DEPARTMENT OF THE ARMY

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

July 30, 2015

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

Re: No Further Action Request
Site Investigation Report Addendum for the ECP Parcel 83 Underground Storage Tanks
Fort Monmouth, NJ

Attachments:

A. Correspondence
B. Site Layout Drawings of Parcel 83(Recent and Historical)
C. Summary Table of Parcel 83 Underground Storage Tanks
D. No Further Action Letters from NJDEP
E. USTs 49-76 and 49-77 File Review, Report and Analyses
F. UST 63B Report
G. UST 80 File Review (FTMM-56)
H. UST 108 File Review (FTMM-57)
I. UST 108A Report
J. UST 116B File Review and Analyses
K. UST 117C File Review and Report
L. USTs 161 Reports
M. UST 167 Report
N. USTs 273 File Review and Report
O. UST 482 File Review and Analyses
P. UST 483 File Review and Analyses

Previous Correspondence (provided in Attachment A):

1. NJDEP letter to the Army dated July 10, 2012, re: *March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008.*

Dear Ms. Range:

The U.S. Army Fort Monmouth (FTMM) has reviewed existing file information for underground storage tank (UST) sites at Fort Monmouth within Environmental Condition of Property (ECP) Parcel 83. The purpose of this submittal is to provide comprehensive documentation of the location and updated closure status of all USTs identified within this parcel. This information may be useful for the future Phase II property transfer. This submittal provides the information for Parcel 83 USTs as

requested by NJDEP in Correspondence 1 (provided in Attachment A). NJDEP's additional comments regarding various constituents previously detected in Parcel 83 soils (including PAHs, TCE, and metals) are addressed separately in the ECP Work Plan Addendum.

Several USTs specifically mentioned by NJDEP in the Correspondence 1 comments on Parcel 83 are not addressed in this submittal for the following reasons:

- UST 421-37 is located in Parcel 79, and therefore has been addressed in the Parcel 79 UST summary document that was submitted on 4/22/2015;
- There are no USTs associated with Buildings 66, 281 or 479.

Parcel 83 includes the eastern portion of the Main Post located east of Oceanport Avenue. Parcel 83 is bounded by Burns Avenue to the west, Riverside Avenue and the Fort boundary to the south, Oceanport Creek to the east, and the New Jersey Transit railroad tracks and Base boundary to the northeast (see recent and historical layout drawings presented in Attachment B). There are three designated Installation Restoration Program (IRP) sites located within the contiguous boundary of Parcel 83, as follows:

- FTMM-17 Pesticide Storage Building T-65 (also designated as ECP Parcel 88), which was approved by NJDEP for NFA in 1994, as reported in the 2007 ECP Report;
- FTMM-56 Building 80 Petroleum Release, which includes USTs that are discussed within this submittal; and
- FTMM-57 Building 108 UST Gasoline Release, which includes USTs that are discussed within this submittal.

ECP Parcels 84 through Parcel 94 are also located within the contiguous boundary of Parcel 83. ECP Parcel 88 is the designation for FTMM-17, while the remaining parcels within ECP Parcels 84 through 94 are assigned to specific USTs, which are further described herein.

The locations of the USTs within Parcel 83 are presented in Attachment B, and a summary table of these USTs is provided in Attachment C. Attachment C also includes the identification of both the IRP site designation and the ECP Parcel designation for UST, as applicable. All of the USTs identified within Parcel 83 have been removed. None of the Parcel 83 USTs were used for residential heating oil; however, approximately half of them were less than 2000 gallons in size and used to store heating oil for nonresidential buildings, and are therefore considered unregulated heating oil tanks (UHOTs).

Multiple USTs and UHOTs within Parcel 83 were previously approved for No Further Action (NFA) by NJDEP; documentation of this approval is provided in Attachment D, and referenced below. In these cases, there is generally a supporting investigation report that was previously submitted to NJDEP and that describes the basis for closure. For the sake of brevity, we have not included these reports for UHOTs where NFA has already been approved. However, these reports are available within the FTMM environmental records.

In the Attachment C table, the term "Case Closed" has been used (consistent with previous FTMM procedures) to indicate the Army previously determined that no further sampling or remedial actions were warranted for a specific UST site. "Case Open" indicates the Army previously determined that ongoing monitoring, reporting or possibly even remedial action was warranted. In contrast, "No Further Action" has been reserved for NJDEP approval that no further sampling or remedial actions are warranted. "Case Open" sites previously identified within Parcel 83 in Attachment C can now be considered as "Closed" by this submittal.

We are submitting the following documentation for the multiple USTs that were previously removed from the Parcel 83 Area, and we request a No Further Action determination for each site (sites that have been previously approved for NFA by NJDEP are highlighted in green):

- UST 49 File Review summary, an investigation report, and additional analyses are presented in Attachment E.
- UST 63B investigation report is presented in Attachment F.
- UST 64A NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 64B NFA was approved by NJDEP on 10/23/2000 (Attachment D).
- UST 65A NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 80 NFA was approved by NJDEP on 8/29/2000 (Attachment D). This site was assigned IRP Site FTMM-56 and is subject to ongoing groundwater monitoring. A File Review summary is presented in Attachment G that describes the current site status; NFA for soils has been approved, but resolution of groundwater issues for this IRP site will be provided under separate cover.
- USTs at former Building 108 include five tanks that were assigned IRP Site FTMM-57. A File Review summary is presented in Attachment H that describes the current site status; further resolution for this IRP site will be provided under separate cover.
- UST 108A investigation report is presented in Attachment I; this heating oil tank is separate from the IRP Site FTMM-57 tanks, and therefore NFA is requested herein.
- UST 116A NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 116B NFA was approved by NJDEP on 10/23/2000 (Attachment D). Additional evaluation of this site was provided by FTMM in 2010, as presented in the File Review summary in Attachment J.
- UST 116C NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 117A NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 117B NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 117C File Review summary and investigation report is presented in Attachment K.
- USTs 90010-14 and 90010-68 at Building 161 were located adjacent to one another and were closed simultaneously; an investigation report is presented in Attachment L.
- UST 164 NFA was approved by NJDEP on 1/10/2003 (Attachment D).
- UST 165 NFA was approved by NJDEP on 2/24/2000 (Attachment D).
- UST 166 NFA was approved by NJDEP on 8/29/2000 (Attachment D). This site is generally understood to be part of IRP Site FTMM-56; see the summary memo for UST 80 (Attachment G).
- UST 167 investigation report is presented in Attachment M.
- UST 173 NFA was approved by NJDEP on 1/10/2003 (Attachment D).
- UST 197-2 NFA was approved by NJDEP on 2/24/2000 (Attachment D).
- USTs 273-65, 273-66, and 273-67 File Review summary and investigation report is presented in Attachment N.
- UST 276 NFA was approved by NJDEP on 10/23/2000 (Attachment D).
- UST 277 NFA was approved by NJDEP on 1/10/2003 (Attachment D).
- UST 280 NFA was approved by NJDEP on 10/23/2000 (Attachment D).
- UST 480 NFA was approved by NJDEP on 7/10/1998 (Attachment D).

- UST 482 NFA was approved by NJDEP on 1/10/2003 (Attachment D). Additional evaluation of this site was provided by FTMM in 2010 and 2011, as presented in the File Review summary in Attachment O.
- UST 483 NFA was approved by NJDEP on 10/23/2000 (Attachment D). Additional evaluation of this site was provided by FTMM in 2010, as presented in the File Review summary in Attachment P.
- UST 484 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 485 NFA was approved by NJDEP on 8/29/2000 (Attachment D).

This information supports the conclusion that multiple UHOTs and USTs identified within Parcel 83 have been adequately addressed by previous environmental activities under the FTMM tank removal and assessment program. In summary, we submit that the Army has provided adequate due diligence with regards to the environmental condition of USTs and UHOTS within Parcel 83, and we request that NJDEP approve No Further Action for Parcel 83 USTs. IRP Sites FTMM-56 and FTMM-57, and additional non-UST soil constituents within Parcel 83 (as described in the ECP Work Plan Addendum), will be further addressed under separate cover.

The technical Point of Contact (POC) for this matter is Kent Friesen at (732) 383-7201 or by email at kent.friesen@parsons.com. Should you have any questions or require additional information, please contact me by phone at (732) 383-5104 or by email at john.e.occhipinti.civ@mail.mil.

Sincerely,

John E. Occhipinti
Fort Monmouth Site Manager

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

ATTACHMENT A

Correspondence

Contents:

- NJDEP letter to the Army dated July 10, 2012, re: *March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008, Fort Monmouth, NJ, PI G000000032.*

State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

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BOB MARTIN
Commissioner

July 10, 2012

Wanda Green
BRAC Environmental Coordinator
OACSIM – U.S. Army Fort Monmouth
PO Box 148
Oceanport, NJ 07757

Re: March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008
Fort Monmouth, NJ
PI G000000032

Dear Ms. Green:

A review of the above referenced report, received March 27, 2012 and submitted in response to the Department's comments regarding the Draft Site investigation Report of July 21, 2008 by Shaw Environmental, Inc., has been completed by this office. Many of the parcel comments involved suspected USTs; in addition to that information provided in this submittal and the July 2008 SI, a review and comparison of Appendix G, Appendix O, and Figures 15 and 16 of the January 2007 ECP Report was conducted by this office in an attempt to ascertain the location and status of all tanks located within the parcels. Unless otherwise noted, comments and questions are provided only for each parcel referenced in the submittal and are generally presented by parcel.

Parcel 13 – Former Barracks (Buildings 2004-2016)
Geophysical surveys were performed, and sampling was conducted throughout that area at which USTs were known to or may have been present. No USTs were found; all soils analytical results were below cleanup criteria applicable to the site; no additional action for the parcel is necessary.

Parcel 14 – Former Buildings and Housing Area Northwest Portion of CWA
As indicated in the Department's correspondence of May 30, 2012, the geophysical surveys performed and sampling conducted throughout that area at which USTs were or may have been present were sufficient to adequately characterize the area. No USTs were found; all soils analytical results collected were below cleanup criteria applicable to the site. The parcel was re-categorized from Category 2 to Category 1.

Parcel 15 – Building 2700
Parcel 15 was issued a designation of No Further Action for soils and ground water, *exclusive of CW-1*, on May 9, 2012. Remediation efforts involving CW-1 continue.

Parcel 27 – Southwestern Corner CWA
The single outstanding issue at Parcel 27 was the USTs. As previously indicated, numerous USTs were removed from the parcel, however, additional documentation for same was required.

It is agreed fourteen (14) USTs have been removed and given NJDEP Closure Approval Letters/NFAs. Although it is understood Departmental approval may have been granted for an additional five USTs, as indicated on Page 6 of the referenced submittal and in Appendix G, please be advised this office does not have documentation confirming Closure Approval/NFA for the following USTs.

UST 2506-17	Reported NJDEP UST Closure Approval Date 7/10/98
UST 2624-34	Reported NJDEP UST Closure Approval Date 7/23/93
UST 2624-57	Reported NJDEP UST Closure Approval Date 9/21/95
UST 2624-58	Reported NJDEP UST Closure Approval Date 9/21/95
UST 2624-59	Reported NJDEP UST Closure Approval Date 9/21/95

Additionally, please provide information as to the status of the USTs noted in Appendix O at what appear to be Buildings 2566 and 2505, located just north of Building 2503?

Any sediment issues which may have resulted from parcel operations are to be addressed as part of the ongoing facility wide ecological assessment.

Parcel 28 – Former Eatontown Laboratory

<u>Underground Storage Tanks</u>

Although this office is in agreement with the information submitted in regard to the majority of the USTs as noted on Parcel 28, questions remain on several, which are not considered as given a designation of NFA at this time.

As above, documentation for closure approval or NFA is not available for confirmation on the following USTs.

UST 2539-28	Reported NJDEP UST Closure Approval Date 3/31/93
UST 2539-64	Reported NJDEP UST Closure Approval Date 3/31/93
UST-2531-21	Reported NJDEP UST Closure Approval Date 8/29/00

UST 2542-29 and UST 2564-32 are reported as no release observed. A Standard Reporting Form and/or Site Assessment Compliance Statement were reported sent to us 11/22/91, however, no designation of NFA was granted, nor comments apparently generated.

Appendix O indicates three USTs within that area which underwent a geophysical survey between Building 2525 & Heliport Drive. The center UST appears to correlate to UST P28-8, which, based upon the investigation performed, warrants no further action. Although it is agreed no tanks remain in that area, please provide any record of their removal or indication as to evidence of a discharge upon removal. As previously discussed, a designation of NFA for USTs cannot be granted without sampling.

Septic Tanks & Leachfields

Leachfield East of Heliport Drive, South of Radiac Way – It is agreed the four test pits were adequate for characterization of the leachfield; no additional action is necessary for the leachfield. It does not appear, however, the suspected D-box/entirety of the septic system was investigated. Although they are not designed to hold liquids/sludges (but rather to distribute the liquids after the solids fall out into the holding tank), particularly as the structure apparently remains in place, additional information is required as to whether the structure could have been/functioned as a holding tank (field notes do reference it as a septic tank) which did contain solids or liquids which should have been sampled.

Septic System & Septic Tank A – Located off the northeast corner of Building 2525, a suspected septic tank was located via GPR scanning, as denoted as "A" on Figure 3.5-2 of the ECP Site Investigation. Sampling efforts, however, were performed only at the associated leachfield. What efforts were made to adequately characterize any holding tank contents of the actual septic tank, as required by the Tech Regulations in effect at the time of investigation (NJAC 7:26E-3.9(e)3)? As regarding the associated leachfield, a minimum of 4 samples is required. A single soil and single ground water sample is inadequate.

Septic System at Southeastern Corner of Parcel - For that septic system located in the southeastern corner of the parcel as sampled by P28-SB1, the findings/requirements noted in the above paragraph also apply.

Former Storage Areas/Possible Former Tank Pads – This area received a designation of NFA on March 29, 2012.

Parcel 34 – Building 2567/FTMM 58

Elevated levels of ground water contamination underwent treatment via a Permit-by-Rule approved in October of 2010. The Department most recently responded on March 7, 2012 approving monitoring via two rounds of seasonal high ground water analytical sampling.

As recently discussed, although piping was cleaned at the time of tank removal, it necessary to remove the piping and dispensing equipment/island.

Parcel 38 – Former Outdoor Pistol Range (1940-1955)
Although no exceedences were noted, Departmental comments indicated the surface soil sampling was not adequate due to the possibility the parcel soils had been re-worked; a ground water investigation was therefore required. The Army will be submitting the results of a ground water investigation in a future letter report to this office. If you wish to receive comments on anticipated frequency and locations of the ground water sampling points and methodology (ie low-flow), please submit the sampling plan prior to implementation.

Parcel 39 – Building 1150/Vail Hall
Previous comments indicated the soil exceedences, although permitted to remain in place with institutional controls (Deed Notice), must be compared to and delineated to the RDCSCC. The Army has agreed, in this submittal, to prepare a revised map indicating delineation boundaries to the more stringent criteria, as appropriate. A draft Deed Notice for same is to be submitted to this office for review and comment.

Any sediment issues which may have resulted from operations are to be addressed as part of the ongoing facility wide ecological assessment.

Parcel 43 – Building 1122 (Do-it-Yourself Auto Repair)
No comments based on submittal; Army acknowledges Department's March 18, 2011 comments; remedial efforts are ongoing.

Any sediment issues which may have resulted from parcel operations are to be addressed as part of the ongoing facility wide ecological assessment.

Parcel 49 – Former Squier Laboratory Complex
The Site Investigation indicated five surface soil samples contained base neutrals at concentrations above the NRDCSCC, while one sample contained PCBs above the NRDCSCC. The Department concurred with the recommendation of additional sampling for delineation purposes. The March 2012 submittal, however, specifies no sampling will be performed in regard to the BNs exceedences as they "are commonly detected in soil directly beneath asphalt pavement".

Base Neutrals (BNs)
Although it is agreed elevated levels of BN constituents related to asphalt rather than a discharge may be encountered beneath asphalt paving, it is not agreed sufficient information has been provided at this time to document each location at which BN exceedences are noted is unrelated to site operations. The previously approved proposal for additional sampling remains appropriate for each sample location at which exceedences were noted.

PCBs
Regarding PCBs, a re-sample is currently proposed in the location at which PCBs were noted to exceed the NRDCSCC, sample P49-SS8-A. As no Remedial Action Workplan for this parcel was previously approved, the Soil Remediation Standards (0.2 ppm) apply. As such, PCBs exceed the standard at three locations – P49-SB3-A and P49-SS7-A (which also exhibits the highest levels of BN contamination), in addition to SS8-A. Delineation to the most stringent standard is required.

Arsenic
A review of the site operations and the analytical data, including the horizontal and vertical distribution of the arsenic, the lead to arsenic ratio, as well as the presence of glauconitic soils indicate the arsenic encountered in this area is representative of naturally occurring levels.

Volatile Organics
It is agreed further discussion regarding volatile organics in ground water at the M-18 Landfill is to be discussed in a forthcoming Remedial Investigation Report for the landfill.

USTs
As with the above parcels, although many tanks have received a designation of NFA, several tanks do not have sufficient documentation to be designated same. These include:

UST-293-67 – per Appendix G, report submitted 2/26/96; no Departmental response
UST-290-193 - per Appendix G, report submitted October 1993, no Departmental response
UST 283-59 – per Appendix G, reported Closure Approval 2/24/00; no confirmation available
UST 283-58 - per Appendix G, no sampling was performed
UST 296-69 – per Appendix G, report submitted 2/26/96; no Departmental response

For those USTs which Appendix G indicates reports were previously submitted and not responded to, unfortunately, this office has no record of same and re-submittal is required for comment.

Parcel 50 – IRP Sites FTMM-54, FTMM-55 & FTMM-61
The Army acknowledges the Department's August 14, 2007 letter, the comments of which are to be addressed via Remedial Investigation Report Addendums for FTMM-54 (Site 296), FTMM-55 (Site 290) and FTMM-61 (Site 283). Submittal dates were not indicated. This office will await submittal of same.

Parcel 51 – 750 Area, 500 Area, 600 Area, 1100 Area – Former Buildings
The geophysical survey and sampling conducted at portions of the parcel were insufficient to allow for determination of NFA for the USTs previously/currently located in the parcel. Further investigation conducted north of Building 750 revealed the presence of USTs UHOT 1123B and 1123C at the two northernmost previously identified anomalies. The USTs were subsequently removed, as was affected soil. Although it is indicated all soils were removed to below 1000 ppm TPH, Table 2 at Attachment D appears to indicate soils at sample 1123B East Wall at 8.5-9' contains TPH at 9832.44 ppm. Clarification is needed.

Although it is understood the additional investigation undertaken in June of 2009 revealed the presence of the two above referenced USTs located above Semaphore Ave, it is unclear what efforts were made to investigate the nine potential USTs/anomalies noted on Figure 3.12-2 south of Echo Avenue? Are they all to be included in the Building 750 submittal?

Additional questions regarding USTs within the parcel remain. As above, documentation for closure approval or NFA is not available for confirmation on the following USTs.

No geophysical surveys, sampling or at least reports appear to have been performed or submitted for the following USTs - UST 68, 635, 637, 642, 643, 645, 647, 648, 649, 650, 651, 652, 653, 654, 656-97, 656-98, 657-90, 658-100, 660, 662, 663, 665, 667, 689-102.

Appendix O indicates USTs which do not appear to be "closed" per Appendix G which were/are also present in areas outside the geophysical survey, including those at Building 676, several along Sherrill Avenue north of Building 600, east of Brewer Ave by Buildings 545 and 554, Building 555, and several by Building 557.

Although Appendix G indicates closure reports were submitted, it also indicates no Departmental response was received for the following USTs - UST-682-106, UST 656-104, UST 659-101, UST 114-1, UST 645-78, UST 789-126.

USTs 750 – report pending
UST 501-76 – Appendix G indicates NFAed July 10, 1998, however confirmation unavailable
UST 551-80 – Appendix G indicates NFAed August 29, 2000, however, confirmation unavailable
UST 695 – Appendix indicates NFA August 24, 2000, however, confirmation unavailable

Parcel 52 – Building 699 – Army Exchange Services Gas Station
No comments based on submittal; Army acknowledges Department's March 18, 2011 comments; remedial efforts are ongoing.

Parcel 57 – Former Coal Storage & Railroad Unloading – 800 Area
Three surface soil samples contained B/Ns at concentrations above the NRDCSCC. The Department concurred with the general recommendation to conduct additional sampling, and required the submittal of a Remedial Investigation Workplan. The March 2012 submittal, however, states the exceedences were related to the asphalt pavement under which the samples were collected.

As with Parcel 49, it is agreed elevated levels of BN constituents related to asphalt rather than a discharge may be encountered beneath asphalt paving. However, information has not been submitted to document these sample results are not reflective of site operations, particularly given the nature of operations in the area. Delineation is necessary.

PCBs analyses was required due to the proximity of the railroad tracks/unloading area, as indicated in the Department's June 15, 2007 letter, rather than historical operations at Parcel 57.

As PCBs are often associated with rail road tracks and spurs, analysis for same is appropriate and remains a requirement.

Ground Water
Although the previous proposal for delineation of ground water exceedences was approved, the current submittal indicates NFA is warranted due to naturally occurring background conditions. The Department is conducting further review of the information provided.

Parcel 61 - Building 1075 – Patterson Health Clinic
Soil sampling conducted at the parcel indicated elevated levels of three base neutral compounds in a soil sample collected beneath an area of former asphalt paving at the southeastern corner of Building 1075. The Department is in agreement the PAHs are not reflective of a discharge nor of operations performed at the site. No additional action for same is necessary.

As discussed, the analyses for PCBs as indicated in the Department's October 2008 correspondence is not required, based upon a review of areas of concern located within the parcel.

UST 1076-209 – Although Appendix G indicates the closure report was being prepared, recent conversation indicates no submittal of the report is anticipated as the tank was a "clean closure." This would, of course, not allow for comment or designation of NFA for this tank. Additionally, information previously submitted indicates this tank was installed at a location at which a leaking UST was removed and remediated. It does not appear closure information for that UST was submitted.

Parcel 69 – Building 900 – Former Vehicle Repair/Motor Pool
The previous Departmental comments indicated soil sampling was inadequate for designation of NFA as analytical parameters did not include PCBs. Although it is understood your position is that PCBs are not suspected to have been disposed of in the former waste oil AST at Building 900, the Technical Requirements for Site Remediation, both those in effect at the time of sampling, as well as those currently in effect, require the inclusion of PCBs in the analytical parameters for sampling of soil when waste oil is involved.

Regarding analytical parameters for sediment sampling, that will be addressed as part of the ongoing facility wide ecological assessment.

One ground water sample previously indicated an exceedence of PCE. Per this submittal, the Army plans to resample the ground water at the location of temporary well point P69GW-1. Previous Departmental correspondence, however, stated the submittal of a ground water remedial investigation workplan was required for NJDEP review and approval. If resampling of a single location, in anticipation of a "clean" result is performed, rather than several delineation sampling points, please ensure the resultant submittal includes adequate rationale/justification to confirm the area of greatest possible contamination was sufficiently targeted.

Two USTs were previously noted as within the parcel. UST 900-142 was granted Closure Approval Letter/NFA on July 10, 1998, while documentation for closure approval or NFA is not available for confirmation on the following UST:

UST 900-141 Reported NJDEP UST Closure Approval Date 7/10/98

Parcel 70 – Building 551 – Former Photoprocessing

The October 28, 2008 Departmental correspondence concurred with the recommendation for no further action. As a note however, we do not have a copy of the Appendix G referenced 8/29/00 Closure Approval Letter for UST 551-80

Parcel 76 – 200 Area, 300 Area – Former Barracks

A geophysical survey was performed throughout Parcel 76, with suspect USTs noted in the western portion of the parcel. Although sampling conducted within that western portion of the parcel indicated no exceedences of the applicable cleanup criteria, additional investigation was required regarding the possible USTs.

Additional evaluation was documented in the June 2011 Remedial Investigation and Closure Report, which references Incident #s 09-11-04-1553-32, 10-04-28-1333-57, 10-04-13-1710-23, 09-11-19-1710-57 and 10-01-06-1342-44 and the removal of UHOTs 544, 543, 542, 541, 540, 539 and 538. Affected soils were reported removed to below the 1000 ppm contingency analytical threshold; a ground water investigation was performed via the installation of four monitor wells as ground water was encountered in the excavations.

The adequacy of the investigations/remedial actions presented in the report submittal cannot be determined, as insufficient information has been provided. No information was contained in Appendices A through E, nor were any Figures included (this information was missing in many of the Attachment D reports, some of which was obtainable through previous submittals and information, some not). No comparison could be made of UST locations against geophysical anomalies, sample locations, or monitor well locations. A review of Table 2/Summary of Laboratory Analyses as a stand-alone document (without sampling location/result maps, further association between sample ID and tank) is insufficient to allow for documentation of soils removal to below the above stated 1000 ppm contingency analytical threshold, or even the 5100 ppm EPH standard at each tank, or to determine if the ground water investigation (placement of monitor wells) was adequate.

Additionally, although it is agreed no USTs appear to remain in the eastern portion of Parcel 76, no remedial documentation was submitted for those former tank locations as noted on Appendix O and Figure 15 of the January 2007 ECP Report in the eastern portion of Parcel 76, as follows:

UST-261-45	UST-262-46	UST-263-47	UST-264-48	UST-265-49
UST-266-50	UST-267-51	UST-268-52	UST-269-53(contamination per Appendix G)	

As previously discussed, a designation of no further action for these USTs cannot be issued without an investigation in accordance with the Technical Requirements for Site Remediation.

Parcel 79 – 400 Area Former Barracks
A geophysical survey was previously performed throughout the parcel, identifying potential USTs in only that portion as noted in Figure 3.19-1. Additional evaluation of the area encountered eight USTs, noted as UHOTs 437, 440, 441, 444, 445, 448 and 450 which were subsequently removed, while contamination was noted at Building 449. A ground water investigation is to be performed based upon the presence of ground water in the excavation. Additional comments regarding same will be forthcoming pending submittal.

As with Parcel 76, above, although it is agreed no USTs appear to remain, no remedial documentation was submitted for many of those former tank locations noted on Appendix O and Figure 15 of the January 2007 ECP Report at other areas of the parcel, and/or insufficient information currently exists to allow for designation of NFA.

North of Fisher Avenue

UST-401-26 – per Appendix G, no samples were collected, no report submitted
UST-411-28 – per Appendix G, report submitted 02/26/96, no Departmental response noted
UST-416-32 – per Appendix G, no samples collected, no report submitted
UST-421-37 – per Appendix G, report submitted 7/22/98, no Departmental response noted
UST-423-39 – per Appendix G, report submitted 2/26/96, no Departmental response noted

South of Fisher Ave, North of Leonard Ave

UST-430-45 – per Appendix G, report submitted 10/23/97, no Departmental response noted
UST-447 – Not referenced on Appendix G; located east of grid sampling; sampling status unclear

South of Leonard Avenue

UST-454-51 – Reported Closure Approval date 7/10/98 – no record of same
UST-142-73 – per Appendix G, report submitted 10/23/97, no Departmental response received
UST-142-13 – per Appendix G, report submitted 10/23/97, no Departmental response received
UST-29-1 – per Appendix G, report submitted 11/22/91, no Departmental response noted
UST-490-58 – per Appendix G, no sampling; "site closed by NJDEP"; no record of same
UST-492-59 – Reported Closure Approval date 8/29/00 – no record of same
UST-202-a – "clean closure", no report submitted
UST-202-b – per Appendix G, *30 tons of soil removed, report submittal pending*
UST-202-21 – per Appendix G, TPH ND, no report submitted
UST-202-22 – per Appendix G, TPH ND, no report submitted

Please submit documentation in accordance with the Tech Regs for each of the above to allow for comment/designation of NFA. For those which Appendix G indicates reports were previously submitted and not responded to, unfortunately, this office has no record of same and re-submittal is required.

Additionally, with the exception of the above referenced UST-454-51, and UST 475-52 (NFA 10/23/00), no documentation of sampling activities for that area shown on Appendix O extending from Tilly Avenue north to Leonard Avenue, previously shown to include approximately 22 USTs, appears to have been submitted.

Finally, please indicate what investigation, if any, has taken place at the two former and one current ASTs located north of Hazen Drive.

Parcel 80 – Former Buildings 105 & 106 - Photoprocessing

Prior to issuing a determination as to the adequacy of the soil sampling, additional information is required regarding the basis for establishment of the sample locations. Were as-builts or other plans available for the demolished buildings to assist in locating former floor drains, septic systems, discharge points, etc.?

Although the previous proposal for delineation of ground water exceedences was approved, the current submittal indicates NFA is warranted due to naturally occurring background conditions. The Department is conducting further review of the information provided.

Parcel 83 – Former Photoprocessing, Vehicle Maintenance, Coal Storage & Railroad Unloading, Maintenance Shops

The 2008 SI Report, Section 4.1.2, indicates "eight surface soil samples contained B/Ns at concentrations above the NJDEP NRDCSCC. Two surface soil samples contain lead at concentrations above the NJDEP NRDCSCC and MPBC. Further evaluation is recommended."

While the exceedences at P83-SB9C were apparently not included in that statement, nor plotted, several PAH constituents were noted above the residential and non-residential criteria at 4.5-5'. Vertical delineation appears incomplete at this location.

Although this office does not as yet agree the PAH exceedences at this parcel are due to current/former asphalt (particularly at SB9 or B5), re-collection of the samples as proposed to assist in determining same is acceptable. The further evaluation must, of course, include all exceeded contaminant categories if the intent is to prove no discharge.

Trichloroethylene is reported on Table 3.21-4 of the SI Report above criteria at sample location P83-SB9B, at 5.8 ppm, at 1.5-2', with no discussion provided. Please provide same.

Metals exceedences were noted at three locations – SB10A, SB9A and B5A; this office considers location SB-10 to be above criteria for arsenic and lead (residential criteria is 400 ppm).

As regarding arsenic in soils, although it is agreed the site soils are often associated with elevated levels of naturally occurring arsenic, the parcel specific soil analytical results, the lead to arsenic ratio, and the decrease of arsenic with depth at those locations exhibiting an elevated level, do not appear to indicate the exceedences are naturally occurring, and must be included in a remedy.

As with the above parcels, although many tanks have received a designation of NFA, several tanks do not have sufficient documentation to be designated same. These include:

UST-421-37 – Per Appendix G, report submitted 10/23/97; no Departmental response
UST-273-65 - Per Appendix G, 6000 gallon gasoline tank still in use
UST-273-66 – Per Appendix G, 10000 gallon gasoline tank still in use
UST-273-67 – Per Appendix G, 10000 gal gasoline tank still in use
UST-117-72 – Per Appendix G, remedial action report completed July '98; status unknown
UST-108-7 – Per Appendix G, report submitted 2/26/96; no Departmental response
UST-108-60 through 64 – Per Appendix G, remediation efforts ongoing
UST-161-68 – Per Appendix G, waste oil tank RAR submitted 2/26/96, no response
UST-161-14 – Per Appendix G, RAR submitted 2/26/96, no Departmental response

Appendix O also includes several former USTs on the parcel which appear to have had no documentation of closure or investigation submitted, including those at Buildings 479, 66, 276, 485, 280, 281 and 167.

Electrical Substations
The October 28, 2008 correspondence indicated the need for establishment of a Deed Notice and engineering controls due to elevated levels of PCBs above the RDCSCC of 0.49 ppm. The March 2012 proposal is for resampling of the two locations at which results were above the criteria, with a letter report to follow. This is acceptable, however, please be advised a Deed Notice will be required for any soils left in place *within these two areas*, which exhibit a result of greater than 0.2 ppm PCBs. No engineering controls are required if all results are below 1 ppm.

Miscellaneous
Attachment E of the submittal references numerous letters from the NJDEP regarding UST closure approvals/NFAs, however, the letters dated July 23, 1993 and September 21, 1995 were not included in the submittal. Submittal of those two letters would be beneficial and appreciated.

Vapor Intrusion Investigation
Submittal of the report is anticipated shortly.

Baseline Ecological Evaluation
Submittal of the amended report is anticipated shortly.

If you have any questions regarding this matter contact this office at (609) 984-6606.

Sincerely,

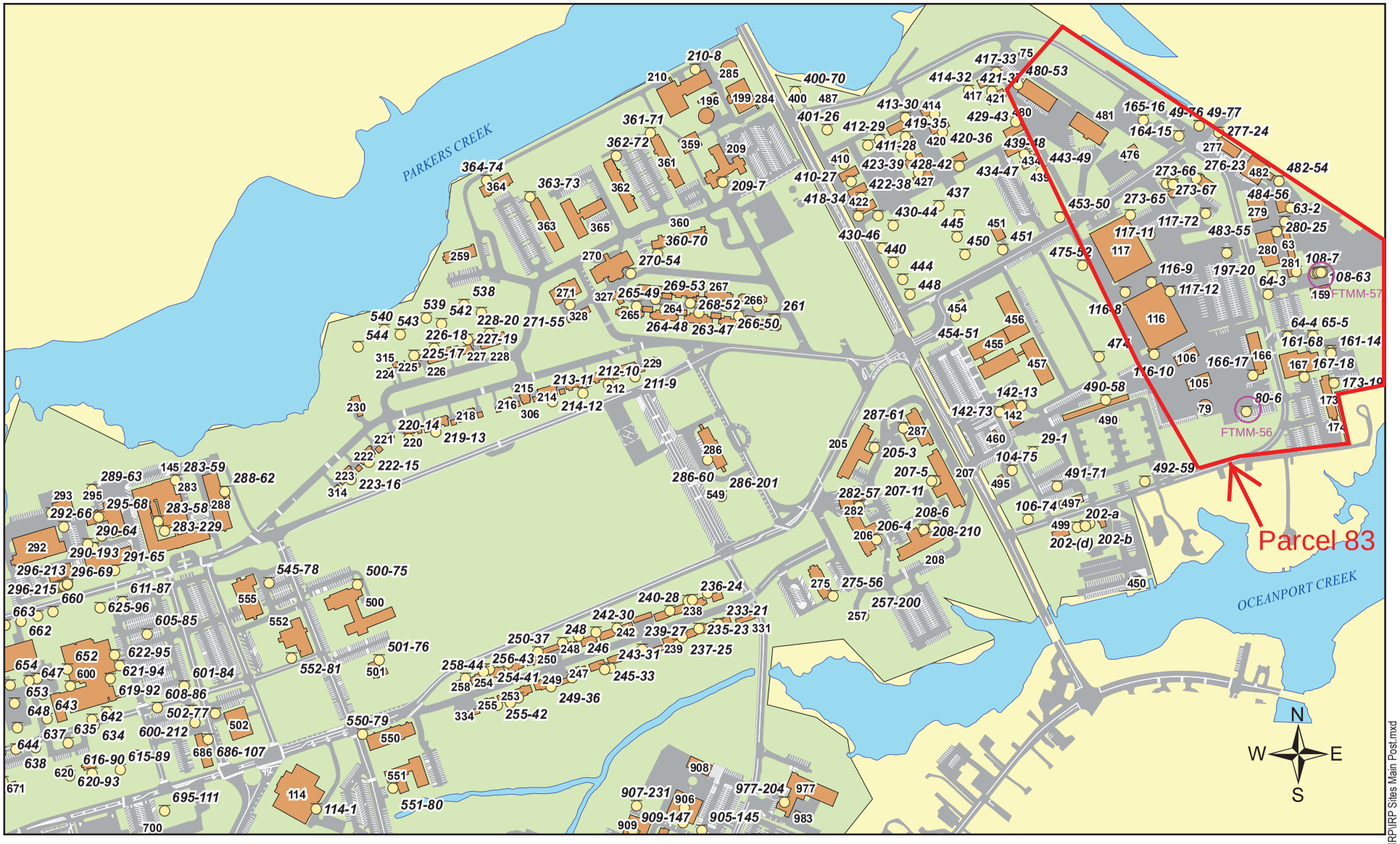
Linda Range
Bureau of Case Management

C: Joe Pearson, Calibre Systems
Rich Harrison, FMERA
Julie Carver, Matrix

ATTACHMENT B

Site Layout Drawings of Parcel 83

(Recent and Historical)



Underground Storage Tank Sites
Main Post
Fort Monmouth, New Jersey
FOUO

0 375 750 1,500 Feet

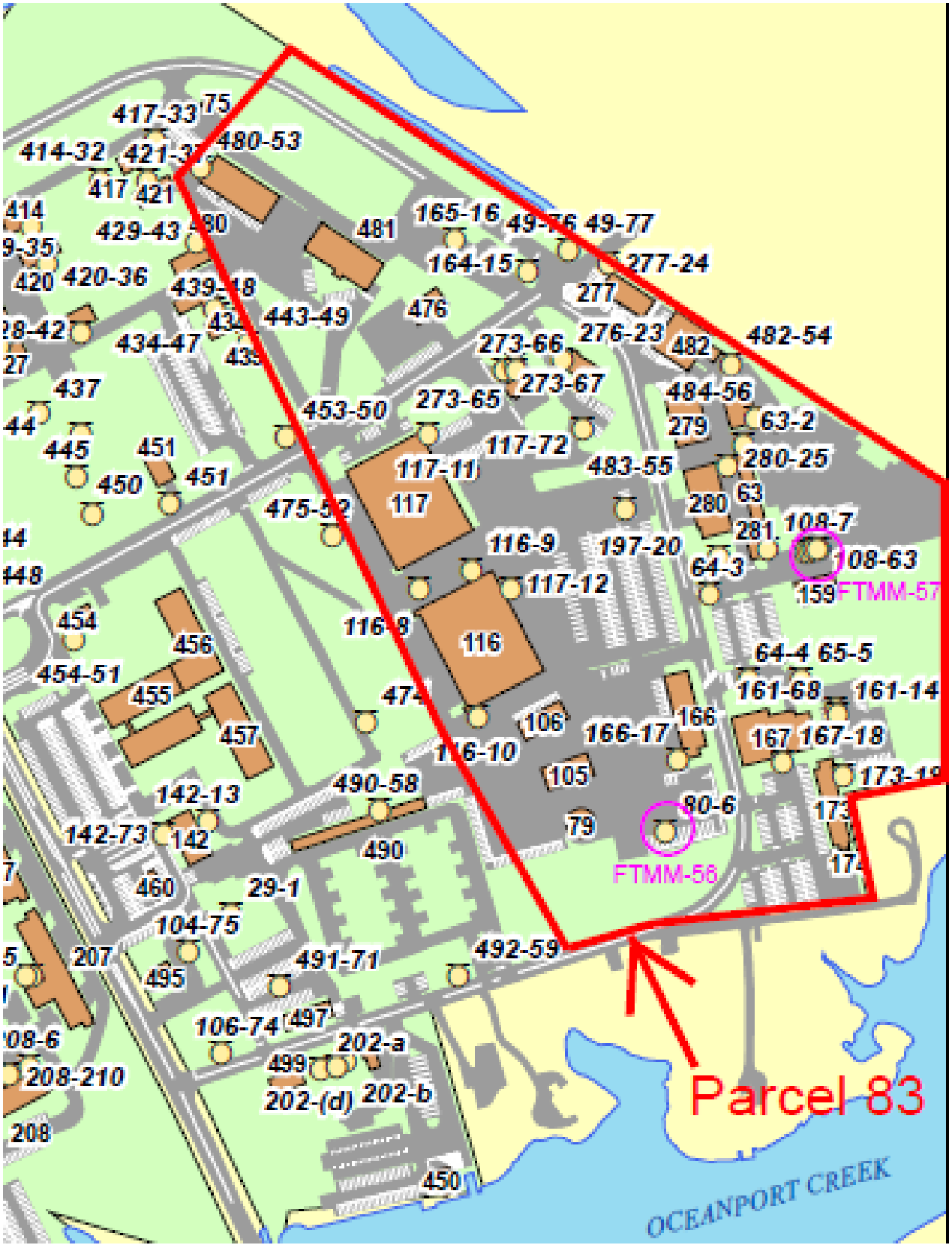
Legend

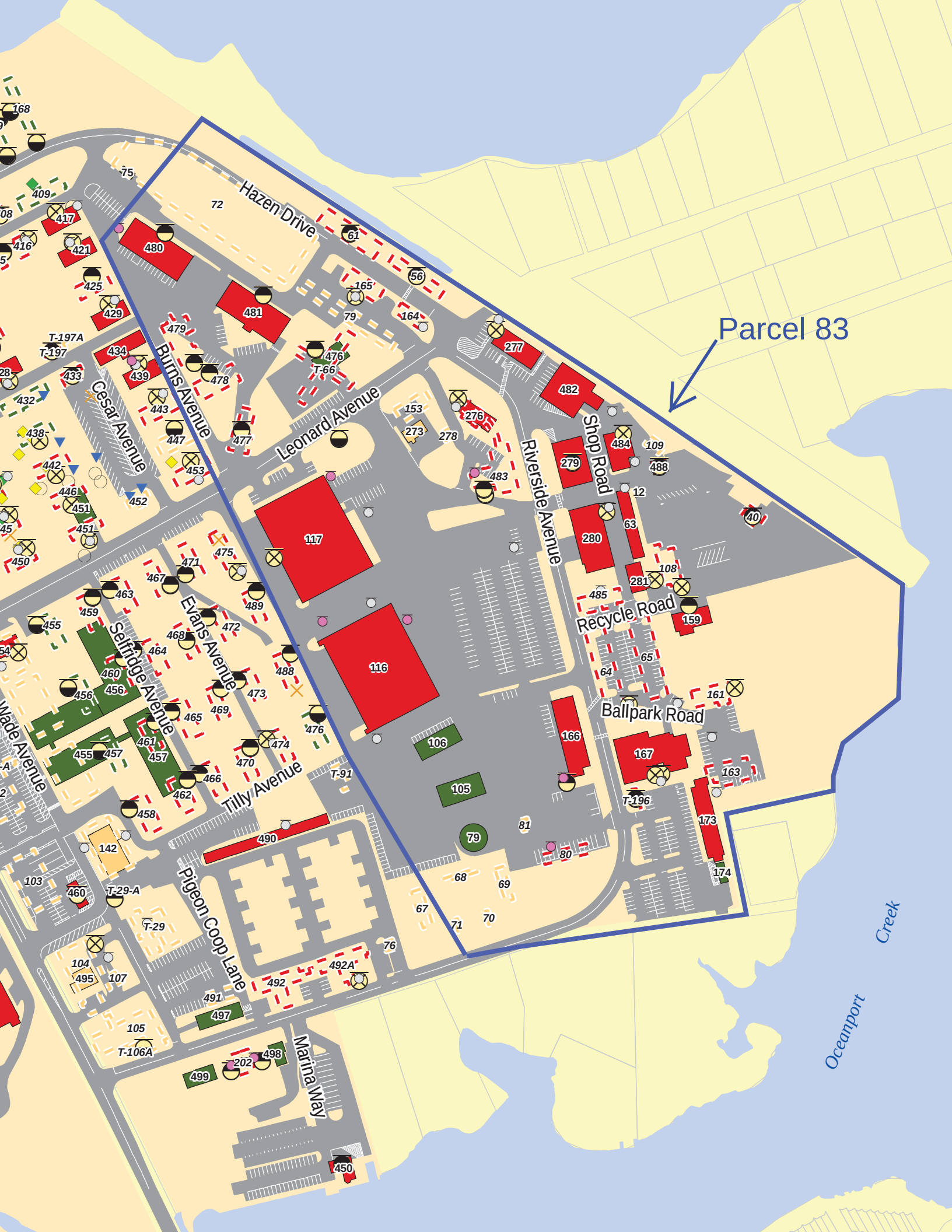
- Underground Storage Tank
- Existing Building
- Roadway & Parking
- Water Body
- Post Boundaries

Map Created by:
Fort Monmouth Installation GIO, Environmental Division
Fort Monmouth, New Jersey
Date: January 10, 2011
All drawings must be field verified.
New Jersey State Plane Feet, NAD83

January 10, 2011 H:\GIS\GIS Maps\CHPR14-IRP\IRP Sites Main Post.mxd

CLOSER VIEW OF PARCEL 83 UNDERGROUND STORAGE TANK SITES




Parcel 83
Hazen Drive
Burns Avenue
Cesar Avenue
Leonard Avenue
Riverside Avenue
Shop Road
Recycle Road
Ballpark Road
Evans Avenue
Selfridge Avenue
Wade Avenue
Tilly Avenue
Pigeon Coop Lane
Marina Way
Oceanport Creek

Historical Site Layout of Parcel 83 (1956 Drawing)



ATTACHMENT C

Summary Table of Parcel 83 Underground Storage Tanks

SUMMARY TABLE OF PARCEL 83 UNDERGROUND STORAGE TANKS

Site Name	RESIDENTIAL	Registration ID	DICAR	Tank Size and Type	Product	Army Case Status	Also Known As	Comments on Current or Requested NJDEP Status
49	NO	90010-76	01-05-24-1004-1 OP19	5000 gallon steel	LEADED GASOLINE	Case Open	--	Submit review summary, TVS Report and data; request NFA
49	NO	90010-77	01-05-24-1004-1 OP19	5000 gallon steel	LEADED GASOLINE	Case Open	--	Submit review summary, TVS Report and data; request NFA
63B	NO	90010-2		1000 gallon steel	#2 FUEL OIL	Case Closed		Submit TVS report; request NFA
64A	NO	90010-3		1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 89	NFA approved per 8/29/2000 NJDEP letter
64B	NO	90010-4	95-10-24-1118-12	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 87	NFA approved per 10/23/2000 NJDEP letter
65A	NO	90010-5	90-06-16-1303	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 87	NFA approved per 8/29/2000 NJDEP letter
80	NO	90010-6	94-06-16-1127-25	1000 gallon steel	#2 FUEL OIL	Case Open	FTMM-56 /Parcel 84	NFA approved per 8/29/2000 NJDEP letter. See review summary of IRP site status; NFA for FTMM-56 will be requested under separate cover.
108	NO	90010-60	93-4-12-1939-29	5000 gallon steel	GASOLINE	Case Open	FTMM-57 /Parcel 90	See review summary of IRP site status; NFA for FTMM-57 will be requested under separate cover
108	NO	90010-61	93-4-12-1939-29	5000 gallon steel	GASOLINE	Case Open	FTMM-57 /Parcel 90	See review summary of IRP site status; NFA for FTMM-57 will be requested under separate cover
108	NO	90010-62	93-4-12-1939-29	5000 gallon steel	GASOLINE	Case Open	FTMM-57 /Parcel 90	See review summary of IRP site status; NFA for FTMM-57 will be requested under separate cover
108	NO	90010-63	93-4-12-1939-29	5000 gallon steel	DIESEL	Case Open	FTMM-57 /Parcel 90	See review summary of IRP site status; NFA for FTMM-57 will be requested under separate cover
108	NO	90010-64	93-4-12-1939-29	5000 gallon steel	KEROSENE	Case Open	FTMM-57 /Parcel 90	See review summary of IRP site status; NFA for FTMM-57 will be requested under separate cover
108A	NO	90010-7		1000 gallon steel	#2 FUEL OIL	Case Open	--	Submit Smith report; request NFA
116A	NO	90010-8		1000 gallon fiberglass	#2 FUEL OIL	Case Closed		NFA approved per 7/10/1998 NJDEP letter
116B	NO	90010-9	97-4-10-1409-35	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 85	NFA approved per 10/23/2000 NJDEP letter; see also review summary, which validates NFA
116C	NO	90010-10		2000 gallon steel	#2 FUEL OIL	Case Closed		NFA approved per 7/10/1998 NJDEP letter
117A	NO	90010-11		2000 gallon fiberglass	#2 FUEL OIL	Case Closed		NFA approved per 7/10/1998 NJDEP letter
117B	NO	90010-12		2000 gallon fiberglass	#2 FUEL OIL	Case Closed		NFA approved per 7/10/1998 NJDEP letter
117C	NO	90010-72	94-4-28-1944-21	1000 gallon steel	#2 FUEL OIL	Case Open	Parcel 86	Submit review summary and Smith report; request NFA
161	NO	90010-14	93-3-12-2158-30	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 87	Submit Weston and Smith reports; request NFA
161	NO	90010-68	93-3-12-2158-30	550 gallon steel	WASTE OIL	Case Closed	Parcel 87	Submit Weston and Smith reports; request NFA
164	NO	90010-15	97-01-21-1356-47	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 94	NFA approved per 1/10/2003 NJDEP letter
165	NO	90010-16	94-07-19-1331-59	1000 gallon steel	#2 FUEL OIL	Case Closed		NFA approved per 2/24/2000 NJDEP letter
166	NO	90010-17	94-06-16-1545-09	4000 gallon fiberglass	#2 FUEL OIL	Case Closed	FTMM-56 /Parcel 84	NFA approved per 8/29/2000 NJDEP letter. See review summary of status of IRP site FTMM-56 (UST 80); NFA for FTMM-56 will be requested under separate cover.
167	NO	90010-18		1000 gallon steel	#2 FUEL OIL	Case Closed		Submit Smith report; request NFA
173	NO	90010-19	96-05-22-1432-31	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 87	NFA approved per 1/10/2003 NJDEP letter
197-2	NO	90010-20	94-07-05-1150-54	550 gallon steel	#2 FUEL OIL	Case Closed		NFA approved per 2/24/2000 NJDEP letter

SUMMARY TABLE OF PARCEL 83 UNDERGROUND STORAGE TANKS

Site Name	RESIDENTIAL	Registration ID	DICAR	Tank Size and Type	Product	Army Case Status	Also Known As	Comments on Current or Requested NJDEP Status
273	NO	90010-66		10,000 gallon double-walled fiberglass	GASOLINE	Case Open		Submit TVS report; request NFA
273	NO	90010-65		6000 gallon double-walled fiberglass	DIESEL	Case Open		Submit TVS report; request NFA
273	NO	90010-67		10,000 gallon double-walled fiberglass	GASOLINE	Case Open		Submit TVS report; request NFA
276	NO	90010-23	96-6-21-1331-05	1000 gallon steel	#2 FUEL OIL	Case Closed		NFA approved per 10/23/2000 NJDEP letter
277	NO	90010-24		1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 94	NFA approved per 1/10/2003 NJDEP letter
280	NO	90010-25	97-3-27-1054-57	3000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 91	NFA approved per 10/23/2000 NJDEP letter
480	NO	90010-53		1000 gallon fiberglass	#2 FUEL OIL	Case Closed		NFA approved per 7/10/1998 NJDEP letter
482	NO	90010-54	94-08-11-1345-43	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 93	NFA approved per 1/10/2003 NJDEP letter; see also review summary, which validates NFA
483	NO	90010-55	97-03-19-1359-16	2000 gallon fiberglass	#2 FUEL OIL	Case Closed		NFA approved per 10/23/2000 NJDEP letter; see also review summary, which validates NFA
484	NO	90010-56	95-10-13-1038-45	1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 92	NFA approved per 8/29/2000 NJDEP letter
485	NO	90010-57		1000 gallon steel	#2 FUEL OIL	Case Closed	Parcel 89	NFA approved per 8/29/2000 NJDEP letter

ATTACHMENT D

No Further Action Letters from NJDEP

State of New Jersey
Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Mr. James Ott
Director – Public Works
U.S. Army, Fort Monmouth
Fort Monmouth, NJ 07703

JUL 10 1998

Re: UST Closure Reports
Fort Monmouth Army Base
Tinton Falls, Monmouth County

Dear Mr. Ott:

The NJDEP is in receipt of UST closure reports noted below. These documents have been reviewed by the NJDEP throughout the closure process and the documents submitted were discussed throughout their drafting and in great detail upon submittal. Based on these steps and the final review conducted by me, the NJDEP accepts the closure reports and all of the NFA requests commensurate with these submittals.

NJDEP REG. NO.	BUILDING	CONTENTS	CAPACITY	PROPOSAL	DEP APPROVAL
90010-10	116C-MP/E	No. 2 Fuel Oil	2000	NFA	YES
81533-134	826-MP/W	No. 2 Fuel Oil	550	NFA	YES
81533-144	902-MP/W	No. 2 Fuel Oil	1000	NFA	YES
81515-20	2529-CW	No. 2 Fuel	1000	NFA	YES
81515-22	2532-CW	No. 2 Fuel Oil	550	NFA	YES
81515-23	2533-CW	No. 2 Fuel Oil	1000	NFA	YES
81515-31	2561-CW	No. 2 Fuel Oil	550	NFA	YES
90010-27	410-MP/E	No. 2 Fuel Oil	1080	NFA	YES
81533-206	1075	NOT	SUBMITTED	WITH	PACKAGE
81515-16	2504B-CW	No. 2 Fuel Oil	1000	NFA	YES
81515-18	2507-CW	No. 2 Fuel Oil	1080	NFA	YES
81515-26	2536-CW	No. 2 Fuel Oil	1000	NFA	YES
81515-14	2503-CW	No. 2 Fuel Oil	1000	NFA	YES
90010-12	117B-MP/E	No. 2 Fuel Oil	2000	NFA	YES
90010-34	418-MP/E	No. 2 Fuel Oil	1080	NFA	YES
90010-36	420-MP/E	No. 2 Fuel Oil	1080	NFA	YES
90010-38	422-MP/E	No. 2 Fuel Oil	1080	NFA	YES
90010-41	427-MP/E	No.2 Fuel Oil	1080	NFA	YES
90010-44	430A-MP/E	No. 2 Fuel Oil	550	NFA	YES
90010-50	453-MP/E	No. 2 Fuel Oil	1080	NFA	YES
90010-51	454-MP/E	No. 2 Fuel Oil	1080	NFA	YES
81533-76	501-MP/W	No. 2 Fuel Oil	1000	NFA	YES
81533-141	900A-MP/W	No. 2 Fuel Oil	1000	NFA	YES
81515-17	2506-CW	No. 2 Fuel Oil	1000	NFA	YES
90010-9	116A-MP/E	No. 2 Fuel Oil	1000	NFA	YES
90010-11	117A-MP/E	No. 2 Fuel Oil	2000	NFA	YES
90010-53	480-MP/E	No. 2 Fuel Oil	1000	NFA	YES

81515-19	2508-CW	No. 2 Fuel Oil	550	NFA	YES
81533-228	804B-MP/W	No. 2 Fuel Oil	1000	NFA	YES
81533-142	900B-MP/W	No. 2 Fuel Oil	1000	NFA	YES

The efforts made to assure protection of human health and the environment as well as the efforts made to make the entire closure process efficient and consistent with the NJDEP's Technical Requirements for Site Remediation (N.J.A.C. 7:9-6 et seq.) has been exceptional.

If I can be of any assistance, please do not hesitate to contact me should you have any questions or comments.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Federal Case Management
ICURTIS@DEP.STATE.NJ.US

cc. Kevin Kratina, BUST

FTMMTH51.DOC

State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Mr. James Ott
C/O: Dinker Desai
Director – Public Works
U.S. Army, Fort Monmouth
Fort Monmouth, NJ 07703

FEB 24 2000

Re: UST Closure Reports - Closure Approvals
Fort Monmouth Army Base
Fort Monmouth, Monmouth County

Dear Mr. Ott:

The NJDEP has reviewed the UST Closure and Site Investigation Reports for the Fort Monmouth underground storage tank sites noted below. Based on the NJDEP review of these documents, your request that the NJDEP approve the closure reports for those tanks listed below.

The following tanks were removed, sampled and analyzed in accordance with State and Federal requirements. Additionally, the reports consistently state the Fort Monmouth Public Works Department policy of removing all soils which are determined to have total petroleum hydrocarbon contamination (TPHC) greater than 1000 ppm. NJDEP criteria requires similar removal for TPHC contamination greater than 10,000 ppm. These activities are conservative and therefore further assure the NJDEP that no further action is necessary at these sites.

NJDEP Req. #	Bldg. #	NJDEP Req. #	Bldg. #
0090016–16	165	0081533–151	913
0090010–69	170D	0081533–155	917
0090010–20	197	0081533–165	1105
0081533–54	270	0081533–169	1109
0081533–60	286	0081533–173	1213A
0081533–65	291	0081533–208	1221
0090010–70	400	00192486–34	2018
0081533–103	671A	00192486–35	2021A
0081533–138	876A	0081515–30	2543
0081533–149	911	0081515–40	2707
0081533–150	912		

If you should have any questions or comments, please do not hesitate to contact me at (609) 633-7232 or via E-mail.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Case Management
ICURTIS@DEP.STATE.NJ.US

FTMMTH06\IRC.DOC

State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

AUG 2 9 2000

Mr. Dinkerrai Desai
DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY COMMUNICATIONS-ELECTRONIC COMMAND
FORT MONMOUTH, NJ 07703-5000

Re: UST Closure Approval/NFA
Fort Monmouth Main Post
Monmouth County

Dear Mr. Desai:

The NJDEP is in receipt of twenty-five (25) UST closure reports dated August 1, 2000. The Army has requested to receive No Further Action approval letters for each of these reports. This letter approves the NFA requests for the following 25 UST located on the Main Post of the Fort Monmouth site:

NJDEP Req. #	Bldg. #	NJDEP Req. #	Bldg. #
0090010–03	64	0081533–80	551
0090010–05	65	0081533–81	552
0090010–05	74	0081533–120	746
0081533–03	205	0081533–122	748
0090010-29	412	0081533–123	749
0090010-30	413	0081533–131	810
0090010-31	414	0081533–132	811
0090010-33	417	0081533-232	906B
0090010-42	428	0081533–159	1006
0090010-47	434	0081533–206	1075
0090010-47	447	0081515–21	2531
0090010-57	485	00192486–02	2018
0090010-59	492		

The NJDEP has determined that the Army has performed the remedial actions in a manner consistent or in excess of the regulatory requirements, specifically the Technical Requirements For Site Remediation (N.J.A.C. 7:26E et seq.). Soils with contamination in excess of the NJDEP residential cleanup criteria have been excavated and the Army has taken great care to provide documentation which assures us that all sources of contamination have been remediated.

The NJDEP has one comment in that we request that future reports provide ground water flow direction indications on the well location maps.

If you should have any questions or comments, please do not hesitate to contact me at (609) 633-7232 or via E-mail.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Case Management
ICURTIS@DEP.STATE.NJ.US

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State of New Jersey

Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Mr. Dinkerrai Desai
DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY COMMUNICATIONS-ELECTRONIC COMMAND
FORT MONMOUTH, NJ 07703-5000

AUG 2 9 2000

Re: UST Closure Approval/NFA
Fort Monmouth Main Post
Monmouth County

Dear Mr. Desai:

The NJDEP is in receipt of seventeen (17) UST closure reports dated June 1, 2000. The Army has requested to receive No Further Action approval letters for each of these reports. This letter approves the NFA requests for the following 17 UST located on the Main Post of the Fort Monmouth site:

NJDEP Req. #	Bldg. #	NJDEP Req. #	Bldg. #
0090010—06	80	0081533—226	707
0090010—17	166	0081533—119	745
0081533—5	207A	0081533—160	1076
0081533—211	207B	0081533—161	1076
0081533—57	282	0081533—168	1108
0081533—64	290	00192486—1	2000
0081533—68	295	0081515—62	2700.4
0081533—108	689A	00192486—30	3050
0081533—109	689B		

The NJDEP has determined that the Army has performed the remedial actions in a manner consistent or in excess of the regulatory requirements, specifically the Technical Requirements For Site Remediation (N.J.A.C. 7:26E et seq.). Soils with contamination in excess of the NJDEP residential cleanup criteria have been excavated and the Army has taken great care to provide documentation which assures us that all sources of contamination have been remediated.

The NJDEP has one comment in that we request that future reports provide ground water flow direction indications on the well location maps.

If you should have any questions or comments, please do not hesitate to contact me at (609) 633-7232 or via E-mail.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Case Management
ICURTIS@DEP.STATE.NJ.US

State of New Jersey
Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

AUG 2 9 2000

Mr. Dinkerrai Desai
DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY COMMUNICATIONS-ELECTRONIC COMMAND
FORT MONMOUTH, NJ 07703-5000

Re: UST Closure Approval/NFA
Fort Monmouth Main Post
Monmouth County

Dear Mr. Desai:

The NJDEP is in receipt of nine (9) UST closure reports dated July 27, 1998. The Army has requested to receive No Further Action approval letters for each of these reports. This letter approves the NFA requests for the following 9 UST located on the Main Post of the Fort Monmouth site:

NJDEP Req. #	Bldg. #
0090010-35	419
0090010-48	439
0090010-56	484
0081533-77	502
0081533-143	901
0081515-12	2275
0081515-13	2502
0081515-25	2535
0081515-27	2537

The NJDEP has determined that the Army has performed the remedial actions in a manner consistent or in excess of the regulatory requirements, specifically the Technical Requirements For Site Remediation (N.J.A.C. 7:26E et seq.). Soils with contamination in excess of the NJDEP residential cleanup criteria have been excavated and the Army has taken great care to provide documentation which assures us that all sources of contamination have been remediated.

If you should have any questions or comments, please do not hesitate to contact me at (609) 633-7232 or via E-mail.

Sincerely,

Iah R. Curtis, Case Manager
Bureau of Case Management
ICURTIS@DEP.STATE.NJ.US

FTMMTH069IRC.DOC

State of New Jersey
Department of Environmental Protection

Christine Todd Whitman
Governor

Robert C. Shinn, Jr.
Commissioner

Mr. Dinkerrai Desai
DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY COMMUNICATIONS-ELECTRONIC COMMAND
FORT MONMOUTH, NJ 07703-5000

Re: UST Closure Approval/NFA
Fort Monmouth Main Post
Monmouth County

OCT 23 2000

Dear Mr. Desai:

The NJDEP is in receipt of forty [redacted] UST closure reports dated September 11, 2000. The Army has requested to receive No Further Action approval letters for each of these reports. This letter approves the NFA requests for the following 40 UST located on the Main Post of the Fort Monmouth site:

NJDEP Req. #	Bldg. #	NJDEP Req. #	Bldg. #	NJDEP Req. #	Bldg. #
0090010—04	64B	0081533—79	550	0081533—179	1220F
0090010—09	116B	0081533—116	718	0081533—180	1220E
0090010—09	206B	0081533—202	752	0081533—181	1220D
0081533—56	275	0081533—147	909	0081533—182	1220C
0090010-23	276	0081533—152	914	0081533—183	1220B
0090010-25	280	0081533—153	915	00192486—36	2043
0081533—201	286/548A	0081533—204	977	0081515—15	2504A
0081533—62	288	0081533—205	979	0081515—35	2700
0081533—63	289	0081533—167	1107	0081515—36	2700
0081533—66	292	0081533—233	1107B	0081515—37	2700
0090010-43	429	0081533—175	1220J	0081515—38	2700
0090010-52	475	0081533—176	1220I	0081515—39	2700
0090010-55	483	0081533—177	1220H		
0081533—75	500	0081533—178	1220G		

The NJDEP has determined that the Army has performed the remedial actions in a manner consistent with the regulatory requirements, specifically the Technical Requirements For Site Remediation (N.J.A.C. 7:26E et seq.). Soils with contamination in excess of the NJDEP residential cleanup criteria have been excavated and the Army has taken great care to provide documentation that assures us that all sources of contamination have been remediated.

If you should have any questions or comments, please do not hesitate to contact me at (609) 633-7232 or via E-mail.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Case Management
ICURTIS@DEP.STATE.NJ.US

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State of New Jersey

James E. McGreevey
Governor

Department of Environmental Protection

Bradley M. Campbell
Commissioner

Mr. Dinkerrai Desai
DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY COMMUNICATIONS-ELECTRONIC COMMAND
FORT MONMOUTH, NJ 07703-5000

JAN 10 2003

Re: UST Closure Approval/NFA
Fort Monmouth Main Post
Monmouth County

Dear Mr. Desai:

The NJDEP is in receipt of sixty-eight (68) underground storage tank (UST) closure reports dated between July 17, 2001 and May 15, 2002. The Army has requested to receive No Further Action (NFA) approval letters for each of these reports. This letter approves the NFA requests for the following 68 UST that are located on the Main Post of the Fort Monmouth site:

Submittal Date	Building No.	NJDEP Reg. #	Residential
07/17/2001	104	90010-75	NO
07/17/2001	699A	81533-112	NO
07/17/2001	800A	81533-127	NO
07/17/2001	875	81533-234	NO
07/17/2001	949	81533-203	NO
07/17/2001	1220A	81533-184	NO
07/17/2001	2000B	192486-38	NO
01/02/2002	257	81533-200	NO
01/02/2002	283C	81533-229	NO
01/02/2002	290B	81533-224	NO
01/02/2002	290B	81533-225	NO
01/02/2002	491	90010-71	NO
01/02/2002	605	81533-85	NO
01/02/2002	678	81533-105	NO
01/02/2002	699	81533-236	NO
01/02/2002	699	81533-238	NO
01/02/2002	699	81533-237	NO
01/02/2002	699	81533-235	NO
01/02/2002	801B	81533-129	NO
01/02/2002	804A	81533-130	NO
01/02/2002	2337	81515-65	NO
01/02/2002	2562A	81515-41	NO
01/02/2002	2707	81515-50	NO
01/02/2002	2707	81515-49	NO
01/02/2002	2707	81515-51	NO
01/02/2002	2707	81515-47	NO
01/02/2002	2707	81515-48	NO

Submittal Date	Building No.	NJDEP Reg. #	Residential
02/13/2002	2044	192486-24	NO
02/13/2002	2044	192486-32	NO
02/13/2002	2044	192486-33	NO
02/26/2002	208B	81533-210	YES
03/05/2002	246	N/A	YES
03/05/2002	261B	N/A	YES
05/15/2002	106	90010-74	NO
05/15/2002	164	90010-15	NO
05/15/2002	173	90010-19	NO
05/15/2002	200	81533-2	NO
05/15/2002	208A	81533-6	YES
05/15/2002	233	81533-21	YES
05/15/2002	237	81533-25	YES
05/15/2002	271	81533-55	YES
05/15/2002	277	90010-24	NO
05/15/2002	296B	81533-217	NO
05/15/2002	296B	81533-223	NO
05/15/2002	296B	81533-221	NO
05/15/2002	296B	81533-220	NO
05/15/2002	296B	81533-222	NO
05/15/2002	296B	81533-218	NO
05/15/2002	296B	81533-216	NO
05/15/2002	296B	81533-215	NO
05/15/2002	296B	81533-214	NO
05/15/2002	296B	81533-213	NO
05/15/2002	296B	81533-219	NO
05/15/2002	426	90010-40	NO
05/15/2002	482	90010-54	NO
05/15/2002	600 A	81533-83	NO
05/15/2002	600 B	81533-212	NO
05/15/2002	611	81533-87	NO
05/15/2002	615	81533-89	NO
05/15/2002	618	81533-91	NO
05/15/2002	619	81533-92	NO
05/15/2002	621	81533-94	NO
05/15/2002	634	N/A	NO
05/15/2002	638	N/A	NO
05/15/2002	639-2	N/A	NO
05/15/2002	640	N/A	NO
05/15/2002	641	N/A	NO
05/15/2002	644	N/A	NO
05/15/2002	664	N/A	NO
05/15/2002	666	N/A	NO
05/15/2002	686	81533-107	NO
05/15/2002	697	81533-194	NO
05/15/2002	697	81533-195	NO

Submittal Date	Building No.	NJDEP Reg. #	Residential
05/15/2002	697	81533-196	NO
05/15/2002	876B	81533-139	NO
05/15/2002	886	81533-140	NO
05/15/2002	905	81533-145	NO
05/15/2002	1102	81533-162	NO
05/15/2002	1104	81533-164	NO
05/15/2002	2067	192486-37	NO
05/15/2002	2534	81515-24	NO
05/15/2002	2603	81515-60	NO
05/15/2002	2700 2,6	81515-61	NO

The NJDEP has determined that the Army has performed the remedial actions in a manner consistent with the regulatory requirements, specifically the Technical Requirements For Site Remediation (N.J.A.C. 7:26E et seq.). Soils with contamination in excess of the NJDEP residential cleanup criteria have been excavated and the Army has taken great care to provide documentation that assures us that all sources of contamination have been remediated.

If you should have any questions or comments, please do not hesitate to contact me at (609) 633-7232 or via E-mail.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Case Management
ICURTIS@DEP.STATE.NJ.US

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ATTACHMENT E

USTs 49-76 and 49-77 File Review, Report and Analyses

Contents:

- Bldg. 49 Underground Storage Tank File Review
- Enclosure 1 – Tecom-Vinnell Services (TVS) Report: *Underground Storage Tank Closure and Remedial Investigation Report, Main Post – (former) Building T-49*. December 2006.
- Enclosure 2 – Fort Monmouth 2010 Work Order Report
- Enclosure 3 – 2010 Analytical Data Report

UNDERGROUND STORAGE TANK FILE REVIEW
FORT MONMOUTH BRAC 05 FACILITY
OCEANPORT, NEW JERSEY

Date: *December 22, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 49*** Registration ID: 90010-76, 90010-77

Recommended Status of Site: ***Case Closed (need NJDEP NFA)***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***NA***

Based on the file review, were there indications of a contaminant release? [X] Yes [ ] No

NJDEP Release No. or DICAR (If applicable): 01-05-24-1004-1

Did NJDEP approve No Further Action (NFA) for this site? [ ] Yes [X] No [ ] Not Applicable

Tank Description: [X] Steel [ ] Fiberglass Size: 5000 gals. Ea. Contents: Gasoline

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 5/18/2001

Were closure soil samples taken? [X] Yes [ ] No Analyses: VOCs, lead

Comparison criteria: RDCSCC

Were closure soil sample results less than comparison criteria? [X] Yes [ ] No

Brief Narrative

Two steel gasoline USTs were discovered ca. 2001 at a location approximately 100 ft northwest of Bldg. 277 during construction of a gas main through the area. Historical maps indicated that these USTs were formerly used for gasoline dispensers at former Bldg. T-49. The UST removal and closure soil sampling was performed in May 2001, and a temporary groundwater piezometer was installed and sampled in December 2001 and January 2002. A UST closure report was subsequently prepared by Tecom-Vinnell Services (TVS, 2006; see Enclosure 1). Results from this closure report are summarized below.

Following tank removal, soil samples were collected from the tank excavation and analyzed by the Fort Monmouth Environmental Laboratory for volatile organic compounds (VOCs; specifically benzene, toluene, ethyl benzene and xylenes [BTEX]) and lead. Low levels of BTEX were detected but were well below residential comparison criteria; soil lead results were non-detected (ND). Therefore, No Further Action (NFA) is warranted for site soils.

Groundwater was encountered in the tank removal excavation and was sampled; this initial grab sample contained detected BTEX compounds and lead (194 ug/L) in excess of NJDEP Ground Water Quality Criteria. A temporary piezometer was then installed at the former tanks location and sampled in December 2002; no BTEX compounds were detected, and lower lead concentrations (40.5 ug/L) were detected. This piezometer was re-sampled in January 2003, and even lower lead concentrations (5.1 ug/L) were detected. The TVS report recommended NFA for this site because the latest lead concentrations in groundwater did not exceed the then-current NJDEP Ground Water Quality Criteria (GWQC) for lead of 10 ug/L.

Fort Monmouth completed a Work Order in 2010 (see Enclosure 2) for installation of a replacement groundwater piezometer at the site using a Geoprobe, and sampling of the piezometer for lead analysis, based on the decrease of the lead GWQC comparison criteria to 5 ug/L. This sampling was completed, and the groundwater analyses from the piezometer (see

Enclosure 3) were ND for lead. Therefore, NFA is also warranted for groundwater at this site. It is inferred that elevated lead concentrations in previous groundwater samples were caused by turbidity in these samples.

Additional file review was performed to ensure that these T-49 tanks were not the same as other tanks that were removed from the immediate vicinity. A 1000 gallon fuel oil UST was removed in 1997 from nearby Bldg. 277, and NFA was approved by NJDEP in their 1/10/2003 letter. The 277 tank is clearly different from the T-49 tanks based on different tank contents (gasoline versus fuel oil) and different locations. The closed fuel oil UST was located immediately off the northwest corner of Bldg. 277, while the two gasoline USTs were across Leonard Avenue, about 100 ft northwest of Bldg. 277.

Under Base Realignment and Closure (BRAC) evaluations, ECP Parcel 94 appears to be located at the T-49 site (Figure 19 in the 2007 BRAC ECP Report, designated as 94[2]PS/PR); however, Parcel 94 is defined as removed fuel oil tanks from Bldgs. 277 and 164, and so is distinct from the T-49 tanks. Therefore, T-49 should be considered as part of Parcel 83. No additional work was done at the T-49 location in the ECP Site Investigation (SI). NJDEP (7/10/2012) correspondence recognized that multiple UST sites were located within Parcel 83 that were not yet closed, although T-49 was not specifically mentioned.

In conclusion, the analytical results support the UST Case Status of "Case Closed." Since the T-49 tanks may have been registered after discovery, and since there was a NJDEP release number opened, NFA from the NJDEP should be obtained.

Recommendations (if any): Request NFA from NJDEP

Signed: _____

Kent A. Friesen, Parsons

ENCLOSURE 1

TECOM-VINNELL SERVICES (TVS) REPORT

Underground Storage Tank Closure and Remedial Investigation Report, Main Post – (former) Building T-49

December 2006

U.S. Army Garrison
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Remedial Investigation Report

Main Post – (former) Building T-49

NJDEP UST Registration No. 90010-76 and 77
NJDEP Case No. 01-05-24-1004-1
USTs No. 90010-76 and 77

December 2006

UNDERGROUND STORAGE TANK CLOSURE AND REMEDIAL INVESTIGATION REPORT

MAIN POST – (FORMER) BUILDING T-49
NJDEP UST REGISTRATION NO. 90010-76 AND 77
NJDEP CASE NO. 01-05-24-1004-1

DECEMBER 2006

PREPARED FOR:

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

PREPARED BY:

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

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Appendix B UST Disposal Certificate
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EXECUTIVE SUMMARY

UST Closure

On May 18, 2001, two single wall steel underground storage tanks (USTs) were closed by removal in accordance with the Directorate of Public Works (DPW) UST Management Plan for the U.S. Army Garrison, Fort Monmouth, New Jersey. The tanks were located in a grass area near Building 277 in the Main Post area of Fort Monmouth. USTs No. 90010-76 and 77 were two single wall steel 5,000-gallon gasoline tanks. The fill port, vent pipe and associated supply/return piping was not present in the excavation. The tank closure was performed by TECOM-Vinnell Services, Inc. (TVS).

Site Assessment

The site assessment was performed by TVS personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. Soils surrounding the tank were screened visually with air monitoring instruments for evidence of contamination. Following removal, the USTs were inspected for holes, of which none were found. However, petroleum odors and stained soils were observed surrounding the tanks.

Post-remediation soil samples were collected after the removal of the USTs and approximately 15 cubic yards of potentially contaminated soils were excavated. Post-remediation samples A, B, C, D, E and F-Duplicate were collected from a total of five (5) locations along the sidewalls and bottom of the excavation. All samples were analyzed for volatile organic analysis (VOA) and lead.

Groundwater was encountered in the bottom of the excavation and a sample of it was collected for analysis. A temporary well piezometer was installed in the location where the USTs were removed. A groundwater sample was collected On December 12, 2002 and also on January 10, 2003.

Findings

The initial post-remediation soil samples collected from the UST excavation associated with former USTs No. 90010-76 and 77, contained several VOA compounds that were detected above the method detection limits. However, the concentrations were well below the NJDEP Direct Contact Soil Cleanup Criteria (N.J.A.C. 7:26E and revisions dated February 3, 1994). Groundwater samples T-49-GW, T-49-GW2 and T-49-GW3 contained lead concentrations of 194.3 ug/L, 40.5 ug/L and 5.1 ug/L, respectively.

Site Restoration

Following receipt of all post-remediation soil sampling results, the excavation was backfilled to grade with uncontaminated excavated soil and clean fill in compacted lifts. The excavation site was then restored to its original grade with four inches of topsoil and seeded.

Conclusions and Recommendations

Based on the post-remediation soil sampling results, soils with VOA concentrations exceeding the NJDEP Direct Contact Soil Cleanup Criteria do not remain in the location of the former USTs. In the samples analyzed for volatile organics, there are no detected compounds that exceed the NJDEP Residential Direct Contact Soil Cleanup Criteria.

No Further Action is proposed in regard to the closure and site assessment of USTs No. 90010-76 and 77.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

Two underground storage tanks (USTs), New Jersey Department of Environmental Protection (NJDEP) Registration No. 90010-76 and 77 were closed in the 400 area of the Main Post at the U.S. Army Garrison, Fort Monmouth, New Jersey on May 18, 2001. Refer to the site location map on Figure 1. This report presents the results of the implementation of the DPW's UST Management Plan, March, 1996. The USTs were two 5,000-gallon, single-walled steel tanks which were used to store gasoline.

Decommissioning activities for USTs No. 90010-76 and 77 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. The closure and subsurface evaluation of the USTs were conducted by a NJDEP licensed TVS employee.

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

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

1.2 SITE DESCRIPTION

Former Building T-49, was located near the intersection of Leonard Avenue and Hazen Drive in the eastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. USTs 90010-76 and 77 were located approximately 100 feet northwest of Building 277. The fill port, vent pipe and appurtenant piping were not encountered in the excavation. A site map is provided in Figure 2. The abandoned tanks were discovered by a contractor while excavating for a natural gas main installation. Review of historical maps concluded that the tanks were used to dispense gasoline at former Building T-49.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the 400 Area. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

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

Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile. The upper member

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

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

Hydrogeology

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

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

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

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

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

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

USTs No. 90010-76 and 77 are located approximately 300 feet southeast of Parker's Creek, the nearest water body, which flows into the Shrewsbury River. Based on the Main Post topography, the groundwater flow in the area of T-49 is anticipated to be to the northwest.

1.3 HEALTH AND SAFETY

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

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- All underground utilities were marked out by the respective trade shops or utility contractor prior to excavation activities.
- All activities were carried out with high regard to safety and health and 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.
- An NJDEP certified Subsurface Evaluator was present during all closure and remediation activities.

1.4.2 Underground Storage Tank Excavation

During decommissioning activities, surficial soil was carefully removed to expose the UST. The tanks were completely empty and contained no liquids prior to removal from the ground.

After the USTs were removed from the excavation, they was staged on an impervious surface, labeled and examined. No holes were found during the inspection by the Subsurface Evaluator. Soils surrounding the USTs were screened visually and with an OVA for evidence of contamination. Soil staining and an odor of petroleum hydrocarbons were observed. It was determined that remedial soil excavation would be conducted prior to sampling. DPW personnel were made aware of the field conditions that existed, prompting them to call the NJDEP Spill Hotline. The NJDEP assigned the site Case No. 01-05-24-1004-1.

1.5 UNDERGROUND STORAGE TANK DECOMMISSIONING AND DISPOSAL

Subsequent to disposal, the USTs were purged with air to remove vapors prior to cutting. A 4 foot by 3 foot access hole was made in the UST using a pneumatic ripper gun with a non-sparking bit. The USTs were cleaned first with rubber squeeges and then with adsorbent material broomed on the sidewalls and bottom. The adsorbent material was then drummed and subsequently placed into Ft. Monmouth's 'Oil Spill Debris' roll-off container for proper disposal. The atmosphere in and around the tanks were monitored using an OVM and an Oxygen/Lower Explosive Level (LEL) meter to ensure safe working conditions during cutting and cleaning activities.

The tanks were then transported by TVS to Beacon Metal Co., Inc., Throckmorton St., Freehold, NJ for disposal in compliance with all applicable regulations and laws. Refer to Appendix C for UST disposal certificate.

The Subsurface Evaluator labeled the USTs with the following information:

- site of origin
- NJDEP UST Facility ID number
- date of removal
- size of tank
- previous contents of tank

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and visual observations, approximately 55 cubic yards of potentially contaminated soil were excavated from the area surrounding the USTs. All soil was loaded into a truck and transported to the Main Post ID 27 Soil Staging Area (located behind Bldg.166). The soil was stockpiled on an impervious concrete pad and covered with heavy duty reinforced polyethylene tarps, prior to recycling at Soil Remediation of Philadelphia. Soils that did not exhibit signs of contamination were separated during the excavation and used as backfill.

2.0 REMEDIAL INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Remedial Investigation was managed by U.S. Army DPW personnel. All analyses were performed and reported by Fort Monmouth Environmental Testing Laboratory, a NJDEP-certified testing laboratory. All sampling was performed by a NJDEP Certified Subsurface Evaluator according to the methods described in the NJDEP Field Sampling Procedures Manual (1992). Sampling frequency and parameters analyzed complied with the NJDEP document *Technical Requirements for Site Remediation, 7:26E-3.9* (June 7, 1993 and revisions dated February 3, 2003) which was the applicable regulation at the date of the closure. All records of the Remedial Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Closure and Remedial Investigation Activities.

- Ft. Monmouth Directorate of Public Works-Environmental Branch
  Contact Person: Joseph Fallon
  Phone Number: (732) 532-6223

- Subsurface Evaluator, Tank Closure: Frank Accorsi
  Employer: TECOM-Vinnell Services, Inc. (TVS)
  Phone Number: (732) 532-5241
  NJDEP License No.: 0010042
  (TVS)NJDEP License No.: US252302

- Analytical Laboratory: Fort Monmouth Environmental Testing Laboratory
  Contact Person: Dan Wright
  Phone Number: (732) 532-4359
  NJDEP Laboratory Certification No.: 13461

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP certified Subsurface Evaluator using an OVM and visual observations to identify potentially contaminated material. Soils were removed from the excavation surrounding USTs No. 90010-76 and 77 until no evidence of contamination remained.

2.3 SOIL AND GROUNDWATER SAMPLING

On May 24, 2001, post-remediation soil samples T-49-A, T-49-B, T-49-C, T-49-D, T49-E and T49-F(duplicate-E) were collected from a total of five (5) locations along the sidewalls and the bottom of the UST excavation. Sample T-49-B was mislabled as being from the north sidewall, it was collected from the south sidewall. Groundwater was encountered in the excavation, in which a sample was collected (T49-GW). On December 12, 2002 a temporary well piezometer was installed. On December 12, 2002 and January 3, 2003 two (2) post-remediation groundwater samples (T-49-GW2 and T-49-GW3, respectively) were collected from the piezometer. Refer to soil sampling location map in Figure 3. All samples were analyzed for VOA and lead. Groundwater samples were also analyzed for semi-volatile analysis (SVOA).

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

Post-remediation soil samples were collected from a total of five locations on May 24, 2001 to evaluate soil conditions following removal of the USTs. All samples were analyzed for VOA and lead. The post-remediation soil sample results were compared to the NJDEP Residential Direct Contact Soil Cleanup Criteria (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided on Table 2 and Table 3. The analytical data package, including associated quality control data, is provided in Appendix D.

Post-remediation soil samples collected on May 24, 2001 from the UST remedial excavation contained concentrations of volatile organic compounds below the NJDEP soil cleanup criteria. Samples T-49-A, T-49-C, T-49-D, T-49-E and T-49-F exhibited some compounds with concentrations above the method detection limits, but below the NJDEP Residential Direct Contact Soil Cleanup Criteria.

3.2 GROUNDWATER SAMPLING RESULTS

Benzene and lead were not detected in any of the soil samples, but they were detected in the groundwater sample collected directly from the excavation. That sample contained benzene at 12.8 ug/L and lead at 194.3 ug/L, which are above the cleanup criteria of 1.0 ug/L and 10.0 ug/L, respectively. These results prompted a further groundwater investigation, in which a temporary groundwater piezometer was installed in the middle of where the former tanks were located using a Geoprobe. Two subsequent rounds of sampling indicated that diminishing levels of benzene and lead were documented. This is due to the fact that the source area has been removed. The groundwater sample collected on December 12, 2002, had concentrations of benzene and lead at Not Detected and 40.5 ug/L, respectively. The groundwater sample collected on January 10, 2003 had concentrations of benzene and lead at Not Dectected and 5.1 ug/L, respectively.

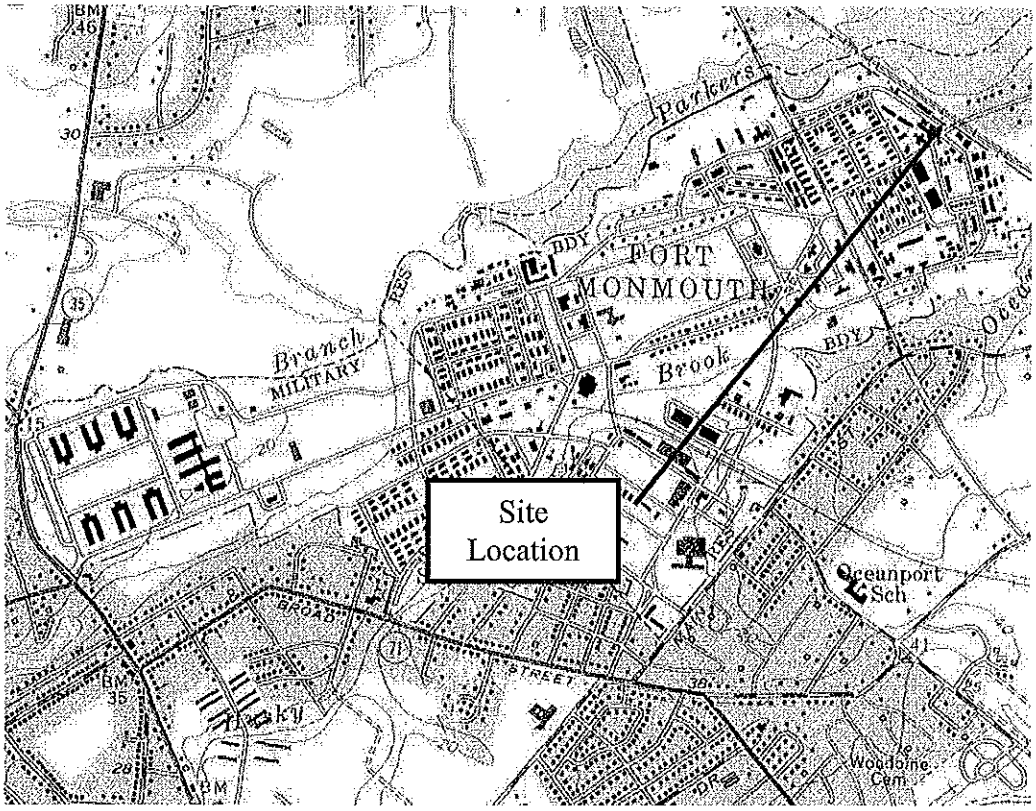
3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all of post-remediation soil samples collected from the UST closure excavation at T-49 were below the NJDEP soil cleanup criteria for volatile organic compounds and lead.

Based on the post-remediation soil sampling results, soils with VOA and lead concentrations exceeding the NJDEP Residential Direct Contact Soil Cleanup Criteria have been excavated from the location of former USTs No. 90010-76 and 77.

No Further Action is proposed in regard to the closure and remedial investigation of USTs No. 90010-76 and 77 at former Building T-49.

FIGURES



SCALE 1:24,000

1 0.5 0 1 MILE

1 0.5 0 1 KILOMETER

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

N

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

FIGURE 1

SITE LOCATION MAP
(FORMER)BUILDING T-49
USTS NO. 90010-76,77
FT. MONMOUTH, NJ

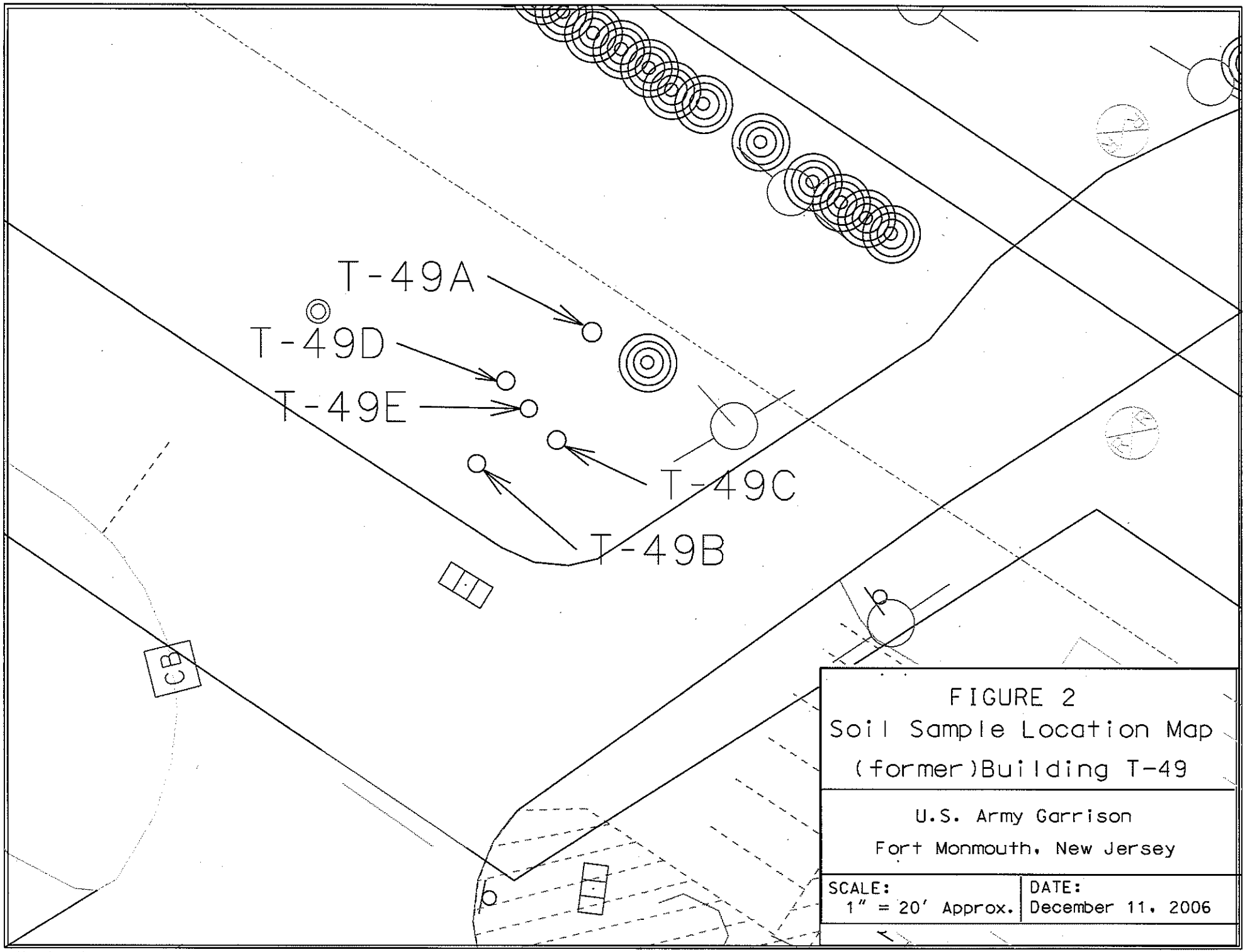


FIGURE 2
Soil Sample Location Map
(former)Building T-49

U.S. Army Garrison
Fort Monmouth, New Jersey

SCALE:	DATE:
1" = 20' Approx.	December 11, 2006

...\Projects\bim_MainPost.dgn 12/11/2006 11:41:00 AM

TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, (former)BUILDING T-49, UST No. 90010-76 and 77
24 May 2001, 12 December 2002, 10 January 2003

SAMPLE ID	LAB SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	SAMPLE LOCATION/ DEPTH	ANALYTICAL PARAMETER	ANALYTICAL METHOD
				(in feet)		
T-49-A	1614201	24-May-01	SOIL	NORTH WALL 5.5 – 6.0	VOA, Lead	SW-846, 8260, 7420
T-49-B	1614202	24-May-01	SOIL	SOUTH WALL 5.5 – 6.0	VOA, Lead	SW-846, 8260, 7420
T-49-C	1614203	24-May-01	SOIL	EAST WALL 5.5 – 6.0	VOA, Lead	SW-846, 8260, 7420
T-49-D	1614204	24-May-01	SOIL	WEST WALL 5.5 – 6.0	VOA, Lead	SW-846, 8260, 7420
T-49-E	1614205	24-May-01	SOIL	BOTTOM 7.0-7.5	VOA, Lead	SW-846, 8260, 7420
T-49-F(dupl-E)	1614206	24-May-01	SOIL	BOTTOM 7.0-7.5	VOA, Lead	SW-846, 8260, 7420
T-49-GW	1614207	24-May-01	AQUEOUS	EXCAVATION 6.0	SVOA, Lead	SW-846, 8260, 8270, 7420
TRIP BLANK	1614208	24-May-01	METHANOL	---	VOA, Lead	SW-846, 8260, 7420
TRIP BLANK	1614209	24-May-01	METHANOL	---	VOA, Lead	SW-846, 8260, 7420
T-49-GW2	2088103	12-Dec-02	AQUEOUS	WELL POINT 6.0	SVOA, Lead	SW-846, 8260, 8270, 7420
T-49-GW3	3001703	10-Jan-03	AQUEOUS	WELL POINT 6.0	SVOA, Lead	SW-846, 8260, 8270, 7420

ABBREVIATIONS:
VOA = Volatile Organic Analysis, EPA SW-846, Method 8260
SVOA = Semi-Volatile Organic Analysis, EPA SW-846, Method 8270
Lead = EPA SW-846, Method 7420

TABLE 2

SUMMARY OF LABORATORY ANALYTICAL RESULTS-SOIL

FT. MONMOUTH, (former) Building T-49, UST No. 90010-76 and 77
24 May 2001
VOLATILE ORGANIC COMPOUNDS, LEAD

SAMPLE ID	SAMPLE DATE	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Lead
UNITS		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
T-49-A	24 May 2001	ND	0.71	ND	ND	ND
T-49-B	24 May 2001	ND	ND	ND	ND	ND
T-49-C	24 May 2001	ND	1.10	ND	ND	ND
T-49-D	24 May 2001	ND	1.60	ND	ND	ND
T-49-E	24 May 2001	ND	0.07	0.26	ND	ND
T-49-F (dupl..-E)	24 May 2001	ND	ND	0.64	0.30	ND
Trip Blank	24 May 2001	ND	ND	ND	ND	ND
NJDEP Criteria	Residential	3	1,000	1,000	410	400

ABBREVIATIONS:
mg/kg = milligrams per kilogram = parts per million (ppm)
ND = Compound Not Detected
NA = Compound Not Analyzed

Notes:
Gray shading indicates exceedance of NJDEP
Residential Direct Contact Soil Cleanup Criteria

TABLE 3

GROUNDWATER ANALYTICAL RESULTS FOR VOLATILE, SEMI-VOLATILE ORGANIC COMPOUNDS, LEAD
BUILDING NO. T-49
FT. MONMOUTH, NEW JERSEY

Sample I.D.	Laboratory I.D.	Sample Date	Benzene	Toluene	Ethyl-benzene	Xylenes (Total)	Naph-thalene	Fluoran-thene	Pyrene	Lead
UNITS:			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
T-49-GW	1614207	24-May-01	12.8	9	198.0	55.0	6.4	2.4	1.7	194.3
T-49-GW2	2088103	12-Dec-02	ND	ND	3.0	ND	ND	ND	ND	40.5
T-49-GW3	3001703	10-Jan-03	ND	ND	ND	ND	ND	ND	ND	5.1
NJDEP CRITERIA:	Ground water		1	1,000	700	NLE	NLE	300	200	10

Abbreviations:

ug/L: micrograms per Liter=parts per billion(ppb)
ND: Indicates compound Not Detected above method detection limits.
NA: Indicates not analyzed.
NLE: No Limit Established.
J: Compound identified below detection limit.

Notes:

Gray shading indicates exceedance of NJDEP Ground Water Quality Criteria

APPENDIX A

CERTIFICATIONS

Site Remediation Program
UST Site Remedial Investigation Report

A. Facility Name: Ft. Monmouth, Main Post, (former) Building T-49

Facility Street Address: Leonard Ave. and Hazen Drive

Municipality: Oceanport County: Monmouth

Block: NA Lot(s): NA Telephone Number: 732-532-6223

B. Owner (RP)'s Name: U.S. Army Garrison - Directorate of Public Works

Street Address: 173 Riverside Ave. City: Ft. Monmouth

State: NJ Zip: 07703 Telephone Number: 732-532-6223

C. (Check as appropriate)

☐ Site Investigation Report (SIR) $500 Fee

☐ Remedial Investigation Report (RIR) $1000 Fee

D. (Complete all that apply)

Assigned Case Manager: Greg Zalaskus

UST Registration Number: 90010-76, 90010, 77 (7 digits)

- Incident Report Number: 01-05-24-1004-1 (10 or 12 digits)
- Tank Closure Number C(N)9____-____ C 9-____ C9____-_____(7 characters)

E. Certification by the Subsurface Evaluator:

The attached report conforms to the specific reporting requirements of N.J.A.C. 7:26E . . . . . Yes No

Name: Frank Accorsi Signature: _____ UST Cert. No.: 0010042

Firm: Tecom-Vinnell Services, Inc. Firm's UST Cert. Number: US252302

Firm Address: P.O. Box 60 City: Ft. Monmouth

State: NJ Zip: 07703 Telephone Number: 732-532-5241

(NOTE: Certification numbers required only if work was conducted on **USTs** regulated per N.J.S.A. 5 8: **10A-2 1** et seq.)

F. Certification by the Responsible Party(ies) of the Facility:

The following certification shall be signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)]as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
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 a principal executive officer or ranking elected Official.

"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 responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I **am** committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I **am** also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Name (Print or Type): _____ Title: _____

Signature: _____

Company Name: _____ Date: _____

APPENDIX B

UST DISPOSAL CERTIFICATE

NAME: Fort Monmouth

MATERIAL: ~~10,000~~ 5000 gl. Tank

PRICE: 50¢ PER LB./~~100~~ 2 LBS.

DRIVER: 2 (ON) OFF

TRUCK: Blue Flat Bed

TRACTOR # _____ TRAILER # _____

ID NO. 2
WEIGHIN 31840 LB

GROSS	31840	LB
W TARE	22960	LB
NET	8880	LB

TIME 15:30 14 NOV 01
TIME 15:07 14 NOV 01

$44.40

BEACON METAL CO., INC.

☒ 215 THROCKMORTON STREET
FREEHOLD, NJ 07728
(732) 462-0543

☐ 73 MAIN STREET
SOUTH AMBOY, NJ 08879
(732) 727-2300

NAME: Fort Monmouth

MATERIAL: ~~10,000~~ 5,000 gl. Tank

PRICE: 50¢ PER LB./~~100~~ 2 LBS.

DRIVER: 2 (ON) OFF

TRUCK: Blue Flat Bed

TRACTOR # _____ TRAILER # _____

ID NO. 3
WEIGHIN 31920 LB

GROSS	31920	LB
W TARE	23040	LB
NET	8880	LB

TIME 11:35 14 NOV 01
TIME 11:19 14 NOV 01

$44.40

BEACON METAL CO., INC.

☒ 215 THROCKMORTON STREET
FREEHOLD, NJ 07728
(732) 462-0543

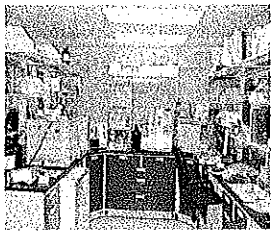
☐ 73 MAIN STREET
SOUTH AMBOY, NJ 08879
(732) 727-2300

APPENDIX C

ANALYTICAL DATA PACKAGES

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: IJO# 01-0001

Bldg. T-49

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
T-49-A North Wall 5.5-6'	16142.01	Soil	24-May-01 10:30	05/24/01
T-49-B North Wall 5.5-6'	16142.02	Soil	24-May-01 11:05	05/24/01
T-49-C East Wall 5.5-6'	16142.03	Soil	24-May-01 10:45	05/24/01
T-49-D West Wall 5.5-6'	16142.04	Soil	24-May-01 11:30	05/24/01
T-49-E Bottom 7-7.5'	16142.05	Soil	24-May-01 11:55	05/24/01
T-49-F Duplicate 7-7.5'	16142.06	Soil	24-May-01 11:55	05/24/01
T-49-G W	16142.07	Aqueous	24-May-01 10:15	05/24/01
Trip Blank	16142.08	Aqueous	24-May-01	05/24/01
Trip Blank	16142.09	Methanol	24-May-01	05/24/01

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15, LEAD, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

7-24-01
Daniel Wright/Date
Laboratory Director

U.S. ARMY - FT. MONMOUTH, NJ

(former)Building T-49 USTs #90010-76, 77
SOIL SAMPLE GPS POSITIONS & COORDINATES

US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

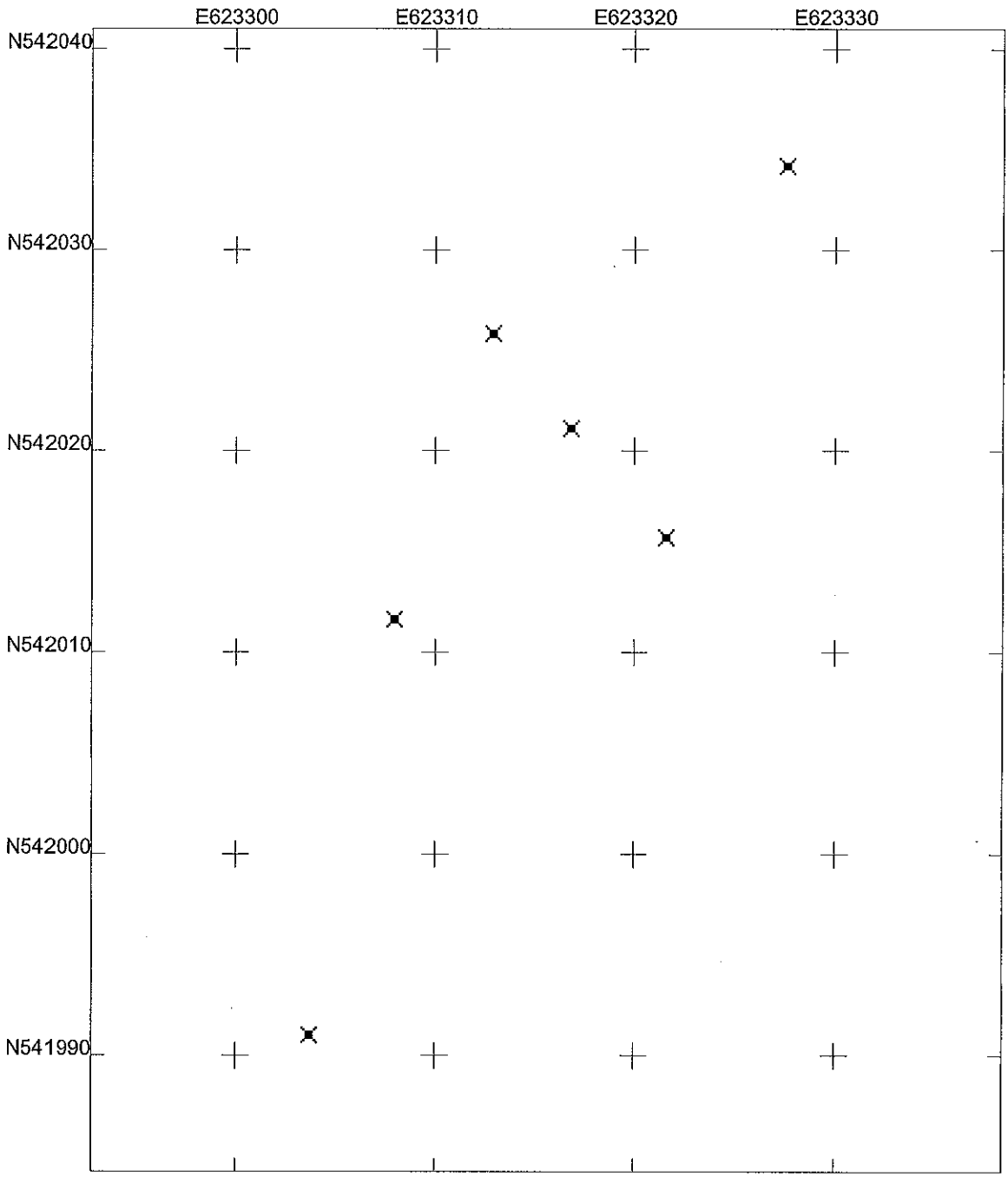
(IN US SURVEY FEET)

SAMPLE POINTS

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
T-49A NORTH WALL	542034.2278	623327.564
T-49B SOUTH WALL	542011.6998	623307.9116
T-49C EAST WALL	542015.7677	623321.5549
T-49D WEST WALL	542025.8956	623312.8759
T-49E BOTTOM	542021.1508	623316.7834

REFERENCE POINT

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
STORM DRAIN	541991.0579	623303.6562



U.S. Army-Ft. Monmouth (former)Building T-49 Soil Sample GPS Locations

US State Plane 1983
New Jersey 2900
NAD 1983 (Conus)

N

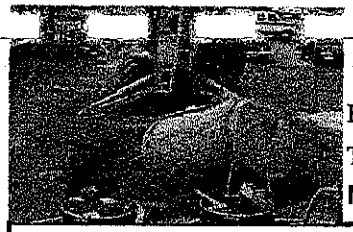
Scale 1:100
0 12.50
US Survey Feet

T49.cor
12/7/2006
GPS Pathfinder
Trimble

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461 / NYDOH Certification #11699

Chain of Custody Record

Customer: Dinker Desai
Phone #: X21475
( )DERA (X)OMA UST Assessment

Project No: ~~10000+~~ 01-0001
Location: (FORMER) BLDG. T-49
UST# 90010 - 76, 77

Samplers Name / Company : Frank Accorsi/TVS

Lab Sample I.D.	Sample Location	Depth (ft.)	Date	Time	Sample Type	# Bottles	Analysis Parameters: TPH/LEAD	% SOLIDS	VOA+10	VOA ID #	PID Reading	* = Samples Kept <4°C / Remarks / Preservation Method
101412.01	T49A - NORTH WALL	5.5-6	5-24-01	1030	SOIL	2	X	X	X	2342	106	ICE
02	T49B - NORTH WALL	5.5-6		1105	SOIL	2	X	X	X	2348	162	
03	T49C - EAST WALL	5.5-6		1045		2	X	X	X	2344	140	
04	T49D - WEST WALL	5.5-6		1130		2	X	X	X	2345	650	
05	T49E - BOTTOM	7-7.5		1155		2	X	X	X	2346	560	
06	T49F - DUPLICATE	7-7.5		1155		2	X	X	X	2347	228	
07	T49-GW	—		1015	AQ	4	X	BN+15	X	—	—	
08	TRIP BLANK	—		—	AQ	2			X	—	—	
09	TRIP BLANK	—		—	AQ	1			X	2349	—	

OVM sn#580U-64455.343 was calibrated with zero air & w/ 245 ppm Isobutylene read 245 ppm. 000 5-24-01 FA (time/date & initial)

Relinquished by (signature):	Date/Time:	Received by (signature):	Comments:
Frank Accorsi	5-24-01 1400		
Relinquished by (signature):	Date/Time:	Received by (signature):	

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: ( )Standard 2 wks, (X)Rush 10 days, ( )ASAP Verbal ___ Hrs.

Remarks: Dedicated Sampling Tools Used
All sample points have been GPS? (X)YES ( ) NO ( ) NA

000002

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USTcoc.xls3/21/00

METHOD SUMMARY

Methodology Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

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

EPA Method 625
Gas Chromatographic Determination of Semi-volatiles in Water

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

EPA SW-846 Method 8260
Gas Chromatographic Determination of Volatiles in Soil

A 5-gram volume of soil sample is added to a 5-ml aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system. Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

Method Summary

EPA SW-846 Method 3051A, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Microwave Assisted Acid Digestion of Soil Samples

Milestone MLS 1200 MEGA
A representative sample of 0.5 to 1.0 g is digested in 8-ml of concentrated Nitric acid and 3-ml of concentrated Hydrochloric acid for 10 minutes using a microwave heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) microvessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to 100-ml volume and analyzed by FLAA.

EPA SW-846 Method 3015A, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Microwave Assisted Acid Digestion of Aqueous Samples

Milestone MLS 1200 MEGA
A representative sample of 45ml is digested in 4 ml of concentrated nitric acid and 1 ml concentrated hydrochloric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) micro-vessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 50-ml volume and analyzed by ICP.

Standard Methods for the Examination of Water and Waste, 18th Ed Method 3113B FLAA PB

Varian SpectrAA-640 Flame Atomic Absorption Spectrometer
A representative aliquot of sample is aspirated into an Acetylene flame. The absorption of hollow cathode or EDL radiation during atomization will be proportional to the Lead concentration.

EPA SW-846 Method 7420, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: FLAA PB

Varian SpectrAA-640 Flame Atomic Absorption Spectrometer
A representative aliquot of sample is aspirated into an Acetylene flame. The absorption of hollow cathode or EDL radiation during atomization will be proportional to the Lead concentration.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 16142 **Site:** Bldg. T-49

	Date	Hold Time
Date Sampled	05/24/01	NA
Receipt/Refrigeration	05/24/01	NA
Extractions		
1. Base Neutral (AQ)	05/25/01	7 days
Analyses		
1. Volatile Organics	05/25,30/01	14 days
2. Base Neutral	06/07/01	40 days
3. Lead	05/31/01, 06/26/01	180 days

CONFORMANCE/ NON CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	Indicate Yes, No, N/A
1. Chromatograms labeled/Compounds identified (Field samples and method blanks)	Yes
2. Retention times for chromatograms provided	yes
3. GC/MS Tune Specifications	
a. BFB Meet Criteria	Yes
b. DFTPP Meet Criteria	Yes
4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series	Yes
5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	Yes
6. GC/MS Calibration requirements	
a. Calibration Check Compounds Meet Criteria	Yes
b. System Performance Check Compounds Meet Criteria	Yes
7. Blank Contamination – If yes, List compounds and concentrations in each blank:	NO
a. VOA Fraction _____	
b. B/N Fraction _____	
c. Acid Fraction NA	
8. Surrogate Recoveries Meet Criteria	NO
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
a. VOA Fraction 1,2-DCE-d4 124.8% 124.2%	
b. B/N Fraction _____	
c. Acid Fraction NA	
If not met, were the calculations checked and the results qualified as "estimated"?	yes
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range)	Yes
a. VOA Fraction _____	
b. B/N Fraction _____	
c. Acid Fraction NA	

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

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

    a. VOA Fraction _____
    b. B/N Fraction _____
    c. Acid Fraction N/A

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: _____ Date: 7-24-01

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

		Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2.	ICP Interference Check Sample Results Meet Criteria	Yes
3.	Serial Dilutions Meet Criteria	NA
4.	Laboratory Control Samples Meet Criteria	Yes
5.	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank	No
6.	Spike Sample Recoveries Meet Criteria	Yes
7.	Duplicates Meet Criteria	Yes
8.	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes

Additional Comments _____

Laboratory Manager _____ Date 7-24-01

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	**:**	**Method Detection Limit**
J	**:**	**Compound identified below detection limit**
B	**:**	**Compound found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

AQUEOUS

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

Data File	**VC005936.D**	Sample Name	**MB**
Operator	**Skelton**	Field ID	**MB**
Date Aquired	**29-May-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB**

Lab Name: FMETL NJDEP#: 13461

Project: 01-0001 Case No.: 16142 Location: T-49 SDG No.:

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

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC005936.D

Level: (low/med) LOW Date Received: 5/24/01

% Moisture: not dec. Date Analyzed: 5/29/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VC005955.D**	Sample Name	**1614208**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Aquired	**30-May-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: 01-0001 Case No.: 16142 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1614208

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC005955.D

Level: (low/med) LOW Date Received: 5/24/01

% Moisture: not dec. Date Analyzed: 5/30/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VC005956.D**	Sample Name	**1614207**
Operator	**Skelton**	Field ID	**T49-GW**
Date Aquired	**30-May-01**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone	8.86	569285	47.48 ug/L	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene	18.61	2063341	12.77 ug/L	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene	23.62	1438589	8.58 ug/L	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene	27.46	28411456	146.19 ug/L	700	0.65 ug/L	E
1330-20-7	m+p-Xylenes	27.66	3725230	48.76 ug/L	nle	1.14 ug/L	
1330-20-7	o-Xylene	28.75	928391	6.21 ug/L	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

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

Data File	**VC005961.D**	Sample Name	**1614207**
Operator	**Skelton**	Field ID	**T49-GW**
Date Aquired	**30-May-01**	Multiplier	**5**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	9.25 ug/L	
107131	Acrylonitrile			not detected	50	13.90 ug/L	
75650	tert-Butyl alcohol			not detected	nle	42.60 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.80 ug/L	
108203	Di-isopropyl ether			not detected	nle	1.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	8.40 ug/L	
74-87-3	Chloromethane			not detected	30	5.80 ug/L	
75-01-4	Vinyl Chloride			not detected	5	5.30 ug/L	
74-83-9	Bromomethane			not detected	10	5.50 ug/L	
75-00-3	Chloroethane			not detected	nle	5.05 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	2.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	1.20 ug/L	
67-64-1	Acetone	8.88	116333	49.20 ug/L	700	6.80 ug/L	D
75-15-0	Carbon Disulfide			not detected	nle	2.30 ug/L	
75-09-2	Methylene Chloride			not detected	2	1.20 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.80 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.60 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	3.90 ug/L	
78-93-3	2-Butanone			not detected	300	3.10 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.85 ug/L	
67-66-3	Chloroform			not detected	6	1.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	1.15 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	2.35 ug/L	
71-43-2	Benzene	18.61	443715	13.96 ug/L	1	1.15 ug/L	D
107-06-2	1,2-Dichloroethane			not detected	2	0.90 ug/L	
79-01-6	Trichloroethene			not detected	1	1.15 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	2.75 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	3.25 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	3.45 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	2.95 ug/L	
108-88-3	Toluene	23.62	398215	12.08 ug/L	1000	1.85 ug/L	D
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	4.35 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	2.40 ug/L	
127-18-4	Tetrachloroethene			not detected	1	1.60 ug/L	
591-78-6	2-Hexanone			not detected	nle	3.55 ug/L	
126-48-1	Dibromochloromethane			not detected	10	4.30 ug/L	
108-90-7	Chlorobenzene			not detected	4	1.95 ug/L	
100-41-4	Ethylbenzene	27.46	7540839	198.01 ug/L	700	3.25 ug/L	D
1330-20-7	m+p-Xylenes	27.65	801242	53.52 ug/L	nle	5.70 ug/L	D
1330-20-7	o-Xylene	28.74	227225	7.76 ug/L	nle	3.10 ug/L	D
100-42-5	Styrene			not detected	100	2.80 ug/L	
75-25-2	Bromoform			not detected	4	3.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	2.35 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.75 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.85 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	3.20 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **T49-GW**

Lab Name: FMETL NJDEP#: 13461

Project: 01-0001 Case No.: 16142 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1614207

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC005956.D

Level: (low/med) LOW Date Received: 5/24/01

% Moisture: not dec. Date Analyzed: 5/30/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 15

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 027133-93-3	2,3-Dihydro-1-methylindene	34.94	64	JN
2.	unknown	11.54	31	J
3. 000096-37-7	Cyclopentane, methyl-	15.20	100	JN
4. 000110-82-7	Cyclohexane	17.45	120	JN
5. 002452-99-5	Cyclopentane, 1,2-dimethyl-	18.43	71	JN
6. 000108-87-2	Cyclohexane, methyl-	20.48	220	JN
7. 000591-47-9	Cyclohexene, 4-methyl-	21.64	38	JN
8.	unknown	22.87	58	J
9. 000591-49-1	Cyclohexene, 1-methyl-	23.07	48	JN
10. 000098-82-8	Benzene, (1-methylethyl)-	29.62	52	JN
11. 000103-65-1	Benzene, propyl-	30.61	41	JN
12. 000611-14-3	Benzene, 1-ethyl-2-methyl-	30.88	33	JN
13. 000611-14-3	Benzene, 1-ethyl-2-methyl-	31.60	31	JN
14. 000496-11-7	Indane	33.76	84	JN
15.	unknown	34.43	37	J

Analytical Data Package 16142 -
Removed the following QC Summary Data sheets for brevity:

- 000022 through 000040
- 000066 through 000087
- 000095 through 000119 and
- 000123 through 000132

(available upon request to FTMM)

SOIL

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC005907.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 0 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	700	U
107131	Acrylonitrile	700	U
75650	tert-Butyl alcohol	1300	U
1634044	Methyl-tert-Butyl ether	300	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	400	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	300	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	300	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	100	U
108-05-4	Vinyl Acetate	300	U
78-93-3	2-Butanone	300	U
	cis-1,2-Dichloroethene	100	U
67-66-3	Chloroform	100	U
75-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	100	U
78-87-5	1,2-Dichloropropane	100	U
75-27-4	Bromodichloromethane	100	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC005907.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 0 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	300	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	300	U
106-46-7	1,4-Dichlorobenzene	300	U
95-50-1	1,2-Dichlorobenzene	300	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC005907.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 0 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614209

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC005908.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 0 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	700	U
107131	Acrylonitrile	700	U
75650	tert-Butyl alcohol	1300	U
1634044	Methyl-tert-Butyl ether	300	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	400	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	300	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	300	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	100	U
108-05-4	Vinyl Acetate	300	U
78-93-3	2-Butanone	5200	
	cis-1,2-Dichloroethene	100	U
67-66-3	Chloroform	100	U
75-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	100	U
78-87-5	1,2-Dichloropropane	100	U
75-27-4	Bromodichloromethane	100	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614209

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC005908.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 0 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	300	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	300	U
106-46-7	1,4-Dichlorobenzene	300	U
95-50-1	1,2-Dichlorobenzene	300	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

Trip Blank

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614209

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC005908.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 0 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49A

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614201

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC005909.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 15.53 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	800	U
107131	Acrylonitrile	800	U
75650	tert-Butyl alcohol	1500	U
1634044	Methyl-tert-Butyl ether	340	U
108203	Di-isopropyl ether	230	U
75718	Dichlorodifluoromethane	460	U
74-87-3	Chloromethane	110	U
75-01-4	Vinyl Chloride	340	U
74-83-9	Bromomethane	230	U
75-00-3	Chloroethane	340	U
75-69-4	Trichlorofluoromethane	230	U
75-35-4	1,1-Dichloroethene	110	U
67-64-1	Acetone	230	U
75-15-0	Carbon Disulfide	110	U
75-09-2	Methylene Chloride	230	U
156-60-5	trans-1,2-Dichloroethene	230	U
75-35-3	1,1-Dichloroethane	110	U
108-05-4	Vinyl Acetate	340	U
78-93-3	2-Butanone	5900	
	cis-1,2-Dichloroethene	110	U
67-66-3	Chloroform	110	U
75-55-6	1,1,1-Trichloroethane	110	U
56-23-5	Carbon Tetrachloride	230	U
71-43-2	Benzene	110	U
107-06-2	1,2-Dichloroethane	230	U
79-01-6	Trichloroethene	110	U
78-87-5	1,2-Dichloropropane	110	U
75-27-4	Bromodichloromethane	110	U
110-75-8	2-Chloroethyl vinyl ether	230	U
10061-01-5	cis-1,3-Dichloropropene	110	U
108-10-1	4-Methyl-2-Pentanone	230	U
108-88-3	Toluene	710	
10061-02-6	trans-1,3-Dichloropropene	230	U
79-00-5	1,1,2-Trichloroethane	230	U
127-18-4	Tetrachloroethene	110	U
591-78-6	2-Hexanone	230	U
126-48-1	Dibromochloromethane	230	U
108-90-7	Chlorobenzene	110	U
100-41-4	Ethylbenzene	230	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49A

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614201

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC005909.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 15.53 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	340	U
1330-20-7	o-Xylene	230	U
100-42-5	Styrene	230	U
75-25-2	Bromoform	230	U
79-34-5	1,1,2,2-Tetrachloroethane	230	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

T49A

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614201

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC005909.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 15.53 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49B

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614202

Sample wt/vol: 9.5 (g/ml) G Lab File ID: VC005910.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 13.02 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	850	U
107131	Acrylonitrile	850	U
75650	tert-Butyl alcohol	1600	U
1634044	Methyl-tert-Butyl ether	360	U
108203	Di-isopropyl ether	240	U
75718	Dichlorodifluoromethane	480	U
74-87-3	Chloromethane	120	U
75-01-4	Vinyl Chloride	360	U
74-83-9	Bromomethane	240	U
75-00-3	Chloroethane	360	U
75-69-4	Trichlorofluoromethane	240	U
75-35-4	1,1-Dichloroethene	120	U
67-64-1	Acetone	240	U
75-15-0	Carbon Disulfide	120	U
75-09-2	Methylene Chloride	240	U
156-60-5	trans-1,2-Dichloroethene	240	U
75-35-3	1,1-Dichloroethane	120	U
108-05-4	Vinyl Acetate	360	U
78-93-3	2-Butanone	6200	
	cis-1,2-Dichloroethene	120	U
67-66-3	Chloroform	120	U
75-55-6	1,1,1-Trichloroethane	120	U
56-23-5	Carbon Tetrachloride	240	U
71-43-2	Benzene	120	U
107-06-2	1,2-Dichloroethane	240	U
79-01-6	Trichloroethene	120	U
78-87-5	1,2-Dichloropropane	120	U
75-27-4	Bromodichloromethane	120	U
110-75-8	2-Chloroethyl vinyl ether	240	U
10061-01-5	cis-1,3-Dichloropropene	120	U
108-10-1	4-Methyl-2-Pentanone	240	U
108-88-3	Toluene	120	U
10061-02-6	trans-1,3-Dichloropropene	240	U
79-00-5	1,1,2-Trichloroethane	240	U
127-18-4	Tetrachloroethene	120	U
591-78-6	2-Hexanone	240	U
126-48-1	Dibromochloromethane	240	U
108-90-7	Chlorobenzene	120	U
100-41-4	Ethylbenzene	240	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49B

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614202

Sample wt/vol: 9.5 (g/ml) G Lab File ID: VC005910.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 13.02 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	360	U
1330-20-7	o-Xylene	240	U
100-42-5	Styrene	240	U
75-25-2	Bromoform	240	U
79-34-5	1,1,2,2-Tetrachloroethane	240	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

T49B

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614202

Sample wt/vol: 9.5 (g/ml) G Lab File ID: VC005910.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 13.02 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49C

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614203

Sample wt/vol: 9.4 (g/ml) G Lab File ID: VC005911.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 19.47 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	910	U
107131	Acrylonitrile	910	U
75650	tert-Butyl alcohol	1700	U
1634044	Methyl-tert-Butyl ether	390	U
108203	Di-isopropyl ether	260	U
75718	Dichlorodifluoromethane	520	U
74-87-3	Chloromethane	130	U
75-01-4	Vinyl Chloride	390	U
74-83-9	Bromomethane	260	U
75-00-3	Chloroethane	390	U
75-69-4	Trichlorofluoromethane	260	U
75-35-4	1,1-Dichloroethene	130	U
67-64-1	Acetone	260	U
75-15-0	Carbon Disulfide	130	U
75-09-2	Methylene Chloride	260	U
156-60-5	trans-1,2-Dichloroethene	260	U
75-35-3	1,1-Dichloroethane	130	U
108-05-4	Vinyl Acetate	390	U
78-93-3	2-Butanone	6900	
	cis-1,2-Dichloroethene	130	U
67-66-3	Chloroform	130	U
75-55-6	1,1,1-Trichloroethane	130	U
56-23-5	Carbon Tetrachloride	260	U
71-43-2	Benzene	130	U
107-06-2	1,2-Dichloroethane	260	U
79-01-6	Trichloroethene	130	U
78-87-5	1,2-Dichloropropane	130	U
75-27-4	Bromodichloromethane	130	U
110-75-8	2-Chloroethyl vinyl ether	260	U
10061-01-5	cis-1,3-Dichloropropene	130	U
108-10-1	4-Methyl-2-Pentanone	260	U
108-88-3	Toluene	1100	
10061-02-6	trans-1,3-Dichloropropene	260	U
79-00-5	1,1,2-Trichloroethane	260	U
127-18-4	Tetrachloroethene	130	U
591-78-6	2-Hexanone	260	U
126-48-1	Dibromochloromethane	260	U
108-90-7	Chlorobenzene	130	U
100-41-4	Ethylbenzene	260	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49C

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614203

Sample wt/vol: 9.4 (g/ml) G Lab File ID: VC005911.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 19.47 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	390	U
1330-20-7	o-Xylene	260	U
100-42-5	Styrene	260	U
75-25-2	Bromoform	260	U
79-34-5	1,1,2,2-Tetrachloroethane	260	U
541-73-1	1,3-Dichlorobenzene	390	U
106-46-7	1,4-Dichlorobenzene	390	U
95-50-1	1,2-Dichlorobenzene	390	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

T49C

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614203

Sample wt/vol: 9.4 (g/ml) G Lab File ID: VC005911.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 19.47 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49D

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614204

Sample wt/vol: 9.3 (g/ml) G Lab File ID: VC005912.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 10.42 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	830	U
107131	Acrylonitrile	830	U
75650	tert-Butyl alcohol	1500	U
1634044	Methyl-tert-Butyl ether	360	U
108203	Di-isopropyl ether	240	U
75718	Dichlorodifluoromethane	480	U
74-87-3	Chloromethane	120	U
75-01-4	Vinyl Chloride	360	U
74-83-9	Bromomethane	240	U
75-00-3	Chloroethane	360	U
75-69-4	Trichlorofluoromethane	240	U
75-35-4	1,1-Dichloroethene	120	U
67-64-1	Acetone	240	U
75-15-0	Carbon Disulfide	120	U
75-09-2	Methylene Chloride	830	
156-60-5	trans-1,2-Dichloroethene	240	U
75-35-3	1,1-Dichloroethane	120	U
108-05-4	Vinyl Acetate	360	U
78-93-3	2-Butanone	6800	
	cis-1,2-Dichloroethene	120	U
67-66-3	Chloroform	120	U
75-55-6	1,1,1-Trichloroethane	120	U
56-23-5	Carbon Tetrachloride	240	U
71-43-2	Benzene	120	U
107-06-2	1,2-Dichloroethane	240	U
79-01-6	Trichloroethene	120	U
78-87-5	1,2-Dichloropropane	120	U
75-27-4	Bromodichloromethane	120	U
110-75-8	2-Chloroethyl vinyl ether	240	U
10061-01-5	cis-1,3-Dichloropropene	120	U
108-10-1	4-Methyl-2-Pentanone	240	U
108-88-3	Toluene	1600	
10061-02-6	trans-1,3-Dichloropropene	240	U
79-00-5	1,1,2-Trichloroethane	240	U
127-18-4	Tetrachloroethene	120	U
591-78-6	2-Hexanone	240	U
126-48-1	Dibromochloromethane	240	U
108-90-7	Chlorobenzene	120	U
100-41-4	Ethylbenzene	240	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49D

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614204

Sample wt/vol: 9.3 (g/ml) G Lab File ID: VC005912.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 10.42 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	360	U
1330-20-7	o-Xylene	240	U
100-42-5	Styrene	240	U
75-25-2	Bromoform	240	U
79-34-5	1,1,2,2-Tetrachloroethane	240	U
541-73-1	1,3-Dichlorobenzene	360	U
106-46-7	1,4-Dichlorobenzene	360	U
95-50-1	1,2-Dichlorobenzene	360	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

T49D

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614204

Sample wt/vol: 9.3 (g/ml) G Lab File ID: VC005912.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 10.42 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49E

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614205

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VC005913.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 18.17 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	790	U
107131	Acrylonitrile	790	U
75650	tert-Butyl alcohol	1500	U
1634044	Methyl-tert-Butyl ether	340	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	450	U
74-87-3	Chloromethane	110	U
75-01-4	Vinyl Chloride	340	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	340	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	110	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	110	U
75-09-2	Methylene Chloride	790	
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	110	U
108-05-4	Vinyl Acetate	340	U
78-93-3	2-Butanone	6100	
	cis-1,2-Dichloroethene	110	U
67-66-3	Chloroform	110	U
75-55-6	1,1,1-Trichloroethane	110	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	110	U
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	110	U
78-87-5	1,2-Dichloropropane	110	U
75-27-4	Bromodichloromethane	110	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	110	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	76	J
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	110	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	110	U
100-41-4	Ethylbenzene	260	

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49E

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614205

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VC005913.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 18.17 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	180	J
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

T49E

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614205

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VC005913.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 18.17 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49F

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614206

Sample wt/vol: 11.4 (g/ml) G Lab File ID: VC005914.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 17.58 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	750	U
107131	Acrylonitrile	750	U
75650	tert-Butyl alcohol	1400	U
1634044	Methyl-tert-Butyl ether	320	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	430	U
74-87-3	Chloromethane	110	U
75-01-4	Vinyl Chloride	320	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	320	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	110	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	110	U
75-09-2	Methylene Chloride	820	
156-60-5	trans-1,2-Dichloroethene	210	U
75-35-3	1,1-Dichloroethane	110	U
108-05-4	Vinyl Acetate	320	U
78-93-3	2-Butanone	7000	
	cis-1,2-Dichloroethene	110	U
67-66-3	Chloroform	110	U
75-55-6	1,1,1-Trichloroethane	110	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	110	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	110	U
78-87-5	1,2-Dichloropropane	110	U
75-27-4	Bromodichloromethane	110	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	110	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	110	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	110	U
591-78-6	2-Hexanone	210	U
126-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	110	U
100-41-4	Ethylbenzene	640	

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

T49F

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614206

Sample wt/vol: 11.4 (g/ml) G Lab File ID: VC005914.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 17.58 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	300	J
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
95-50-1	1,2-Dichlorobenzene	320	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

T49F

Lab Name: FMETL NJDEP # 13461

Project: 01-0001 Case No.: 16142 Location: BldgT- SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1614206

Sample wt/vol: 11.4 (g/ml) G Lab File ID: VC005914.D

Level: (low/med) MED Date Received: 5/24/01

% Moisture: not dec. 17.58 Date Analyzed: 5/25/01

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

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

BASE NEUTRALS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05405.D**	Sample Name	**MB 1841**
Operator	**Skelton**	Misc Info	**25May01**
Date Acquired	**5-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05405.D**	Sample Name	**MB 1841**
Operator	**Skelton**	Misc Info	**25May01**
Date Acquired	**5-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB 1841**

Lab Name: FMETL Lab Code 13461

Project: 01-0001 Case No.: 16142 Location: T49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB 1841

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05405.D

Level: (low/med) LOW Date Received: 5/24/01

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/5/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05448.D**	Sample Name	**1614207**
Operator	**Skelton**	Misc Info	**T49-GW**
Date Acquired	**7-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene	13.08	341040	6.39 ug/L	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene	14.73	195504	5.64 ug/L	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene	17.33	35763	1.18 ug/L	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene	18.59	37016	1.08 ug/L	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene	20.91	97360	1.79 ug/L	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene	23.81	136689	2.40 ug/L	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05448.D**	Sample Name	**1614207**
Operator	**Skelton**	Misc Info	**T49-GW**
Date Acquired	**7-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene	24.35	104091	1.74 ug/L	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **T49 GW**

Lab Name: FMETL Lab Code 13461

Project: 01-0001 Case No.: 16142 Location: T49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1614207

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05448.D

Level: (low/med) LOW Date Received: 5/24/01

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/7/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 15 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown	6.41	18	J
2.		unknown	6.84	15	J
3.		unknown	7.04	59	J
4.		unknown	7.18	18	J
5.	003728-54-9	Cyclohexane, 1-ethyl-2-methyl-	7.98	16	JN
6.		unknown	8.25	16	J
7.	000098-82-8	Benzene, (1-methylethyl)-	8.34	30	JN
8.		unknown	8.45	25	J
9.		unknown	8.80	18	J
10.	000620-14-4	Benzene, 1-ethyl-3-methyl-	9.42	23	JN
11.	000526-73-8	Benzene, 1,2,3-trimethyl-	9.71	16	JN
12.	000496-11-7	Indane	10.49	75	JN
13.	000141-93-5	Benzene, 1,3-diethyl-	10.67	22	JN
14.		unknown	11.31	44	J
15.		unknown	12.44	59	J

LEAD

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #:16142
Sample Received: 5/24/01
Analysis Start: 6/26/01
Analysis Completed: 6/26/01

Site:Former Bldg. T-49

Matrix: Aq

Method of Analysis: Std Methods 18th, Method 3113B
Method of Digestion: Method – 3015 A

TEST PARAMETER: Lead

Laboratory ID	Sample Location Identification	Result (ug/L)	MDL (ug/L)
1614207	T49-GW	194.3	8.0

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable

Completed: 06/26/01
Reviewed: 07/16/01

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #:16142
Sample Received: 5/24/01
Analysis Start: 5/31/01
Analysis Completed: 5/31/01

Site:Former Bldg. T-49

Matrix: Soil

Method of Analysis: E.P.A. SW-846, Method 7420
Method of Digestion: E.P.A. SW-846, Method 3051A

TEST PARAMETER: Lead

Laboratory I.D. #	Sample Location	RESULT (mg/Kg)	MDL (mg/Kg)
16142.01	T49A - North Wall	ND	26.9
16142.02	T49B - North Wall	ND	30.3
16142.03	T49C - East Wall	ND	28.2
16142.04	T49D - West Wall	ND	25.4
16142.05	T49E - Bottom	ND	26.6
16142.06	T49F - Duplicate	ND	27.6

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature _____

Date 7/21/21

Laboratory Certification #13461

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

Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-4359 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

T-49

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
T. B.	2088101	Aqueous	12-Dec-02	12/12/02
F. B.	2088102	Aqueous	12-Dec-02 09:45	12/12/02
T-49/6.3'	2088103	Aqueous	12-Dec-02 10:10	12/12/02

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

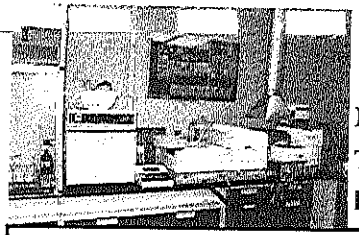
ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

1-6-03
Daniel Wright/Date
Laboratory Director

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DESAI
Phone #: 12175
( )DERA (✓)OMA ( )Other:_____

Project No: 02-12539
Location: T-49

Samplers Name / Company: MARK LAURA - TVS-PWS07

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	VOA+15	BN+15	TAL METAL					Remarks / Preservation Method
20881 1	T.B.	12-12-02	—	AQ.	2	X							4oc, HCl, HNO3
2	F.B.	↓	0945	AQ.	4	X	X	X					↓
3	T-49	↓	1010	AQ.	4	X	X	X					

Analysis Parameters

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Mark Laura	12-12-02 1030	J. Villyna			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, (_)Rush ____ Days, (_)ASAP Verbal ____Hrs.

Remarks:

000002

print legibly

Coc11/21/02

METHOD SUMMARY

Method Summary

EPA Method 624 – Aqueous
Gas Chromatographic Determination of Volatiles in Water

A 5-ml volume of sample is added to 5-ml aliquot of water. Surrogates and internal standards are added and the sample is placed on a purge and trap concentrator. The sample is purged and desorbed into a GC/MS system. Volatiles are then identified and quantitated.

EPA Method 3510/625
Gas Chromatographic Determination of Semi-volatiles in Water

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

EPA SW-846 Method 3115B, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 45ml is digested in 4 ml of concentrated nitric acid and 1 ml concentrated hydrochloric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) micro-vessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 50-ml volume and analyzed by ICP.

Standard Methods for the Examination of Water and Wastewater 18th Edition, Method 3120B: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 7470A, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: Mercury

Varian SpectrAA-640, VGA-77

The flameless AA procedure is a physical method based on the absorption of radiation at 253.7 nm by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrometer. Absorbency (peak height) is measured as a function of mercury concentration and recorded in the usual manner.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 20881 **Site:** T-49

	Date	Hold Time
Date Sampled	12/12/02	NA
Receipt/Refrigeration	12/12/02	NA
Extractions		
1. Base Neutrals	12/16/02	7 Days
Analyses		
1. Volatile Organics	12/14/02	14 Days
2. Base Neutrals	12/19/02	40 Days
3. Metals	12/26/02	6 Months
4. Mercury	12/23/02	28 Days

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms labeled/Compounds identified
   (Field samples and method blanks) — yes

2. Retention times for chromatograms provided — yes

3. GC/MS Tune Specifications

   a. BFB Meet Criteria — yes
   b. DFTPP Meet Criteria — yes

4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series — yes

5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — yes

6. GC/MS Calibration requirements

   a. Calibration Check Compounds Meet Criteria — yes
   b. System Performance Check Compounds Meet Criteria — yes

7. Blank Contamination – If yes, List compounds and concentrations in each blank: — no

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

8. Surrogate Recoveries Meet Criteria — yes

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

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

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

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria — yes
   (If not met, list those compounds and their recoveries, which fall outside the acceptable range)

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

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

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

    a. VOA Fraction_____
    b. B/N Fraction_____
    c. Acid Fraction_____

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager:_____ Date: 1-6-03

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

		Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2.	ICP Interference Check Sample Results Meet Criteria	Yes
3.	Serial Dilutions Meet Criteria Fe 14.5 K 11.1 Na 27.9	No
4.	Laboratory Control Samples Meet Criteria	Yes
5.	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank CCB Cu .004 PB Al .062 Ba .0025 Ca .204 Mg .013 Mn .0036, K .255 Tl .0049	Yes
6.	Spike Sample Recoveries Meet Criteria Fe 126 Mn 128	No
7.	Duplicates Meet Criteria	Yes
8.	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes

Additional Comments _____

Laboratory Manager _____ Date 1-6-03

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	:	Method Detection Limit
J	:	Compound identified below detection limit
B	:	Compound found in blank
D	:	Results are from a dilution of the sample
U	:	Compound searched for but not detected
E	:	Compound exceeds calibration limit
PQL	:	Practical Quantitation Limit
NLE	:	No limit established
RT	:	Retention time

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

Data File	VB012349.D	Sample Name	MB 13Dec02
Operator	Skelton	Field ID	MB 13Dec02
Date Acquired	13 Dec 2002 8:58 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID. **MB 13Dec02**

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 20881 Location: T-49 SDG No.: UST

Matrix: (soil/water) WATER Lab Sample ID: MB 13Dec02

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012349.D

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

% Moisture: not dec. _____ Date Analyzed: 12/13/02

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	VB012370.D	Sample Name	2088101
Operator	Skelton	Field ID	Trip Blank
Date Acquired	14 Dec 2002 11:22 am	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform	16.62	113203	1.65 ug/L	6	0.30 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Trip Blank

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 20881 Location: T-49 SDG No.: UST

Matrix: (soil/water) WATER Lab Sample ID: 2088101

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012370.D

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

% Moisture: not dec. Date Analyzed: 12/14/02

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VB012371.D**	Sample Name	**2088102**
Operator	**Skelton**	Field ID	**Field Blank**
Date Acquired	**14 Dec 2002 12:03 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform	16.62	132088	1.91 ug/L	6	0.30 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Field Blank

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 20881 Location: T-49 SDG No.: UST

Matrix: (soil/water) WATER Lab Sample ID: 2088102

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012371.D

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

% Moisture: not dec. Date Analyzed: 12/14/02

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VB012372.D**	Sample Name	**2088103**
Operator	**Skelton**	Field ID	**T-49**
Date Acquired	**14 Dec 2002 12:45 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene	26.88	480579	3.02 ug/L	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID. **T-49**

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 20881 Location: T-49 SDG No.: UST

Matrix: (soil/water) WATER Lab Sample ID: 2088103

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012372.D

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

% Moisture: not dec. Date Analyzed: 12/14/02

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 10

	CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.		unknown hydrocarbon	6.40	10	J
2.	000107-83-5	Pentane, 2-methyl-	10.98	55	JN
3.	000096-14-0	Pentane, 3-methyl-	11.95	69	JN
4.	000096-37-7	Cyclopentane, methyl-	15.04	81	JN
5.	000110-82-7	Cyclohexane	17.07	97	JN
6.	001638-26-2	Cyclopentane, 1,1-dimethyl-	17.60	40	JN
7.	002453-00-1	Cyclopentane, 1,3-dimethyl-	18.25	20	JN
8.	000822-50-4	Cyclopentane, 1,2-dimethyl-, tran	18.41	18	JN
9.		unknown hydrocarbon	20.23	36	J
10.	006876-23-9	Cyclohexane, 1,2-dimethyl-, trans	23.66	11	JN

Analytical Data Package 20881 -
Removed the following QC Summary Data sheets for brevity:

- 000022 through 000037
- 000048 through 000073
- 000078 through 000086

(available upon request to FTMM)

BASE NEUTRALS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN06035.D**	Sample Name	**MB-121602**
Operator	**B.Patel**	Misc Info	**MB-121602**
Date Acquired	**19-Dec-02**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.27	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.78	ug/L	
62-53-3	Aniline			not detected	NLE	1.11	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.10	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.90	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.80	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.93	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.99	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	1.01	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.88	ug/L	
98-95-3	Nitrobenzene			not detected	10	1.15	ug/L	
78-59-1	Isophorone			not detected	100	0.92	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.83	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.66	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.68	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.24	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.84	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.62	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.53	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.81	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.86	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.79	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.84	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.95	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.66	ug/L	
83-32-9	Acenaphthene			not detected	400	0.86	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.85	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.86	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.71	ug/L	
86-73-7	Fluorene			not detected	300	0.86	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.67	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.19	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.83	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.75	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.66	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.61	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.84	ug/L	
120-12-7	Anthracene			not detected	2000	0.72	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.61	ug/L	
206-44-0	Fluoranthene			not detected	300	0.60	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN06035.D**	Sample Name	**MB-121602**
Operator	**B.Patel**	Misc Info	**MB-121602**
Date Acquired	**19-Dec-02**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.71	ug/L	
129-00-0	Pyrene			not detected	200	0.89	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.67	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.69	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.79	ug/L	
218-01-9	Chrysene			not detected	20	0.91	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.06	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.59	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.88	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.96	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.72	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.56	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.91	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.66	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-121602

Lab Name: FMETL Lab Code 13461

Project: 02-12539 Case No.: 20881 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-121602

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN06035.D

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

% Moisture: decanted: (Y/N) N Date Extracted: 12/16/02

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/02

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.70	6	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN06045.D**	Sample Name	**2088102**
Operator	**B.Patel**	Misc Info	**Field Blank**
Date Acquired	**19-Dec-02**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.27	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.78	ug/L	
62-53-3	Aniline			not detected	NLE	1.11	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.10	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.90	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.80	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.93	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.99	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	1.01	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.88	ug/L	
98-95-3	Nitrobenzene			not detected	10	1.15	ug/L	
78-59-1	Isophorone			not detected	100	0.92	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.83	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.66	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.68	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.24	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.84	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.62	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.53	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.81	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.86	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.79	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.84	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.95	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.66	ug/L	
83-32-9	Acenaphthene			not detected	400	0.86	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.85	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.86	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.71	ug/L	
86-73-7	Fluorene			not detected	300	0.86	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.67	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.19	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.83	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.75	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.66	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.61	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.84	ug/L	
120-12-7	Anthracene			not detected	2000	0.72	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.61	ug/L	
206-44-0	Fluoranthene			not detected	300	0.60	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN06045.D**	Sample Name	**2088102**
Operator	**B.Patel**	Misc Info	**Field Blank**
Date Acquired	**19-Dec-02**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.71	ug/L	
129-00-0	Pyrene			not detected	200	0.89	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.67	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.69	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.79	ug/L	
218-01-9	Chrysene			not detected	20	0.91	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.06	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.59	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.88	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.96	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.72	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.56	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.91	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.66	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Field Blank

Lab Name: FMETL Lab Code 13461

Project: 02-12539 Case No.: 20881 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 2088102

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN06045.D

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

% Moisture: decanted: (Y/N) N Date Extracted: 12/16/02

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/02

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.70	10	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN06046.D**	Sample Name	**2088103**
Operator	**B.Patel**	Misc Info	**T-49**
Date Acquired	**19-Dec-02**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.27	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.78	ug/L	
62-53-3	Aniline			not detected	NLE	1.11	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.10	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.90	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.80	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.93	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.99	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	1.01	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.88	ug/L	
98-95-3	Nitrobenzene			not detected	10	1.15	ug/L	
78-59-1	Isophorone			not detected	100	0.92	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.83	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.66	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.68	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.24	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.84	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.62	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.53	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.81	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.86	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.79	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.84	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.95	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.66	ug/L	
83-32-9	Acenaphthene			not detected	400	0.86	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.85	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.86	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.71	ug/L	
86-73-7	Fluorene			not detected	300	0.86	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.67	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.19	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.83	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.75	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.66	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.61	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.84	ug/L	
120-12-7	Anthracene			not detected	2000	0.72	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.61	ug/L	
206-44-0	Fluoranthene			not detected	300	0.60	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN06046.D**	Sample Name	**2088103**
Operator	**B.Patel**	Misc Info	**T-49**
Date Acquired	**19-Dec-02**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.71	ug/L	
129-00-0	Pyrene			not detected	200	0.89	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.67	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.69	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.79	ug/L	
218-01-9	Chrysene			not detected	20	0.91	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.06	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.59	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.88	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.96	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.72	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.56	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.91	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.66	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
PQL= Practical Quantitation Limit

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

T-49

Lab Name: FMETL Lab Code 13461

Project: 02-12539 Case No.: 20881 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 2088103

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN06046.D

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

% Moisture: decanted: (Y/N) N Date Extracted: 12/16/02

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/02

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.70	13	J

TAL METALS

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 0770

Lab ID #:
Sample Prepared: 12/17/02

Site: TVS-PWS07
Ft. Monmouth, New Jersey

Field ID#: Method Blank

Method of Digestion: E.P.A SW-846, Method 3015A
Method of Analysis: Std. Methods 18th, Method 3120B, 3112B

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	12/26/02	61.8	200	10.0
Antimony	12/26/02	ND	20	2.0
Arsenic	12/26/02	ND	8	2.0
Barium	12/26/02	2.45	2000	0.5
Beryllium	12/26/02	ND	20	0.5
Cadmium	12/26/02	ND	4	0.5
Calcium	12/26/02	204	NLE	20.0
Chromium	12/26/02	ND	100	0.5
Cobalt	12/26/02	ND	NLE	0.5
Copper	12/26/02	ND	1000	2.0
Iron	12/26/02	ND	300	10.0
Lead	12/26/02	ND	10	1.0
Magnesium	12/26/02	12.5	NLE	10.0
Manganese	12/26/02	3.58	50	0.5
Mercury	12/26/02	ND	2	0.1
Nickel	12/26/02	ND	100	1.0
Potassium	12/26/02	255	NLE	40.0
Selenium	12/26/02	ND	50	3.0
Silver	12/26/02	ND	20	1.0
Sodium	12/26/02	ND	50000	20.0
Thallium	12/26/02	4.87	10	2.0
Vanadium	12/26/02	ND	NLE	0.5
Zinc	12/26/02	ND	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 2088102
Sample Received: 12/12/02
Sample Matrix: Aqueous

Site: TVS-PWS07
Ft. Monmouth, New Jersey

Field ID#: Field Blank

Method of Digestion: E.P.A SW-846, Method 3015A
Method of Analysis: Std. Methods 18th, Method 3120B, 3112B

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	12/26/02	54.4	200	10.0
Antimony	12/26/02	3.17	20	2.0
Arsenic	12/26/02	ND	8	2.0
Barium	12/26/02	1.40	2000	0.5
Beryllium	12/26/02	ND	20	0.5
Cadmium	12/26/02	ND	4	0.5
Calcium	12/26/02	270	NLE	20.0
Chromium	12/26/02	ND	100	0.5
Cobalt	12/26/02	ND	NLE	0.5
Copper	12/26/02	2.75	1000	2.0
Iron	12/26/02	ND	300	10.0
Lead	12/26/02	ND	10	1.0
Magnesium	12/26/02	115	NLE	10.0
Manganese	12/26/02	0.899	50	0.5
Mercury	12/23/02	ND	2	0.1
Nickel	12/26/02	ND	100	1.0
Potassium	12/26/02	151	NLE	40.0
Selenium	12/26/02	ND	50	3.0
Silver	12/26/02	2.33	20	1.0
Sodium	12/26/02	967	50000	20.0
Thallium	12/26/02	ND	10	2.0
Vanadium	12/26/02	ND	NLE	0.5
Zinc	12/26/02	ND	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 0770

Lab ID #: 2088103
Sample Received: 12/12/02
Sample Matrix: Aqueous

Site: TVS-PWS07
Ft. Monmouth, New Jersey

Field ID#: T-49

Method of Digestion: E.P.A SW-846, Method 3015A
Method of Analysis: Std. Methods 18th, Method 3120B, 3112B

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	MDL (ug/L)
Aluminum	12/26/02	4380	200	10.0
Antimony	12/26/02	8.23	20	2.0
Arsenic	12/26/02	5.37	8	2.0
Barium	12/26/02	74.4	2000	0.5
Beryllium	12/26/02	0.875	20	0.5
Cadmium	12/26/02	0.906	4	0.5
Calcium	12/26/02	84000	NLE	20.0
Chromium	12/26/02	19.0	100	0.5
Cobalt	12/26/02	3.68	NLE	0.5
Copper	12/26/02	170	1000	2.0
Iron	12/26/02	17400	300	10.0
Lead	12/26/02	40.5	10	1.0
Magnesium	12/26/02	12500	NLE	10.0
Manganese	12/26/02	480	50	0.5
Mercury	12/23/02	ND	2	0.1
Nickel	12/26/02	5.60	100	1.0
Potassium	12/26/02	2990	NLE	40.0
Selenium	12/26/02	ND	50	3.0
Silver	12/26/02	ND	20	1.0
Sodium	12/26/02	65800	50000	20.0
Thallium	12/26/02	ND	10	2.0
Vanadium	12/26/02	48.3	NLE	0.5
Zinc	12/26/02	96.3	5000	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6

SampleID	Analyte	Mean
2088102	Ag 328.068	2.33 µg/L
	Ag 338.289	ND
	Al 308.215 R	54.4 µg/L
	As 188.979	ND
	Ba 233.527	1.40 µg/L
	Be 313.107	ND
	Ca 315.887 R	270 µg/L
	Cd 226.502	ND
	Co 228.616	ND
	Cr 267.716	ND
	Cu 324.754	2.75 µg/L
	Fe 302.107 R	ND
	K 766.491 R	151 µg/L
	Mg 279.079 R	115 µg/L
	Mn 257.610	0.899 µg/L
	Na 330.237 R	967 µg/L
	Ni 231.604	ND
	Pb 220.353	ND
	Sb 206.833	3.17 µg/L
	Se 196.026	ND
	Tl 190.800	ND
	V 292.402	ND
	Zn 206.200	ND

SampleID	Analyte	Mean
2088103	Ag 328.068	ND
	Ag 338.289	ND
	Al 308.215 R	4380 µg/L
	As 188.979	5.37 µg/L
	Ba 233.527	74.4 µg/L
	Be 313.107	0.875 µg/L
	Ca 315.887 R	84000 µg/L
	Cd 226.502	0.906 µg/L
	Co 228.616	3.68 µg/L
	Cr 267.716	19.0 µg/L
	Cu 324.754	170 µg/L
	Fe 302.107 R	17400 µg/L
	K 766.491 R	2990 µg/L
	Mg 279.079 R	12500 µg/L
	Mn 257.610	480 µg/L
	Na 330.237 R	65800 µg/L
	Ni 231.604	5.60 µg/L
	Pb 220.353	40.5 µg/L
	Sb 206.833	8.23 µg/L
	Se 196.026	ND
	Tl 190.800	ND
	V 292.402	48.3 µg/L
	Zn 206.200	96.3 µg/L

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature

Date 1/6/03

Laboratory Certification #13461

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

Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-4359 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

T-49/Round 2

Field Sample Location	Laboratory Sample ID	Matrix	Date and Time of Collection	Date Received
Trip Blank	3001701	Aqueous	10-Jan-03	01/10/03
Field Blank	3001702	Aqueous	10-Jan-03 13:59	01/10/03
T-49	3001703	Aqueous	10-Jan-03 14:05	01/10/03

ANALYSIS:

FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15, TAL METALS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

3-19-03
Daniel Wright/Date
Laboratory Director

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: D. DeAsi
Phone #: (732)532-1475
( )DERA ( )OMA ( )Other:_____

Project No: 02-12539
Location: T-49
Rnd 2

Samplers Name / Company: Corey McCormack, TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	VOA+15	BN+15	TAL Mets						Comments: Remarks / Preservation Method
30017 01	Trip	1/10/03	1345	AQ	2	✓								HCL/HNO3/4°C
02	Field Blank		1359		4	✓	✓	✓						
03	T-49		1405		4	✓	✓	✓						Odor while bailing
														No Mno hit through
														copy

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Corey McCormack	1/10/03 1425	J. Vergara			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, (_)Rush ____ Days, (_)ASAP Verbal ____Hrs.

Remarks:

000002

print legibly

Coc12/30/02

T-49 UST GPS Positions & Coordinates

(In US Survey Feet)

US State Plane 1983

Sample Points

Position / Desc.	Northing	Easting
T49GW	542026.613	623319.045

Reference Points

Storm Grate	541990.248	623305.409

METHOD SUMMARY

Methodology Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

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

EPA Method 625
Gas Chromatographic Determination of Semi-volatiles in Water

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

EPA SW-846 Method 3115B, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 45ml is digested in 4 ml of concentrated nitric acid and 1 ml concentrated hydrochloric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) micro-vessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 50 ml volume and analyzed by ICP.

Standard Methods for the Examination of Water and Wastewater 18th Edition, Method 3120B: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 7470A, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: Mercury

Varian SpectrAA-640, VGA-77

The flameless AA procedure is a physical method based on the absorption of radiation at 253.7 nm by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrometer. Absorbency (peak height) is measured as a function of mercury concentration and recorded in the usual manner.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 30017 **Site:** T-49

	Date	Hold Time
Date Sampled	01/10/03	NA
Receipt/Refrigeration	01/10/03	NA
Extractions		
1. Base Neutrals	01/13/03	7 Days
Analyses		
1. Volatile Organics	01/22,23/03	14 Days
2. Base Neutrals	01/14,15/03	40 Days
3. Metals	01/22/03	6 Months
4. Mercury	01/24/03	28 Days

CONFORMANCE/ NON-CONFROMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

1. Chromatograms labeled/Compounds identified (Field samples and method blanks) — yes
2. Retention times for chromatograms provided — yes
3. GC/MS Tune Specifications
   a. BFB Meet Criteria — yes
   b. DFTPP Meet Criteria — yes
4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series — yes
5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — yes
6. GC/MS Calibration requirements
   a. Calibration Check Compounds Meet Criteria — yes
   b. System Performance Check Compounds Meet Criteria — yes
7. Blank Contamination – If yes, List compounds and concentrations in each blank: — no
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction N/A
8. Surrogate Recoveries Meet Criteria — yes

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction N/A

   If not met, were the calculations checked and the results qualified as "estimated"? _____
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — yes
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction N/A

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

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

    a. VOA Fraction _____
    b. B/N Fraction _____
    c. Acid Fraction N/A

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: _____ Date: 3-19-03

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

		Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	yes
2.	ICP Interference Check Sample Results Meet Criteria	yes
3.	Serial Dilutions Meet Criteria	yes
4.	Laboratory Control Samples Meet Criteria	yes
5.	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank Al 59.6 As 2.3 Co 187 Cr 0.821 Fe 136 Pb 4.2 Mg 129 Mn 1.21 K 1970 Se 6.78 Na 739	yes
6.	Spike Sample Recoveries Meet Criteria Fe 149% Ag 72%	no
7.	Duplicates Meet Criteria	yes
8.	Analysis Holding Time Met If not met, list number of days exceeded for each sample	yes

Additional Comments _____

Laboratory Manager _____ Date 3-19-03

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	**:**	**Method Detection Limit**
J	**:**	**Compound identified below detection limit**
B	**:**	**Compound found in blank**
D	**:**	**Results are from a dilution of the sample**
U	**:**	**Compound searched for but not detected**
E	**:**	**Compound exceeds calibration limit**
PQL	**:**	**Practical Quantitation Limit**
NLE	**:**	**No limit established**
RT	**:**	**Retention time**

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

Data File	VB012670.D	Sample Name	MB 22Jan03
Operator	Skelton	Field ID	MB 22Jan03
Date Acquired	22 Jan 2003 6:58 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	50	1.85 ug/L	20.00 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	20.00 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	2.00 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated value.

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID. **MB 22Jan03**

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 30017 Location: T-49 SDG No.: Rd 2

Matrix: (soil/water) WATER Lab Sample ID: MB 22Jan03

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012670.D

Level: (low/med) LOW Date Received: 1/10/03

% Moisture: not dec. Date Analyzed: 1/22/03

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VB012685.D**	Sample Name	**3001701**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Acquired	**23 Jan 2003 5:15 am**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	50	1.85 ug/L	20.00 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	20.00 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	2.00 ug/L	
67-66-3	Chloroform	17.05	202100	2.02 ug/L	6	0.30 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	2.00 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated value.

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Trip Blank

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 30017 Location: T-49 SDG No.: Rd 2

Matrix: (soil/water) WATER Lab Sample ID: 3001701

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012685.D

Level: (low/med) LOW Date Received: 1/10/03

% Moisture: not dec. Date Analyzed: 1/23/03

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VB012686.D**	Sample Name	**3001702**
Operator	**Skelton**	Field ID	**Field Blank**
Date Acquired	**23 Jan 2003 5:56 am**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	50	1.85 ug/L	20.00 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	20.00 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	2.00 ug/L	
67-66-3	Chloroform	17.05	201421	2.00 ug/L	6	0.30 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	2.00 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated value.

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Field Blank

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 30017 Location: T-49 SDG No.: Rd 2

Matrix: (soil/water) WATER Lab Sample ID: 3001702

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012686.D

Level: (low/med) LOW Date Received: 1/10/03

% Moisture: not dec. _____ Date Analyzed: 1/23/03

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VB012687.D**	Sample Name	**3001703**
Operator	**Skelton**	Field ID	**T-49**
Date Acquired	**23 Jan 2003 6:37 am**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	50	1.85 ug/L	20.00 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	20.00 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	2.00 ug/L	
124-48-1	Bromodichloromethane			not detected	1	0.55 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.62 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated value.

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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3/17/03 10:21 AM

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID. **T-49**

Lab Name: FMETL Project: 02-12539

NJDEP#: 13461 Case No.: 30017 Location: T-49 SDG No.: Rd 2

Matrix: (soil/water) WATER Lab Sample ID: 3001703

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB012687.D

Level: (low/med) LOW Date Received: 1/10/03

% Moisture: not dec. _____ Date Analyzed: 1/23/03

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Analytical Data Package 30017 -
Removed the following QC Summary Data sheets for brevity:

- 000023 through 000038
- 000049 through 000068
- 000073 through 000080

(available upon request to FTMM)

BASE NEUTRALS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN06095.D**	Sample Name	**MB-011303**
Operator	**B.Patel**	Misc Info	**MB-011303**
Date Acquired	**14-Jan-03**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.27	10.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.78	10.00	ug/L	
62-53-3	Aniline			not detected	NLE	1.11	10.00	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.10	10.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.90	10.00	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.80	10.00	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.93	10.00	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.99	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.96	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	1.01	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.88	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	10	1.15	10.00	ug/L	
78-59-1	Isophorone			not detected	100	0.92	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.83	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.66	10.00	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.68	10.00	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.24	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.84	10.00	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.62	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.53	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.81	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.86	10.00	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.79	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.84	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.95	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.66	10.00	ug/L	
83-32-9	Acenaphthene			not detected	400	0.86	10.00	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.85	10.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.86	10.00	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.71	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.86	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.67	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.19	10.00	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.83	10.00	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.75	10.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.66	10.00	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.61	10.00	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.84	10.00	ug/L	
120-12-7	Anthracene			not detected	2000	0.72	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.61	10.00	ug/L	
206-44-0	Fluoranthene			not detected	300	0.60	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN06095.D**	Sample Name	**MB-011303**
Operator	**B.Patel**	Misc Info	**MB-011303**
Date Acquired	**14-Jan-03**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	50	2.71	10.00	ug/L	
129-00-0	Pyrene			not detected	200	0.89	10.00	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.67	10.00	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.69	10.00	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.79	10.00	ug/L	
218-01-9	Chrysene			not detected	20	0.91	10.00	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.06	10.00	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.59	10.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.88	10.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.96	10.00	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.72	10.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.56	10.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.91	10.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.66	10.00	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-011303

Lab Name: FMETL Lab Code 13461

Project: 02-12539 Case No.: 30017 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-011303

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN06095.D

Level: (low/med) LOW Date Received: 1/10/03

% Moisture: decanted: (Y/N) N Date Extracted: 1/13/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/14/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.69	9	J
2.	unknown	25.39	6	J
3. 000123-95-5	Octadecanoic acid, butyl ester	27.12	4	JN

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN06102.D**	Sample Name	**3001702**
Operator	**B.Patel**	Misc Info	**Field Blank**
Date Acquired	**15-Jan-03**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.27	10.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.78	10.00	ug/L	
62-53-3	Aniline			not detected	NLE	1.11	10.00	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.10	10.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.90	10.00	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.80	10.00	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.93	10.00	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.99	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.96	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	1.01	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.88	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	10	1.15	10.00	ug/L	
78-59-1	Isophorone			not detected	100	0.92	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.83	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.66	10.00	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.68	10.00	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.24	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.84	10.00	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.62	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.53	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.81	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.86	10.00	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.79	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.84	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.95	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.66	10.00	ug/L	
83-32-9	Acenaphthene			not detected	400	0.86	10.00	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.85	10.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.86	10.00	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.71	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.86	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.67	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.19	10.00	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.83	10.00	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.75	10.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.66	10.00	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.61	10.00	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.84	10.00	ug/L	
120-12-7	Anthracene			not detected	2000	0.72	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.61	10.00	ug/L	
206-44-0	Fluoranthene			not detected	300	0.60	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN06102.D**	Sample Name	**3001702**
Operator	**B.Patel**	Misc Info	**Field Blank**
Date Acquired	**15-Jan-03**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	50	2.71	10.00	ug/L	
129-00-0	Pyrene			not detected	200	0.89	10.00	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.67	10.00	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.69	10.00	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.79	10.00	ug/L	
218-01-9	Chrysene			not detected	20	0.91	10.00	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.06	10.00	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.59	10.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.88	10.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.96	10.00	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.72	10.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.56	10.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.91	10.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.66	10.00	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Field Blank

Lab Name: FMETL Lab Code 13461

Project: 02-12539 Case No.: 30017 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 3001702

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN06102.D

Level: (low/med) LOW Date Received: 1/10/03

% Moisture: decanted: (Y/N) N Date Extracted: 1/13/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/15/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.69	5	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN06103.D**	Sample Name	**3001703**
Operator	**B.Patel**	Misc Info	**T-49**
Date Acquired	**15-Jan-03**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.27	10.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.78	10.00	ug/L	
62-53-3	Aniline			not detected	NLE	1.11	10.00	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.10	10.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.90	10.00	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.80	10.00	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.93	10.00	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.99	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.96	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	1.01	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.88	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	10	1.15	10.00	ug/L	
78-59-1	Isophorone			not detected	100	0.92	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.83	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.66	10.00	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.68	10.00	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.24	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.84	10.00	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.62	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.53	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.81	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.86	10.00	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.79	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.84	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.95	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.66	10.00	ug/L	
83-32-9	Acenaphthene			not detected	400	0.86	10.00	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.85	10.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.86	10.00	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.71	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.86	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.67	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.19	10.00	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.83	10.00	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.75	10.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.66	10.00	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.61	10.00	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.84	10.00	ug/L	
120-12-7	Anthracene			not detected	2000	0.72	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.61	10.00	ug/L	
206-44-0	Fluoranthene			not detected	300	0.60	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN06103.D**	Sample Name	**3001703**
Operator	**B.Patel**	Misc Info	**T-49**
Date Acquired	**15-Jan-03**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	50	2.71	10.00	ug/L	
129-00-0	Pyrene			not detected	200	0.89	10.00	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.67	10.00	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.69	10.00	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.79	10.00	ug/L	
218-01-9	Chrysene			not detected	20	0.91	10.00	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.06	10.00	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.59	10.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.88	10.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.96	10.00	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.72	10.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.56	10.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.91	10.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.66	10.00	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

T-49

Lab Name: FMETL Lab Code 13461

Project: 02-12539 Case No.: 30017 Location: T-49 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 3001703

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN06103.D

Level: (low/med) LOW Date Received: 1/10/03

% Moisture: decanted: (Y/N) N Date Extracted: 1/13/03

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/15/03

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	7.69	7	J

TAL METALS

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 0770

Lab ID #: 30017
Sample Prepared: 01/17/03

Site: TVS-PWS07
Ft. Monmouth, New Jersey

Field ID#: Method Blank

Method of Digestion: E.P.A SW-846, Method 3015A
Method of Analysis: Std. Methods 18th, Method 3120B, 3112B

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	R.L. (ug/L)	MDL (ug/L)
Aluminum	01/22/03	59.6	200	100	10.0
Antimony	01/22/03	ND	20	10	2.0
Arsenic	01/22/03	2.30	8	5.0	2.0
Barium	01/22/03	ND	2000	10	0.5
Beryllium	01/22/03	ND	20	0.25	0.5
Cadmium	01/22/03	ND	4	1.0	0.5
Calcium	01/22/03	187	NLE	100	20.0
Chromium	01/22/03	0.821	100	10	0.5
Cobalt	01/22/03	ND	NLE	5.0	0.5
Copper	01/22/03	ND	1000	10	2.0
Iron	01/22/03	136	300	200	10.0
Lead	01/22/03	4.20	10	5.0	1.0
Magnesium	01/22/03	129	NLE	100	10.0
Manganese	01/22/03	1.21	50	5.0	0.5
Mercury	01/24/03	ND	2	0.20	0.1
Nickel	01/22/03	ND	100	5.0	1.0
Potassium	01/22/03	1970	NLE	200	40.0
Selenium	01/22/03	6.78	50	10	3.0
Silver	01/22/03	ND	20	5.0	1.0
Sodium	01/22/03	739	50000	200	20.0
Thallium	01/22/03	ND	10	10	2.0
Vanadium	01/22/03	ND	NLE	5.0	0.5
Zinc	01/22/03	ND	5000	500	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9
R.L= Reporting limit. Note: The results reported between MDL and RL are estimated.

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 3001702
Sample Received: 01/10/03
Sample Matrix: Aqueous

Site: TVS-PWS07
Ft. Monmouth, New Jersey

Field ID#: Field Blank

Method of Digestion: E.P.A SW-846, Method 3015A
Method of Analysis: Std. Methods 18th, Method 3120B, 3112B

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	R.L. (ug/L)	MDL (ug/L)
Aluminum	01/22/03	48.6	200	100	10.0
Antimony	01/22/03	ND	20	10	2.0
Arsenic	01/22/03	ND	8	5.0	2.0
Barium	01/22/03	4.76	2000	10	0.5
Beryllium	01/22/03	ND	20	0.25	0.5
Cadmium	01/22/03	ND	4	1.0	0.5
Calcium	01/22/03	179	NLE	100	20.0
Chromium	01/22/03	0.559	100	10	0.5
Cobalt	01/22/03	ND	NLE	5.0	0.5
Copper	01/22/03	ND	1000	10	2.0
Iron	01/22/03	ND	300	200	10.0
Lead	01/22/03	1.42	10	5.0	1.0
Magnesium	01/22/03	45.7	NLE	100	10.0
Manganese	01/22/03	0.932	50	5.0	0.5
Mercury	01/24/03	ND	2	0.20	0.1
Nickel	01/22/03	ND	100	5.0	1.0
Potassium	01/22/03	558	NLE	200	40.0
Selenium	01/22/03	ND	50	10	3.0
Silver	01/22/03	ND	20	5.0	1.0
Sodium	01/22/03	598	50000	200	20.0
Thallium	01/22/03	ND	10	10	2.0
Vanadium	01/22/03	ND	NLE	5.0	0.5
Zinc	01/22/03	ND	5000	500	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6
R.L= Reporting limit. Note: The results reported between MDL and RL are estimated.

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 0770

Lab ID #: 3001703
Sample Received: 01/10/03
Sample Matrix: Aqueous

Site: TVS-PWS07
Ft. Monmouth, New Jersey

Field ID#: T-49

Method of Digestion: E.P.A SW-846, Method 3015A
Method of Analysis: Std. Methods 18th, Method 3120B, 3112B

TAL-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	R.L. (ug/L)	MDL (ug/L)
Aluminum	01/22/03	619	200	100	10.0
Antimony	01/22/03	ND	20	10	2.0
Arsenic	01/22/03	4.44	8	5.0	2.0
Barium	01/22/03	27.3	2000	10	0.5
Beryllium	01/22/03	ND	20	0.25	0.5
Cadmium	01/22/03	ND	4	1.0	0.5
Calcium	01/22/03	108000	NLE	100	20.0
Chromium	01/22/03	2.06	100	10	0.5
Cobalt	01/22/03	0.606	NLE	5.0	0.5
Copper	01/22/03	44.5	1000	10	2.0
Iron	01/22/03	2970	300	200	10.0
Lead	01/22/03	5.08	10	5.0	1.0
Magnesium	01/22/03	14700	NLE	100	10.0
Manganese	01/22/03	395	50	5.0	0.5
Mercury	01/24/03	ND	2	0.20	0.1
Nickel	01/22/03	1.88	100	5.0	1.0
Potassium	01/22/03	3500	NLE	200	40.0
Selenium	01/22/03	ND	50	10	3.0
Silver	01/22/03	ND	20	5.0	1.0
Sodium	01/22/03	73800	50000	200	20.0
Thallium	01/22/03	ND	10	10	2.0
Vanadium	01/22/03	4.42	NLE	5.0	0.5
Zinc	01/22/03	44.4	5000	500	5.0

ND = Not Detected, MDL = Method Detection Limit, NLE = No Limit Established
* Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6
R.L= Reporting limit. Note: The results reported between MDL and RL are estimated.

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature 

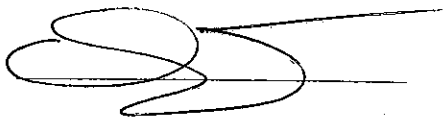
Date: 3/19/03

Laboratory Certification # 13461

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

Laboratory Authentication Statement

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



Daniel K. Wright
Laboratory Manager

ENCLOSURE 2
FORT MONMOUTH 2010 WORK ORDER REPORT

Fort Monmouth

Work Order Report **10-182254**

Work Type:	SO	**Status Date:**	8/12/2010
Parent:		**Priority:**	
Requestor:	ROB YOUHAS	**Status:**	INPRG
Phone 1:	24359	**PWS:**	07A ENVIRONMENTAL
Phone 2:		**Shop:**	27 ENVIRONMENTAL FIELD SHOP
Facility:	04001 Commercial	**POC:**	
Location:	LEONARD AND HAZEN	**POC Phone:**	
		Assign To:	BOYCEG

Work INSTALL TEMPORARY WELL POINT

Appointment Scheduled:
Start:
Finish:

Last Name	First Initial	Time In	Time Out	Hours	Work Date	Initials

Is Job Complete? (Y/N) _____ **Comments:**

Customer Signature _____ **Date:** _____

Supervisor Signature _____ **Date:** _____

Date Prepared: August 12, 2010

Prepared by: Robert Youhas

Scope of Work for Building 49

Background

On May 18, 2001, two, single-walled, steel, 5,000-gallon, leaded gasoline underground storage tanks (USTs) (#90010-76 and #90010-77) were removed from a grassy area in the vicinity of Building 277. Visually contaminated soil and groundwater was observed in the excavation. Based on this observation, the NJDEP was notified and case #01-05-24-1004-1 OP19 was assigned. Five (5) post-excavation soil samples were collected for laboratory analysis. All five post-excavation soil samples were laboratory-determined to be in compliance with the New Jersey Department of Environmental Protection's (NJDEP) *Residential Direct Contact Soil Cleanup Criteria*.

After removal of the USTs, temporary well piezometer T-49 was installed within the UST excavation boundaries. On May 24, 2001, groundwater samples collected from T-49 exceeded the NJDEP Ground Water Quality Standards (GWQS) for benzene [12 micrograms per liter (µg/L)] and lead (194.3 µg/L); on December 12, 2002 for lead (40.5 µg/L) only; and on January 10, 2003 for lead (5.1 ug/L) only. Since the NJDEP GWQS for lead was 10 µg/L in 2003, no further investigation was conducted and piezometer T-49 was subsequently abandoned. However, a No Further Action (NFA) letter was never issued. Therefore, to comply with the NJDEP *Technical Requirements for Site Remediation*, additional soil and groundwater sampling is required.

Purpose

To determine if contaminants of concern identified in previous groundwater sampling events (lead only) remain onsite at concentrations exceeding the NJDEP GWQS (the current NJDEP GWQS for lead is 5 µg/L). Utilize a low-flow purging method to reduce/eliminate suspended solids in the water sample because any suspended particles in the collected aqueous samples may contribute to the concentration of lead in the sample.

Scope of Work

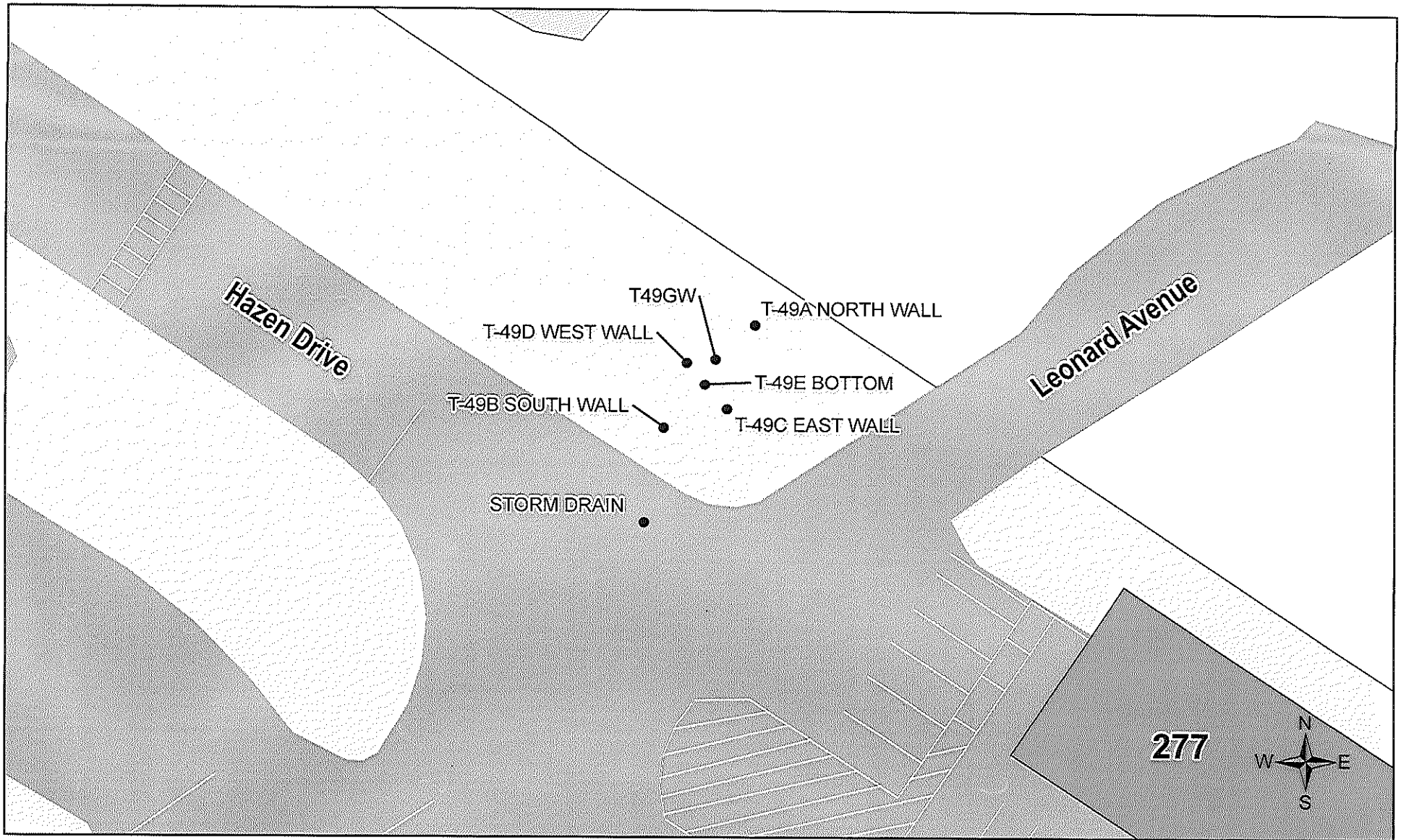
A Geoprobe rig will be utilized for the installation of one (1) temporary groundwater monitoring point (TMP-49) near former piezometer T-49GW for resampling groundwater.

Install a 2-inch diameter, PVC temporary monitoring point (0.010-inch factory slotted screen) near former piezometer T-49. The temporary monitoring point will be installed using a sufficient length of screen to ensure it is screened across the groundwater table. Collect soil samples within the screened portion for laboratory analysis of lead only. After installation, the temporary monitoring point will be purged with a peristaltic pump until the purge water is free of suspended sediments. Following purging, collect a water sample for lead analysis. After groundwater samples are collected, the temporary monitoring point will be removed from the borehole and the borehole grouted/backfilled-to-grade.

The groundwater and soil samples will be analyzed for lead using United States Environmental Protection Agency-approved test methods.

Results

Recommendations



T-49 UST
Main Post
Fort Monmouth, New Jersey
FOUO

0 15 30 60 Feet

Legend
- GPS Locations
- Existing Building
- Roadway & Parking
- Water Body
- Post Boundaries

Map Created by:
Fort Monmouth Installation GIO, Environmental Division
Fort Monmouth, New Jersey
Date: July 28, 2010
All drawings must be field verified.
New Jersey State Plane Feet, NAD83

July 28, 2010 X:\GIS\GIS Maps\JH\T-49 UST.mxd

ENCLOSURE 3
2010 ANALYTICAL DATA REPORT

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

Bldg. /49

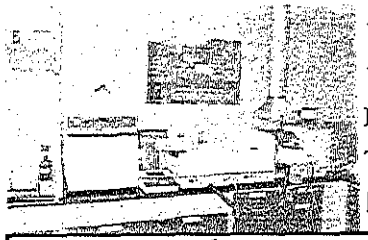
Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
Bldg. 49/SB-1 7.5-8.0	1035301	Soil	20-Aug-10 09:30	08/20/10
Field Blank	1035302	Aqueous	20-Aug-10 09:45	08/20/10
TMP-49	1035303	Aqueous	20-Aug-10 10:15	08/20/10

ANALYSIS:
ACCUTEST LABORATORIES
TOTAL LEAD, %SOLIDS

Dean Tardiff
Déan Tardiff/Date: 9/9/10
Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-6352 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Fort Monmouth
Phone #:
( )DERA ( )OMA ( )Other:_____

Project No:
Location: Building 49

Samplers Name / Company: Robert Youhas / TUS

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Lead (Pb)								Remarks / Preservation Method
10353 01	Bldg 49SB-1(7.5-8)	08/20/10	09:30	Soil	1	✓								
02	Bldg 49-Field Blank	08/20/10	09:45	GW	1	✓								
03	TMP-49	08/20/10	10:15	GW	1	✓								

Analysis Parameters

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	08/20/10 10:30				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (✓)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (✓)Standard 3 wks, (_)Rush ____Wk., (_)ASAP Verbal ____Hrs.

Remarks:

print legibly

COC Copy.xls8/16/2010

SAMPLE RECEIPT FORM

Date Received: 8-20-10 Work Order ID#: 10353

Site/Proj. Name: Bldg #4 Cooler Temp (°C): 4.0°C

Received By: J. Vergara Sign:
(Print name)

Check the appropriate box

1. Did the samples come in a cooler?	yes	no	n/a
2. Were samples rec'd in good condition?	yes	no	
3. Was the chain of custody filled out correctly and legibly?	yes	no	
4. Was the chain of custody signed in the appropriate place?	yes	no	
5. Did the labels agree with the chain of custody?	yes	no	
6. Were the correct containers/preservatives used?	yes	no	
7. Was a sufficient amount of sample supplied?	yes	no	
8. Were air bubbles present in VOA vials?	yes	no	n/a
9. Were samples received on ice?	yes	no	
10. Were analyze-immediately tests perform within 15 minutes	yes	no	n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
10353/2-3	2	HNO3			

Comments: _____

LEAD
(SOIL)

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 1035301
Sample Received: 08/20/10
Sample Matrix: Soil

Site: Ft. Monmouth
Bldg. 49

Field ID: Bldg. 49/SB-7.5-8.0

Method of Analysis: E.P.A SW-846, Method 6010B

METALS RESULTS SUMMARY (mg/kg)

Element	Date of Analysis	Result (mg/kg)	Soil Cleanup Criteria (mg/kg)*	R.L. (mg/kg)	MDL (mg/kg)
Lead	08/24/10	1.28	400	1.09	0.566

ND = Not Detected, NLE = No Limit Established,
*Residential Direct Contact Soil Remediation Standard as per N.J.A.C. 7:26D June 2, 2008
R.L. = Reporting limit, MDL = Method Detection Limit
Estimated results between MDL & R.L.

LEAD
(AQUEOUS)

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 1035301
Sample Received: 08/20/10
Sample Matrix: Soil

Site: Ft. Monmouth
Bldg. 49

Field ID: Bldg. 49/SB-7.5-8.0

Method of Analysis: E.P.A SW-846, Method 6010B

METALS RESULTS SUMMARY (mg/kg)

Element	Date of Analysis	Result (mg/kg)	Soil Cleanup Criteria (mg/kg)*	R.L. (mg/kg)	MDL (mg/kg)
Lead	08/24/10	1.28	400	1.09	0.566

ND = Not Detected, NLE = No Limit Established,
*Residential Direct Contact Soil Remediation Standard as per N.J.A.C. 7:26D June 2, 2008
R.L. = Reporting limit, MDL = Method Detection Limit
Estimated results between MDL & R.L.

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

Client: U.S Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 10353
Sample Received: 08/20/10
Analysis Start: 09/02/10
Analysis Completed: 09/02/10
Matrix: Aqueous

Site: Ft. Monmouth
Bldg. 49

Method of Digestion: E.P.A SW-846, Method 3010A
Method of Analysis: Std. Methods 18th, Method 3120B

TEST PARAMETER: LEAD

Laboratory ID	Sample Location Identification	Result (ug/L)	MDL (ug/L)	R.L (ug/L)
1035301	Bldg. 49/Field Blank	ND	2.40	5.00
1035302	TMP-49	ND	2.40	5.00
Method Blank	NA	ND	2.40	5.00

ND = Not Detected, MDL = Method Detection Limit, NA = Not Applicable,
NS = No Sample Estimated results between MDL and R.L

SampleID	Analyte	Mean
1035303		
	Ag 328.068	1.05 ug/L
	Al 308.215 R	257 ug/L
	Al 396.152	298 ug/L
	As 188.979	18.1 ug/L DNR
	Ba 233.527	21.9 ug/L
	Be 313.107	ND
	Ca 315.887 R	33700 ug/L
	Cd 226.502	ND
	Co 228.616	1.60 ug/L
	Cr 267.716	1.40 ug/L
	Cu 324.754	3.12 ug/L
	Fe 302.107 R	3860 ug/L
	K 766.491 R	2890 ug/L
	Mg 279.079 R	7310 ug/L
	Mn 257.610	120 ug/L
	Na 330.237 R	180000 ug/L
	Ni 231.604	3.97 ug/L
	Pb 220.353	ND
	Sb 206.833	5.38 ug/L
	Se 196.026	62.4 ug/L
	Tl 190.800	ND DNR
	V 292.402	2.01 ug/L
	Zn 206.200	24.6 ug/L

SampleID	Analyte	Mean
MB083010-1		
	Ag 328.068	0.650 ug/L
	Al 308.215 R	32.0 ug/L
	Al 396.152	25.2 ug/L
	As 188.979	ND DNR
	Ba 233.527	ND
	Be 313.107	ND
	Ca 315.887 R	80.7 ug/L
	Cd 226.502	ND
	Co 228.616	ND
	Cr 267.716	ND
	Cu 324.754	ND
	Fe 302.107 R	ND
	K 766.491 R	188 ug/L
	Mg 279.079 R	ND
	Mn 257.610	ND
	Na 330.237 R	ND
	Ni 231.604	ND
	Pb 220.353	ND
	Sb 206.833	ND
	Se 196.026	11.4 ug/L
	Tl 190.800	4.76 ug/L DNR
	V 292.402	ND
	Zn 206.200	1.46 ug/L

ATTACHMENT F

UST 63B Report

U.S. Army Garrison
Fort Monmouth, New Jersey

Underground Storage Tank Closure Report

Main Post – Bldg.63B
Riverside Ave.

NJDEP UST Registration No. 90010-2

February 2007

UNDERGROUND STORAGE TANK REPORT

MAIN POST –RIVERSIDE AVE., BUILDING 63B
NJDEP UST REGISTRATION NO. 90010-2

FEBRUARY 2007

PREPARED FOR:

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

PREPARED BY:

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

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EXECUTIVE SUMMARY

UST Closure

A single wall steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) guidelines, sometime prior to January 1, 1991. The UST was located on the north side of Building 63B in the Main Post area of Fort Monmouth. UST No. 90010-2 was a 1,000-gallon No. 2 heating oil tank. The tank closure was performed by SMC.

Site Assessment

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

During the time of the UST removal no closure soil samples were collected. Soil sampling was not required at that time. On December 5, 2005 a Geoprobe was utilized to collect samples 63B-A, 63B-B, 63B-C and 63B-D-Duplicate were collected from a total of three (3) locations along the tank centerline bottom. All samples were analyzed for total petroleum hydrocarbons (TPH). Groundwater was encountered at approximately six feet below surface grade in the borings and a sample of it was also collected.

Findings

The closure soil samples collected from the location associated with former UST No. 90010-2, contained TPH concentrations below the NJDEP health based criterion of 10,000 milligrams per kilogram (mg/kg) for total organic contaminants (N.J.A.C. 7:26E and revisions dated February 3, 1994). All samples contained TPH concentrations of Not Detected.

Conclusions and Recommendations

Based on the closure soil sampling results, soils with TPH concentrations exceeding the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants are not present in the location of the former UST. A groundwater sample was analyzed for volatile organics and semi volatile organics. The sample did not contain compounds that exceed the NJDEP Class II Ground Water Quality Criteria.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-2 at Building 63B.

1.0 UNDERGROUND STORAGE TANK CLOSURE SOIL SAMPLING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 90010-2, was closed at Building 63B of the Main Post at the U.S. Army Garrison, Fort Monmouth, New Jersey. Refer to site location map on Figure 1. This report presents the results of soil and groundwater sampling analysis to confirm that the tank did not leak. The UST was a 1,000-gallon, single-wall steel tank containing No. 2 heating oil for residential use.

The closure of the UST was conducted by SMC, a government contracted consultant, prior to January 1, 1991.

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

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

1.2 SITE DESCRIPTION

Building 63B, Riverside Ave., is located in the eastern portion (400 Area) of the Main Post of Fort Monmouth, as shown on Figure 1. UST No. 90010-2 was located on the north side of Building 63B. A site map is provided on Figure 2. Historical maps were used to determine the exact location of the former tank.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the 400 Area. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

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

Local Geology

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

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

Hydrogeology

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

Based on records of wells drilled in the Main Post area, water is typically encountered at depths of 2 to 9 feet below ground surface (bgs). According to Jablonski, wells drilled in the Red Bank

and Tinton Sands may produce 2 to 25 gallons per minute (gpm). Some well owners have reported acidic water that requires treatment to remove iron.

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

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

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

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

Building 63B is located approximately 450 feet west of Oceanport Creek, the nearest water body, which flows into the Shrewsbury River. Based on the Main Post topography, the groundwater flow in the area of the Building 63B is anticipated to be to the east.

1.3 HEALTH AND SAFETY

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

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Assessment Activities.

- Ft. Monmouth Directorate of Public Works-Environmental Division
  Contact Person: Joseph Fallon
  Phone Number: (732) 532-0986

- Subsurface Evaluator: Frank Accorsi
  Employer: TECOM-Vinnell Services, Inc. (TVS)
  Phone Number: (732) 532-5241
  NJDEP License No.: 0010042
  (TVS)NJDEP License No.: US252302

- Analytical Laboratory: Fort Monmouth Environmental Testing Laboratory
  Contact Person: Dan Wright
  Phone Number: (732) 532-4359
  NJDEP Laboratory Certification No.: 13461

2.2 FIELD SCREENING/MONITORING

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

2.3 SOIL SAMPLING

On December 5, 2005, closure soil samples 63B-A, 63B-B, 63B-C and 63B-D (Duplicate C) were collected from a total of three (3) locations along the tank centerline bottom of the former UST. Groundwater was encountered at approximately six feet below surface grade in the borings. All samples were analyzed for TPH.

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

2.4 GROUNDWATER SAMPLING

On December 5, 2005, sample 63B-Groundwater was collected from soil borehole 63B-B to assess the groundwater quality in the vicinity of the former tank. The sample was analyzed for volatile organic analysis (VOA) and semi-volatile organic analysis (SVOA).

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

Closure soil samples were collected from a total of three locations on December 5, 2005 to evaluate soil conditions in the location of the former UST. All samples were analyzed for TPH. The closure soil sample results were compared to the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided on Table 2. The analytical data package, including associated quality control data, is provided in Appendix B.

Closure soil samples collected on December 5, 2005 from UST 90010-2 contained concentrations of TPH below the NJDEP soil cleanup criteria. All soil samples were Not Detected above the method detection limits.

3.2 GROUNDWATER SAMPLING RESULTS

One groundwater sample was collected via temporary piezometer installed in soil borehole 63B-B. Methyl-tert-Butyl ether and Diethylphthalate were detected in sample 63B-Groundwater at .34 ug/L and 1.76 ug/L respectively. These results are below the NJDEP Ground Water Criteria of 70 ug/L for Methyl-tert-Butyl ether and 5,000 ug/L for Diethylphthalate .

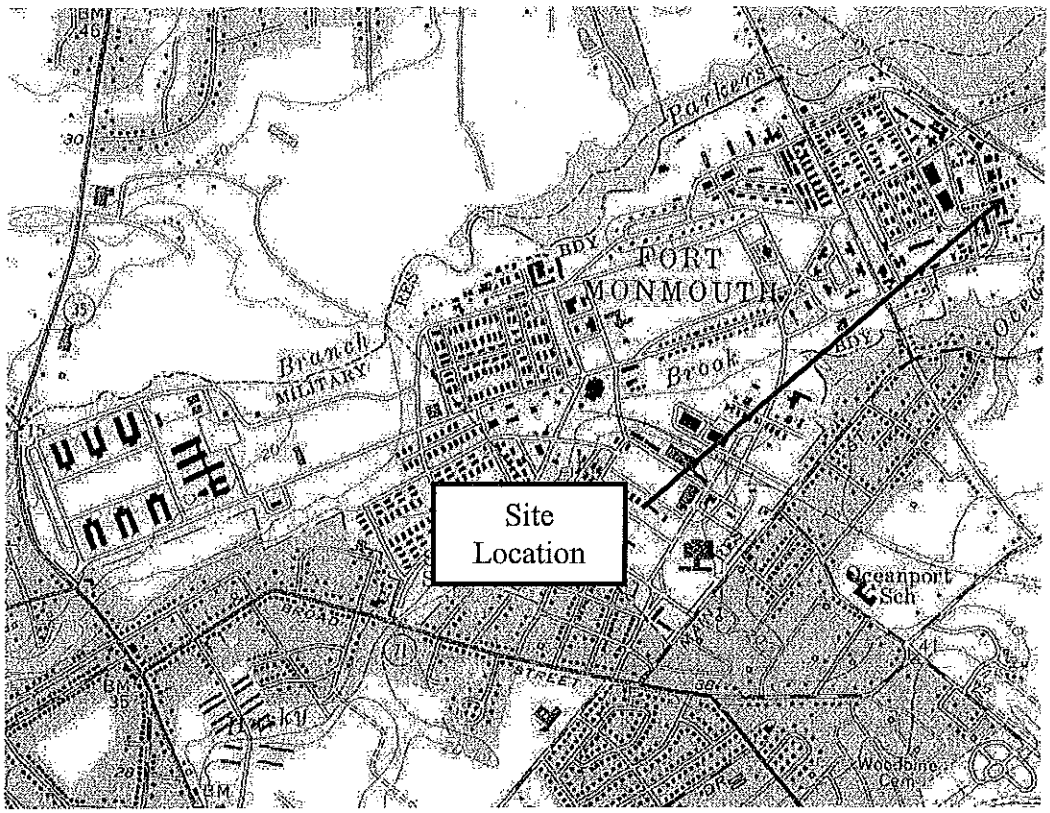
3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all soil samples collected from the UST closure assessment at UST No. 90010-2 were Not Detected.

Based on the closure soil sampling results, soils with TPH concentrations exceeding the NJDEP health based criterion for total organic contaminants of 10,000 mg/kg are not present at the location of former UST No. 90010-2.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-2 at Building 63B.

FIGURES



SCALE 1:24,000

1 0.5 0 1 MILE

1 0.5 0 1 KILOMETER

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

N

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

FIGURE 1

SITE LOCATION MAP
BUILDING 63B
UST NO. 90010-2
FT. MONMOUTH, NJ

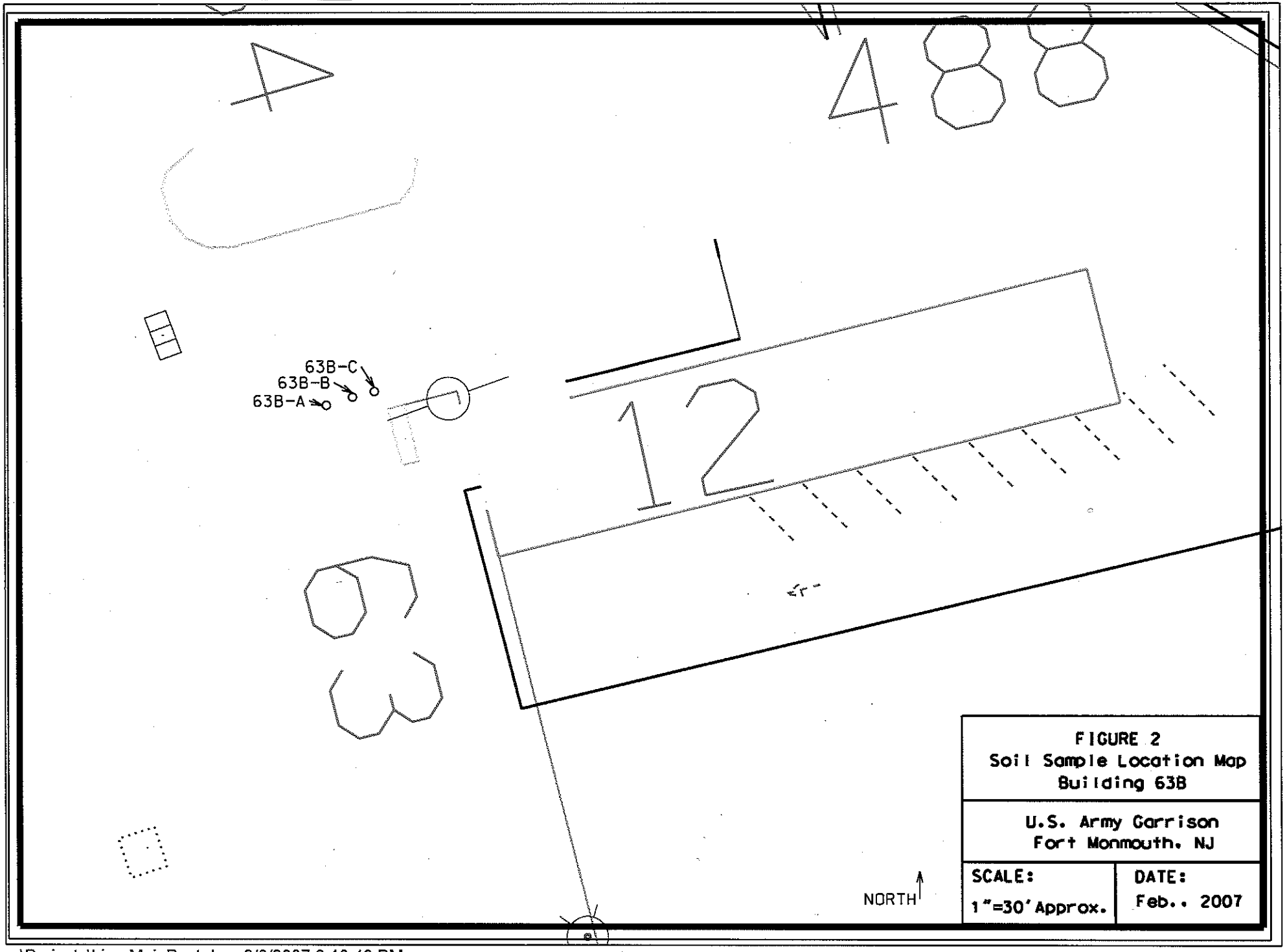


FIGURE 2
Soil Sample Location Map
Building 63B

U.S. Army Garrison
Fort Monmouth, NJ

SCALE:
1"=30' Approx.

DATE:
Feb.. 2007

...\Projects\bim_MainPost.dgn 2/8/2007 3:10:49 PM

TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, BUILDING 63B, UST No. 90010-2
05 December 2005

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
63B-A	5063101	05-Dec-05	SOIL	TPH	OQA-QAM-25
63B-B	5063102	05-Dec-05	SOIL	TPH	OQA-QAM-25
63B-C	5063103	05-Dec-05	SOIL	TPH	OQA-QAM-25
63B-D (dupl. C)	5063104	05-Dec-05	SOIL	TPH	OQA-QAM-25
63B-Groundwater	5063105	05-Dec-05	AQUEOUS	VOA, SVOA	SW-846, 8260 SW-846, 8270
TRIP BLANK	5063106	05-Dec-05	METHANOL	VOA	SW-846, 8260
TRIP BLANK	5063107	05-Dec-05	AQUEOUS	VOA	SW-846, 8260

ABBREVIATIONS:
TPH = Total Petroleum Hydrocarbons, Method NJDEP OQA-QAM-25
VOA = Volatile Organic Analysis, EPA SW-846 Method 8260
SVOA = Semi-Volatile Organic Analysis, EPA SW-846, Method 8270

TABLE 2

SUMMARY OF LABORATORY ANALYTICAL RESULTS-SOIL

FT. MONMOUTH, BUILDING 63B, UST No. 90010-2
05 December 2005

TOTAL PETROLEUM HYDROCARBONS

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH	MATRIX	TPH RESULT S
			(in feet)		mg/kg
63B-A	5063101	WEST END UST	6.5 – 7.0	Soil	ND
63B-B	5063102	CENTER	6.5 – 7.0	Soil	ND
63B-C	5063103	EAST END UST	6.5 – 7.0	Soil	ND
63B-D (dupl. C)	5063104	DUPLICATE (EAST END)	6.5 – 7.0	Soil	ND
Trip Blank	5063106	---	---	Methanol	--

ABBREVIATIONS:
mg/kg = Milligrams Per Kilogram = parts per million
ND = Compound Not Detected
NA = Compound Not Analyzed
*= Further Analyzed for Volatiles

Notes:
Gray shading indicates exceedance of NJDEP
health based criterion of 10,000 ppm total organic contaminants

SUMMARY OF LABORATORY ANALYTICAL RESULTS-GROUNDWATER

FT. MONMOUTH, BUILDING 63B, UST No. 90010-2

05 December 2005

VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	MTBE	Diethylphthalate
	UNITS	ug/L	ug/L
63B-Groundwater	5063105	0.34	1.76
Trip Blank	5063106	ND	NA
Trip Blank	5063107	ND	ND
NJDEP Criteria	Residential	70	5,000

ABBREVIATIONS:
ug/L = Micrograms Per Liter = parts per billion
ND = Compound Not Detected
NA = Compound Not Analyzed

Notes:
Gray shading indicates exceedance of NJDEP Direct Contact Soil Contact Criteria

APPENDIX A

CERTIFICATIONS

Site Remediation Program
UST Site Remedial Investigation Report

A. Facility Name: Building 63B

Facility Street Address: Riverside Ave.

Municipality: Oceanport County: Ft. Monmouth

Block: NA Lot(s): NA Telephone Number: 732-532-6223

B. Owner (RP)'s Name: U.S. Army Garrison - Directorate of Public Works

Street Address: 173 Riverside Ave. City: Ft. Monmouth

State: NJ Zip: 07703 Telephone Number: 732-532-6223

C. (Check as appropriate)

☐ Site Investigation Report (SIR) $500 Fee

☐ Remedial Investigation Report (RIR) $1000 Fee

D. (Complete all that apply)

Assigned Case Manager: Greg Zalaskus

UST Registration Number: 90010-02 (7 digits)

- Incident Report Number: _____ (10 or 12 digits)
- Tank Closure Number **C(N)9**____-____ C 9-____ **C9**____-_____(7 characters)

E. Certification by the Subsurface Evaluator:

The attached report conforms to the specific reporting requirements of N.J.A.C. 7:26E . . . . . (Yes) No

Name: Frank Accorsi Signature: Frank Accorsi UST Cert. No.: 0010042

Firm: Tecom-Vinnell Services, Inc. Firm's UST Cert. Number: US252302

Firm Address: P.O. Box 60 City: Ft. Monmouth

State: NJ Zip: 07703 Telephone Number: 732-532-6223

(NOTE: Certification numbers required only if work was conducted on **USTs** regulated per N.J.S.A. 5 8: **10A-2 1** et seq.)

F. Certification by the Responsible Party(ies) of the Facility:

The following certification shall be signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)]as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
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 a principal executive officer or ranking elected Official.

"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 responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Name (Print or Type): _____ Title: _____

Signature: _____

Company Name: _____ Date: _____

(QC data has been omitted for brevity)

APPENDIX B

SOIL AND GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 532-4359 FAX: (732) 532-6263

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING

CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: BLDG. 63B

Bldg. 63B

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
63B-A, West End	5063101	Soil	05-Dec-05 12:40	12/06/05
63B-B, Center	5063102	Soil	05-Dec-05 13:30	12/06/05
63B-C, East End	5063103	Soil	05-Dec-05 14:50	12/06/05
63B-D, (Duplicate)	5063104	Soil	05-Dec-05 14:50	12/06/05
63B-Groundwater	5063105	Aqueous	05-Dec-05 15:30	12/06/05
Trip Blank	5063106	Methanol	05-Dec-05	12/06/05
Trip Blank	5063107	Aqueous	05-Dec-05	12/06/05

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

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

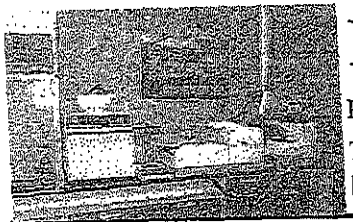
12-30-05
Daniel Wright/Date
Laboratory Director

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: JOE FALLON
Phone: X26223
( )DERA ( )OMA (X)Other:

Project No:
Location: BLDG. 63

Samplers Name / Company: FRANK ACCORSI / TVS

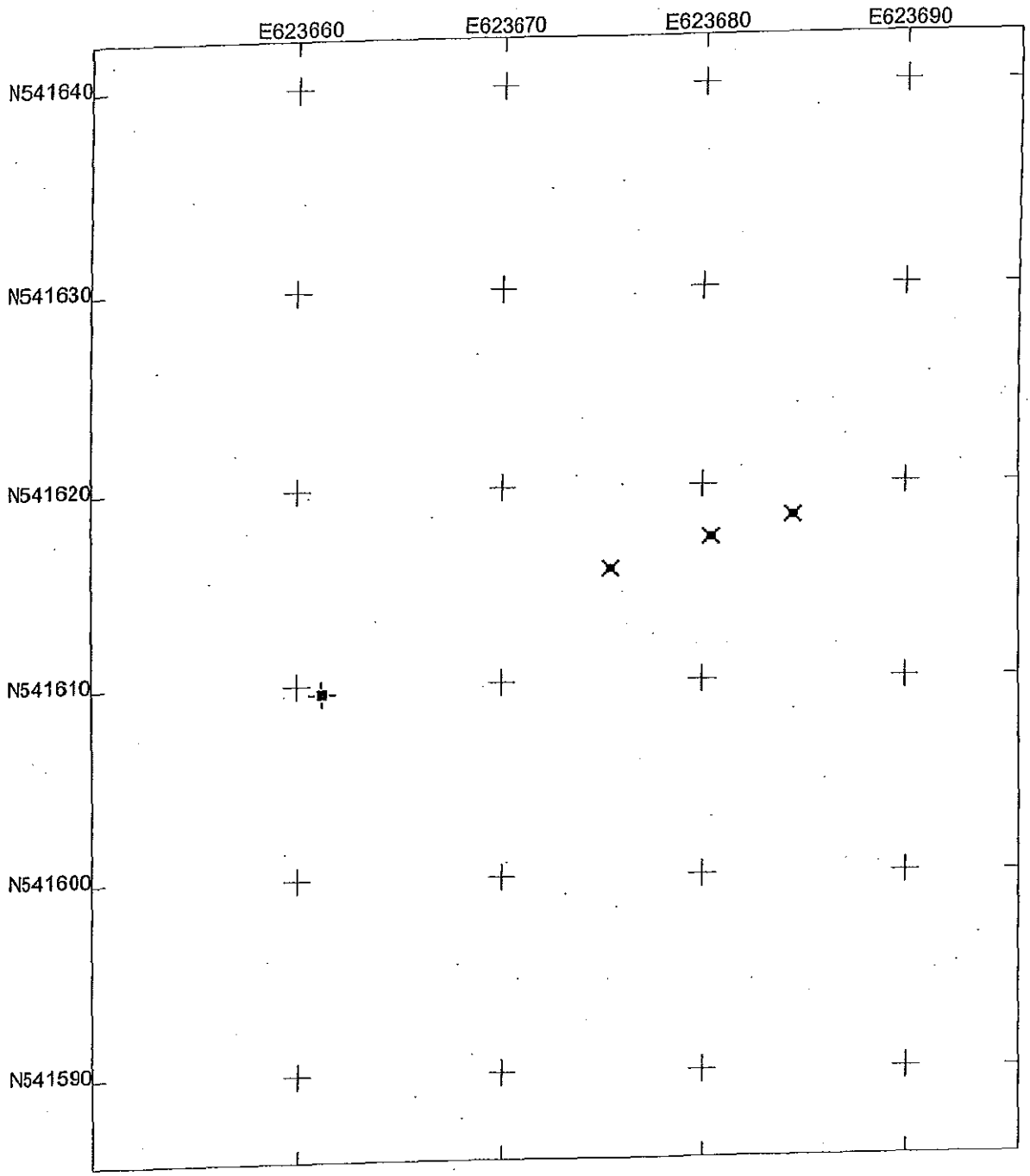
LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOA's	BN's				OCHLP	VOA	Remarks / Preservation Method
5063101	63B-A, WEST END	12-5-05	1240	SOIL	2	X	*					65-7	4359	ICE
02	63B-B, CENTER		1330		2	X	*					65-7	4360	
03	63B-C, EAST END		1430		2	X	*					65-7	4361	
04	63B-D (DUPLICATE)		1450		2	X	*					65-7	4362	
05	63B-GROUNDWATER		1530	AQ.	3		X	X				5	4363	
06	TRIP BLANK		—	AQ.	2		X					—	4363	
07	TRIP BLANK		—	AQ.	1		X					—	—	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	12-6-05 1120				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush ___ Days, ( )ASAP Verbal ___ Hrs.

Remarks: * VOA'S ON 25% > 1,000 PPM TPH, ON HIGHEST

000002



U.S. Army - Ft. Monmouth Bldg. 63B
UST Soil Sample GPS Map

US State Plane 1983
New Jersey 2900
NAD 1983 (Conus)

N

Scale 1:100
0 0.002
Miles

BLDG63B.cor
12/20/2005
GPS Pathfinder
Trimble

U.S. ARMY - FT. MONMOUTH, NJ

BLDG. 63B UST
SOIL SAMPLE GPS POSITIONS & COORDINATES

US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

(IN US SURVEY FEET)

SAMPLE POINTS

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
63B-A WEST END UST	541615.808	623675.442
63B-B CENTER UST	541617.351	623680.354
63B-C EAST END UST	541618.383	623684.406

REFERENCE POINT

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
BLDG63 NW CORNER	541609.549	623661.216

METHOD SUMMARY

Methodology Summary

EPA Method 624
Gas Chromatographic Determination of Volatiles in Water

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

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

A 10-gram volume of soil is combined with 25-ml of Methanol and surrogates in the field. Internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system. Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA Method 625
Gas Chromatographic Determination of Semi-volatiles in Water

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

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

Fifteen grams (15g) of soil is added to a 125-ml acid cleaned and solvent rinsed capped Erlenmeyer flask. 15g anhydrous Sodium Sulfate is added to dry the sample. Surrogate standard spiking solution is then added to the flask.
Twenty-five ml of Methylene Chloride is added to the flask and it is secured on an orbital shaker table. The agitation rate is set to 400 rpm and the sample is shaken for 30 minutes. The flask is removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25-ml of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1-ml auto-sampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for Petroleum Hydrocarbons covering a range of C8-C42, including Pristane and Phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak. The final concentration of Total Petroleum Hydrocarbons is calculated using percent moisture, sample weight and concentration.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 50631

Site: UST
Bldg. 63B

	Date	Hold Time
Date Sampled	12/05/05	NA
Receipt/Refrigeration	12/06/05	NA
Extractions		
1. BN	12/07/05	7 days
2. TPHC	12/08/05	14 days
Analyses		
1. VOA	12/07,08/05	14 days
2. BN	12/13/05	40 days
3. TPHC	12/09/05	40 days

CONFORMANCE/ NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

1. Chromatograms labeled/Compounds identified (Field samples and method blanks) — yes

2. Retention times for chromatograms provided — yes

3. GC/MS Tune Specifications

   a. BFB Meet Criteria — yes
   b. DFTPP Meet Criteria — yes

4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series — yes

5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — yes

6. GC/MS Calibration requirements

   a. Calibration Check Compounds Meet Criteria — yes
   b. System Performance Check Compounds Meet Criteria — yes

7. Blank Contamination – If yes, List compounds and concentrations in each blank: — no

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

8. Surrogate Recoveries Meet Criteria — yes

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

   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

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

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — no

   a. VOA Fraction Chloroethane MS/MSD high Vinyl Acetate, Naphthalene MS/MSD low
   b. B/N Fraction Benzidine MSD low RPD high
   c. Acid Fraction NA

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

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — YES
(If not met, list those compounds, which fall outside the acceptable range)

    a. VOA Fraction _____
    b. B/N Fraction _____
    c. Acid Fraction N/A

11. Extraction Holding Time Met — YES

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

12. Analysis Holding Time Met — YES

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

Additional Comments:

Laboratory Manager: _____ Date: 12-30-05

TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

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

Additional comments: _____

Laboratory Manager: _____ Date: 12-30-05

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

U: The compound was analyzed for but not detected.

B: Indicates that the compound was found in the associated method blank as well as in the sample.

J: Indicates an estimated value. This flag is used:

(1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

(2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.

D: This flag is used to identify all compounds (target or TIC) that required a dilution.

E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.

N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

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

Data File	VB020957.D	Sample Name	MB 07Dec2005
Operator	Skelton	Field ID	MB 07Dec2005
Date Acquired	7 Dec 2005. 5:26 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifier
107028	Acrolein			not detected	10	1.57 ug/L	10.00 ug/L	
107131	Acrylonitrile			not detected	50	2.47 ug/L	10.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	8.54 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.30 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.37 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	0.46 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	0.30 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	0.20 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.25 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	100	0.27 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.26 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.27 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	2.00 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	800	0.16 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.55 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.25 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.32 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.90 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.28 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.38 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.27 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.20 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.20 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.22 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.28 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.33 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.25 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	100	0.25 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.18 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.38 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.25 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.14 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.25 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	100	0.29 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.24 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.30 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.28 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.63 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.24 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.34 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.24 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.24 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.24 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.25 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.27 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9-6.9 (c).

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 07Dec2005**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50631 Location: Bldg63 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB 07Dec2005

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB020957.D

Level: (low/med) LOW Date Received: 12/6/2005

% Moisture: not dec. Date Analyzed: 12/7/2005

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	VB020981.D	Sample Name	5063107
Operator	Skelton	Field ID	Trip Blank
Date Acquired	8 Dec 2005 9:41 am	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifier
107028	Acrolein			not detected	10	1.57 ug/L	10.00 ug/L	
107131	Acrylonitrile			not detected	50	2.47 ug/L	10.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	8.54 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.30 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.37 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	0.46 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	0.30 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	0.20 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.25 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	100	0.27 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.26 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.27 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	2.00 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	800	0.16 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.55 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.25 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.32 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.90 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.28 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.38 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.27 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.20 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.20 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.22 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.28 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.33 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.25 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	100	0.25 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.18 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.38 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.25 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.14 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.25 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	100	0.29 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.24 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.30 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.28 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.63 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.24 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.34 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.24 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.24 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.24 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.25 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.27 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9-6.9 (c).

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50631 Location: Bldg63 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5063107

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB020981.D

Level: (low/med) LOW Date Received: 12/6/2005

% Moisture: not dec. Date Analyzed: 12/8/2005

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	VB020982.D	Sample Name	5063105
Operator	Skelton	Field ID	63B-Groundwater
Date Acquired	8 Dec 2005 10:23 am	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifier
107028	Acrolein			not detected	10	1.57 ug/L	10.00 ug/L	
107131	Acrylonitrile			not detected	50	2.47 ug/L	10.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	8.54 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether	12.78	21587	0.34 ug/L	70	0.30 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.37 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	0.46 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	0.30 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	0.20 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.25 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	100	0.27 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.26 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.27 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	2.00 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	800	0.16 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.55 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.25 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.32 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.90 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.28 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.38 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.27 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.20 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.20 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.22 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.28 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.33 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.25 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	100	0.25 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.18 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.38 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.25 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.14 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.25 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	100	0.29 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.24 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.30 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.28 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.63 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.24 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.34 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.24 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.24 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.24 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.25 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.27 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9-6.9 (c).

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **63B-GW**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50631 Location: Bldg63 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5063105

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB020982.D

Level: (low/med) LOW Date Received: 12/6/2005

% Moisture: not dec. Date Analyzed: 12/8/2005

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	BNA11400.D	Sample Name	MB-120705-01
Operator	BPatel	Misc Info	MB-120705-01
Date Acquired	13-Dec-05	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.13	10.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.60	10.00	ug/L	
62-53-3	Aniline			not detected	NLE	2.38	10.00	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.71	10.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.02	10.00	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.66	10.00	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.76	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.96	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.86	10.00	ug/L	
78-59-1	Isophorone			not detected	100	0.76	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.76	10.00	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.37	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.92	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.72	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.78	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.71	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00	ug/L	
83-32-9	Acenaphthene			not detected	400	0.73	10.00	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.81	10.00	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.96	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.71	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.62	10.00	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.72	10.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.95	10.00	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00	ug/L	
120-12-7	Anthracene			not detected	2000	0.76	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.92	10.00	ug/L	
206-44-0	Fluoranthene			not detected	300	0.82	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA11400.D**	Sample Name	**MB-120705-01**
Operator	**BPatel**	Misc Info	**MB-120705-01**
Date Acquired	**13-Dec-05**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	50	0.98	10.00	ug/L	
129-00-0	Pyrene			not detected	200	0.79	10.00	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.86	10.00	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.82	10.00	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.31	10.00	ug/L	
218-01-9	Chrysene			not detected	20	0.77	10.00	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.28	10.00	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.02	10.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.98	10.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.92	10.00	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.71	10.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.76	10.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.76	10.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLB	0.80	10.00	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
RL= Reporting Limit. The values between the MDL and RL are considered estimated.
MDL= Method Detection Limit
NLB= No Limit Established
R.T.=Retention Time

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-120705-01

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50631 Location: BL.63 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-120705-01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11400.D

Level: (low/med) LOW Date Received: 12/6/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/7/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/13/2005

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	BNA11406.D	Sample Name	5063105
Operator	BPatel	Misc Info	63B-Ground Water
Date Acquired	13-Dec-05	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.13	10.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.60	10.00	ug/L	
62-53-3	Aniline			not detected	NLE	2.38	10.00	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.71	10.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.02	10.00	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.66	10.00	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.76	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.96	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.86	10.00	ug/L	
78-59-1	Isophorone			not detected	100	0.76	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.76	10.00	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.37	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.92	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.72	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.78	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.71	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00	ug/L	
83-32-9	Acenaphthene			not detected	400	0.73	10.00	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.81	10.00	ug/L	
84-66-2	Diethylphthalate	18.65	90809	1.76 ug/L	5000	0.96	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.71	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.62	10.00	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.72	10.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.95	10.00	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00	ug/L	
120-12-7	Anthracene			not detected	2000	0.76	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.92	10.00	ug/L	
206-44-0	Fluoranthene			not detected	300	0.82	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	BNA11406.D	Sample Name	5063105
Operator	BPatel	Misc Info	63B-Ground Water
Date Acquired	13-Dec-05	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	50	0.98	10.00	ug/L	
129-00-0	Pyrene			not detected	200	0.79	10.00	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.86	10.00	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.82	10.00	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.31	10.00	ug/L	
218-01-9	Chrysene			not detected	20	0.77	10.00	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.28	10.00	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.02	10.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.98	10.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.92	10.00	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.71	10.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.76	10.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.76	10.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.80	10.00	ug/L	

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL=Reporting Limit. The values between the MDL and RL are considered estimated.

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
63B-Ground Wate

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50631 Location: BL.63 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5063105

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11406.D

Level: (low/med) LOW Date Received: 12/6/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/7/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/13/2005

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

TPHC

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

Client :	U.S. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project # :**	50631
		Location :	Bldg.63
		UST Reg. # :	
Analysis :	OQA-QAM-025	**Date Received :**	05-Dec-05
Matrix :	Soil	**Date Extracted :**	08-Dec-05
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	09-Dec-05
Injection Volume :	1uL	**Analyst :**	B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
5063101	63B-A	1.00	15.24	87.37	72	375	ND
5063102	63B-B	1.00	15.17	90.02	71	366	ND
5063103	63B-C	1.00	15.24	85.93	74	382	ND
5063104	63B-D	1.00	15.40	86.03	73	377	ND
METHOD BLANK	MB-120805-01	1.00	15.00	100.00	64	333	ND

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

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

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature _____

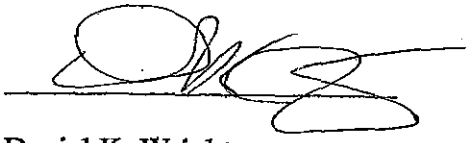
Date: 12/30/05

Laboratory Certification # 13461

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

Laboratory Authentication Statement

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



Daniel K. Wright
Laboratory Manager

ATTACHMENT G

UST 80 File Review (FTMM-56)

UNDERGROUND STORAGE TANK FILE REVIEW
FORT MONMOUTH BRAC 05 FACILITY
OCEANPORT, NEW JERSEY

Date: *December 22, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 80*** Registration ID: 90010-06

Recommended Status of Site: ***Case Open (need NJDEP NFA)***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***NA***

Based on the file review, were there indications of a contaminant release? [X] Yes [ ] No

NJDEP Release No. or DICAR (If applicable): 94-6-16-1127-25

Did NJDEP approve No Further Action (NFA) for this site? [X] Yes [X] No [ ] Not Applicable

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: #2 Fuel Oil

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 6/16/1994

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg

Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

This steel No. 2 fuel oil UST was located adjacent to former Building T-80. The UST for Bldg. 80 is listed in the FTMM UST database as "case open." This site has been assigned to IRP site FTMM-56, which is generally defined as UST sites 80/166. The UST for Bldg. 166 is listed as "case closed" in the UST database. FTMM-56 is subject to the ongoing IRP RI/FS process, and therefore a CERCLA-based RI and risk assessment is currently planned. Following is a brief summary of the regulatory status of the Bldg. 80 UST site:

- A UST closure report was prepared in 1998 by BCM/Smith Technology Corporation (*Underground Storage Tank Closure and Site Investigation Report, Former Building T-80, Main Post*). The final soil sample results following tank and soil removal ranged from non-detected (ND) to 440 mg/kg for TPH, which is less than the 5,100 mg/kg current TPH remediation criterion.
- The 1998 UST closure report was submitted to the NJDEP, and NFA for both 80 and 166 (and other UST sites) was requested by the Army on June 1, 2000. NFA was subsequently approved by the NJDEP in their letter dated 8/29/2000.
- Geoprobe soil sampling and installation of additional groundwater monitoring wells was performed in 2000-2001, and results were reported in Versar (2005) *Remedial Investigation Report, Site 80/166 – Main Post*. This report recommended NFA for pesticides and metals contamination in groundwater.
- NJDEP comments (April 29, 2008) on Versar's RI included the following:
    - NFA for soils was approved for Site 80/166.
    - NJDEP required that benzene should be a potential groundwater contaminant of concern (COC).
    - NJDEP did not accept NFA for pesticides and metals in groundwater; rather, it was stated "the Army needs to request approval for a natural ground water remediation remedy," along with a groundwater Classification Exception Area.

- Meanwhile, on 11/10/2004 the Army requested NJDEP's approval for a change in quarterly groundwater monitoring at site 80/166. Instead of the full suite of analytes, just pesticides and metals analysis was proposed. This change was approved by NJDEP in their e-mail dated 11/12/2004, and subsequently implemented at FTMM.
- NJDEP commented (7/3/2014) on Parsons' 2013 baseline groundwater monitoring report (and the Army agreed) that well 80MW02 would be sampled for one more round with analysis for chlordane, and 80MW05 for one more round with analysis for lead, arsenic and cadmium.

Based on summary review of the historical groundwater data, excluding benzene as a potential groundwater COC is warranted based on multiple quarterly monitoring results that were nondetect for benzene.

Parsons is currently preparing a RI/FS Report for FTMM-56. NFA may be warranted for groundwater at this site, but an additional round of groundwater monitoring is required.

Recommendations (if any): Continue groundwater monitoring; change Army status to "Case closed".

Signed: _____

Kent A. Friesen, Parsons

CA — All COC (GWQC Excess of Criteria) must be a COC in RI + CEA

— TICs

— GW Contour Form.

— Current + Future Water use.

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PUBLICLY FUNDED REMEDIATION ELEMENT
P.O. BOX 413
TRENTON, NJ 08625-0413

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

April 29, 2008

Mr. Joseph Fallon, CHMM
Directorate of Public Works
ATTN: IMNE-MON-PWE
167 Riverside Ave.
Fort Monmouth, NJ 07703

RE: Remedial Investigation Report and CEA Information
Site 80/166 – Main Post
Fort Monmouth, NJ

Dear Mr. Fallon:

The NJDEP Division of Remediation Management & Response (DRMR) has completed its review of the report titled "Remedial Investigation Report, Site 80/166", dated January 4, 2005, by Versar Inc. We have also reviewed the Classification Exception Area (CEA) Information for Site 80/166 that is included in the report titled "Classification Exception Area Information for Various Sites", dated July 12, 2004 by Versar. Our comments are attached.

You or your staff may contact me at 609-633-0766 with any questions on the enclosed comments, or any other site remediation matters at Fort Monmouth.

Sincerely,

Larry Quinn

Larry Quinn, P.E., CHMM, Site Manager
Bureau of Design and Construction

Attachment

NJDEP COMMENTS ON
RI REPORT and CEA INFORMATION for SITE 80/166
FORT MONMOUTH, NJ

RI Report

1. Soil. Based upon the information provided in the RIR, no further investigation of soil is required at Site 80/166.

2. Section 5.3: The statement the benzene is not a ground water contaminant of concern (COC) is not acceptable to the NJDEP. Benzene was detected above the New Jersey Ground Water Quality Criteria (GWQC) of 1.0 ug/l in ground water samples from one well and two geoprobe borings near the Building 80 tank excavation. Therefore, benzene must be a COC in the RIR. The fate and transport of benzene as a ground water contaminant must be determined. Benzene must also be included on all Figures as appropriate, including Figure 5.1.

3. Section 7.0. This section recommends no further action (NFA) for pesticides and metals in ground water. The Department acknowledges the results of the fate and transport modeling of those COCs. However, an NFA determination is not acceptable. The Army needs to request approval for a natural ground water remediation remedy, together with the proposed Classification Exception Area (CEA), as detailed in 7:26E-6.3(d) and (e). Also, based on comment #1, benzene must be included in the remedial proposal.

4. VOC TICs: The NJDEP Ground Water Quality Criteria for Volatile Organic Tentatively Identified Compounds (TICs) are as follows: 100 ppb for individual TICs, and 500 ppb for total TICs. Geoprobe boring #4 registered a slight exceedance of the Criteria with a reported 110 ppb of 2,3-Dihydro-1-methylindene. NJDEP isn't requiring any action, based upon downgradient geoprobe sample TICs, but this exceedance should be noted in the report and shown on Figure 5-2.

5. Section 3.0 (Site Activities): The report states that sampling and decontamination procedures were conducted in accordance with the December 1997 Fort Monmouth Standard Sampling Operating Procedure. All future sampling procedures and equipment decontamination must be conducted pursuant to the most recent version of the NJDEP Field Sampling Procedures Manual per the requirements of N.J.A.C. 7:26E-4.4(d).

NJDEP COMMENTS ON
RI REPORT and CEA INFORMATION for SITE 80/166
FORT MONMOUTH, NJ (continued)

6. Section 3.2 (Ground water Sample Collection Activities): The report is deficient pursuant to **N.J.A.C. 7:26E-4.8(c)7.** Information regarding the purging and sampling of the monitoring wells was not provided in the report. At a minimum, the purging and sampling information for the last 4 quarters of sampling must be submitted to NJDEP. The information should be submitted for all sampling events if available on compact disc.

7. Ground Water Contour Maps: For future reference, the Contour Map Reporting Form found in Appendix G of the Technical Requirements must be completed and submitted for each ground water contour map included in reports.

8. Figure 2-4. The scale on this figure (1"= 10') is incorrect.

CEA Information Report

1. Benzene. Benzene must be included in the CEA Proposal as a COC, and its fate and transport must be determined.

2. The current and projected use of ground water in the proposed CEA must be addressed.

Bc:
K. Petrone, BIDC
J. Prendergast, BEERA
D. Clark, BGWPA
B. Venner, BIDC
S. Maybury, BCM
K. Koschek, Environmental Regulation

Guenther, Douglas C MONMOUTH USAG

From: Greg Zalaskus [Greg.Zalaskus@dep.state.nj.us]
Sent: Friday, November 12, 2004 2:03 PM
To: Douglas.Guenther@mail1.monmouth.army.mil
Cc: John Prendergast; Ken Petrone; Joseph.Fallon@mail1.monmouth.army.mil
Subject: Re: GROUNDWATER ANALYSES REDUCTION

Doug: The Department has completed a review of your November 10, 04 letter request to reduce the groundwater sampling analysis for the seven site listed in the November 10, 04 letter. The Department hereby approves your request as submitted. Additionally, the updated "Restoration Program Site Report Status Table" you e-mailed is most appreciated. If you have any questions please contact me.

Sincerely, greg

Gregory Zalaskus, Case Manager
NJDEP/DRMR/BCM
Greg.Zalaskus@dep.state.nj.us
609-984-2065 (direct)
609-633-1439 (fax)
609-633-1455 (main)

>>> "Guenther, Douglas C MONMOUTH USAG"
<Douglas.Guenther@mail1.monmouth.army.mil> 11/10/04 01:28PM >>> Greg,

As discussed, attached is the letter identifying analyses reduction at restoration sites and a summary of submitted site reports pending NJDEP review. A hard copy is on the way. Any questions let me know.

Sincerely,

Douglas C. Guenther

Environmental Protection Specialist

U.S. Army, Directorate of Public Works

Attn: SELFM-PW-EV, Bldg. 173

Fort Monmouth, NJ 07703

Phone: 732-532-0986; Fax: 732-532-6263; DSN: 992-0986

E-mail: Douglas.Guenther@Mail1.Monmouth.Army.mil

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY GARRISON FORT MONMOUTH
FORT MONMOUTH, NEW JERSEY 07703-5101

REPLY TO
ATTENTION OF

Directorate of Public Works

November 10, 2004

ATTN: Mr. Greg Zalaskus
State of New Jersey
Department of Environmental Protection
Division of Responsible Party Site Remediation
Bureau of Case Management
401 East State Street, 5th Fl., West Wing
PO Box 028
Trenton, New Jersey 08625-0028

RE: **REDUCTION OF GROUNDWATER SAMPLING ANALYSES– MAIN POST&CHARLES WOODS**
Restoration Sites throughout Fort Monmouth, New Jersey

Dear Mr. Zalaskus:

As discussed during our telephone conversation on November 9, 2004, this letter summarizes groundwater sampling revisions at seven active restoration sites on Fort Monmouth property. The Directorate of Public Works (DPW) and TECOM-Vinnell Services (TVS) personnel currently conduct quarterly groundwater monitoring at each of these sites.

The DPW has submitted Remedial Investigation Reports (RIRs), prepared by VERSAR, Inc., requesting no further action (NFA) at four sites including Landfill M-12 (FTMM-12), Landfill M-18/290/296 (FTMM-18/55/54), Landfill M-3 (FTMM-03), and Site 108 (FTMM-57). Two RIRs requesting NFA are pending submittal including Site 80/166 (FTMM-56) and Landfill CW3A (FTMM-25), and one Remedial Action Report for Site 886 (FTMM-66) recommending natural attenuation is also pending submittal.

Initial groundwater sampling at each site consisted of a comprehensive analytical program including volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs); pesticides/polychlorinated biphenyls (PCBs); and TAL metals. Analytical results were then examined to establish potential contaminants of concern (COCs). Each site report presents the identified potential COCs based on the comparison of groundwater analytical results to the higher of the Practical Quantitation Limits (PQLs) and the NJDEP Groundwater Quality Criteria (GWQC) for Class II-A aquifers (NJAC 7:9-6, Table 1). Further evaluation of the potential COCs was then performed to assess contaminant occurrence/magnitude, transport (modeling), and risk to receptors, the environment and human health to determine if remedial action was warranted.

Based on report conclusions, Fort Monmouth DPW proposes the following revisions to the current groundwater sampling program at these sites to maintain a compliant and cost effective program. As discussed, proposed changes will be implemented immediately unless otherwise directed by the NJDEP.

The following table summarizes the revised sampling program at these sites:

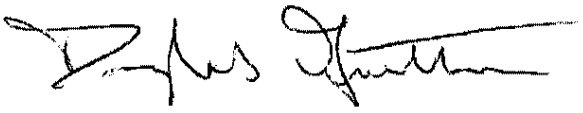
Submitted No Further Action Requests

Site	Was Analyzed:	Revised Analysis:	Potential Contaminants of Concern
Landfill M-12 (FTMM-12)	Quarterly for VOCs, SVOCs, pesticides/PCBs, Metals	Quarterly for TAL Metals.	Arsenic and lead
Landfill M-18/290/296 (FTMM-18/55/54)	Quarterly for VOCs, SVOCs, pesticides/PCBs, Metals	Quarterly for VOCs and TAL Metals.	Benzene, arsenic, cadmium, chromium and lead
Landfill M-3 (FTMM-03)	Quarterly for VOCs, SVOCs, pesticides/PCBs, Metals	Quarterly for VOCs.	Chlorobenzene
Site 108 (FTMM-57)	Quarterly for VOCs, SVOCs, pesticides/PCBs, Metals	Quarterly for TAL Metals.	Arsenic
No Further Action Requests - Submittal Pending			
Site 80/166 (FTMM-56)	Quarterly for VOCs, SVOCs, pesticides/PCBs, Metals	Quarterly for Pesticides and TAL Metals.	a-chlordane, g-chlordane, arsenic and lead
Landfill CW3A (FTMM-25)	Quarterly for VOCs, SVOCs, pesticides/PCBs, Metals	Quarterly for TAL Metals.	Non-Native Metals
Natural Attenuation Request - Submittal Pending			
Site 886 (FTMM-66)	Quarterly for VOCs, SVOCs, pesticides/PCBs, Metals	Quarterly for VOCs and SVOCs	Benzene and 2-butanone

Groundwater sampling and monitoring will continue at these sites as indicated above, in accordance with NJDEP *Technical Requirements for Site Remediation* (July 1999), NJAC 7:26E, et seq. and *Fort Monmouth Standard Sampling Operating Procedure* (1997), pending NJDEP review of these site documents. I have attached an updated summary table of site reports previously submitted to NJDEP which are pending review.

If you should have any questions or comments, please contact me at (732) 532-0986.

Sincerely,



Douglas C. Guenther
Environmental Protection Specialist
Directorate of Public Works

Attachment: Restoration Program Report Status Table
cc: File

ATTACHMENT H

UST 108 File Review (FTMM-57)

UNDERGROUND STORAGE TANK FILE REVIEW
FORT MONMOUTH BRAC 05 FACILITY
OCEANPORT, NEW JERSEY

Date: *December 30, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 108*** Registration ID: 90010-60 to -64, -7

Recommended Status of Site: ***Decision Document and NFA from NJDEP***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***NFA***

Based on the file review, were there indications of a contaminant release? [X] Yes [ ] No

NJDEP Release No. or DICAR (If applicable): 93-04-12-1939-29

Did NJDEP approve No Further Action (NFA) for this site? [ ] Yes [X] No [ ] Not Applicable

Tank Description: [X] Steel [ ] Fiberglass Size: 5000 gals. Ea. Contents: Gasoline, diesel, kerosene, fuel oil

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 4/12/1993, 7/14/1994

Were closure soil samples taken? [X] Yes [ ] No Analyses: VOCs, SVOCs, TPH, lead

Comparison criteria: RDCSCC

Were closure soil sample results less than comparison criteria? ? [ ] Yes [X] No

Brief Narrative

Building 108 is a former gasoline station and motor pool that has been removed. This site is designated as IRP Site FTMM-57. Six USTs were removed over a two year period, as summarized below:

- Three 5000-gallon steel gasoline USTs (90010-60, -61, and -62) were removed on 4/12/1993.
- One 5000-gallon steel diesel UST (90010-63) was removed on 4/12/1993.
- One 5000-gallon steel kerosene UST (90010-64) was removed on 4/12/1993.
- At a different location near former Bldg. 108, one 1000-gallon steel fuel oil tank (90010-7) was removed on 7/14/1994.

A fuels dispenser area was located approximately 70 feet south of the tanks, and was connected to the tanks with below ground piping. Tanks 90010-60 through -63 were located adjacent to one another, and no corrosion holes were noted during removal. Several corrosion holes were noted in kerosene tank 90010-64, which was located southeast of the other tanks. A sheen was also noted in the shallow groundwater encountered within the excavation, and so DICAR No. 93-4-12-1939-29 was reported to the State. Approximately 221 cubic yards of potentially contaminated soil was removed, and soil samples were collected from the sidewalls of the excavation above the groundwater for analysis of VOCs, SVOCs, lead and TPH. Three monitoring wells were installed and sampled in 1993, and a 4th well in 1995.

The fuel oil tank (90010-7) was clean closed in 1994, but documentation was not submitted to NJDEP. The location of the fuel oil tank is approximately 200 ft from the other USTs and former dispensers.

Relevant documents and a summary of findings includes the following:

- Roy F. Weston, Inc. 1994. *Underground Storage Tank Closure and Site Investigation Report, Building 108, NJDEPE Facility UST No. 0090010, TMS No. 60, 61, 62, 63 and 64, TMS No. C-91-2844, Spill Case No. 93-1-12-1939-29.* May 31.
    - Residual soil contamination including benzene was encountered around the former kerosene tank. Additional soil excavation was recommended but was noted to potentially place the adjacent railroad tracks at risk. Benzene was also detected above standards in groundwater, and additional groundwater monitoring was recommended.
- Smith Environmental Technologies Corporation. 1996. *Underground Storage Tank Closure and Site Investigation Report, Former Building 108, Main Post Area*. February.
    - This is the closure report for the 90010-07 fuel oil tank. Closure soil sample results ranged from ND to 192 mg/kg TPH. The results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. Therefore, No Further Action (NFA) is warranted for this UST site.
- Versar. 2004. *Remedial Investigation Report, Site 108.* August 13.
    - Includes a detailed summary of previous work, plus additional Geoprobe soil samples and groundwater monitoring results.
- Versar. 2004b. *Classification Exception Area Information for Various Sites*. July 12.
- FTMM. 2004. Letter to Greg Zalaskus of NJDEP , re: Reduction of Groundwater Sampling Analyses – Main Post & Charles Woods, Restoration Sites throughout Fort Monmouth, New Jersey. November 10.
    - Indicated a change from quarterly groundwater monitoring at Site 108 for a full analytical suite to just TAL metals, with the potential contaminant of concern identified as arsenic.
- NJDEP. 2008. Letter to Mr. Joseph Fallon; re: Remedial Investigation Report and CEA Information, Site 108 – Main Post, Fort Monmouth, NJ. June 24. Outstanding issues included:
    - Arsenic in soil required engineering controls (pavement was acceptable) and a deed notice.
    - The former UST locations, piping, and dispenser area should be shown on a site figure.
    - The existing groundwater monitor wells were not adequate to NJDEP; temporary groundwater samples were needed below select boring locations.
    - NJDEP indicated that the Army should request approval for a natural ground water remedy, along with a groundwater Classification Exemption Area (CEA).

  It appears that these NJDEP comments were never formally responded to.

- Youhas, Robert. 2010. Scope of Work for Building 108. Prepared November 1, latest revision 11/22/2010.
    - This SOW described the collection of soil and groundwater samples from additional Geoprobe soil borings to address NJDEP comments. It presents the best overall summary of the Site encountered to date.
- Ft. Monmouth Environmental Testing Laboratory analytical data report (Lab Sample ID 10557) for water and soil samples collected 12/16/2010.
    - No VOCs or SVOCs were detected in groundwater; some PAHs were detected in soils.
    - Not all of the samples described in the 2010 SOW were represented in this report.
- FTMM. 2011. Letter report to Larry Quinn, NJDEP, re: Base-Wide Glauconitic Soil Sampling Report, Fort Monmouth – Main Post Area, Fort Monmouth, New Jersey 07703. March 9.
    - Collected soil and groundwater samples from 3 sites, including 108, to support that arsenic was likely attributed to causes other than site contamination (i.e., not related to fuel releases from USTs at Site 108).

- Tetra Tech. 2011. *Remedial Investigation Report Addendum, Site 108, Fort Monmouth, New Jersey*. Revised June. Unpublished.
- Parsons. 2014. *August 2013 Baseline Groundwater Sampling Report.* March.
    - 2013 groundwater monitoring at FTMM-57 included VOCs, pesticides, and metals in groundwater at all four wells.
- NJDEP. 2014. July 3
    - NJDEP agreed with recommendations to perform 2 more annual rounds of sampling at well 108MW04 for lead, which is scheduled to be completed by the fall of 2015.

In conclusion, the reported results to date support that the site characterization work is complete. NJDEP may still require the deed notice and CEA as described in their 2008 comments. The current path forward is to complete the recommended groundwater monitoring in 2015, and then proceed to development of a decision document. A groundwater CEA may not be required based on NJDEP's acceptance of the metals in glauconitic soils argument. The NJDEP's 2008 comments may need to be formally responded to. NFA should be requested from NJDEP for fuel oil tank 90010-07 to formally detach that part of the site from FTMM-57.

Recommendations (if any): Continue groundwater monitoring into 2015; develop FTMM-57 Decision Document; request NFA for 90010-07 from NJDEP.

Signed: _____

Kent A. Friesen, Parsons

ATTACHMENT I

UST 108A Report

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

FORMER BUILDING 108

MAIN POST AREA
NJDEP UST REGISTRATION NO. 090010-7
NJDEP CLOSURE APPROVAL NO. C-93-3901

FEBRUARY 1996

PROJECT NO.: 09-5004-07
CONTRACT NO.: DACA51-94-D-0014

PREPARED FOR:

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

PREPARED BY:

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

108.DOC

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

Engineering • Consulting • Remediation • Construction

DEPARTMENT OF THE ARMY
Headquarters, U.S. Army Garrison Fort Monmouth
Fort Monmouth, New Jersey 07703 - 5101

RECEIVED 1996

REPLY TO
ATTENTION OF

Directorate of Public Works

N.J. Dept of Environmental Protection
Division of Responsible Party Site Remediation
Bureau of Federal Case Management- CN029
401 East State Street - 5th Floor
Trenton, N.J. 08625-0028
Attn: Ian Curtis - Case Manager

Dear Mr. Curtis:

Enclosed please find UST Closure and Site Investigation Reports for the following Fort Monmouth Sites:

Building 108 - 0090010-7	Building 411 - 0090010-28	Building 682 - 0081533-106
Building 114 - 0081533-1	Building 423 - 0090010-39	Building 161 - 0090010- 14
Building 443 - 0090010-49	Building 702 - 0081533-114	Building 167 - 0090010-18
Building 563 - 0081533-82	Building 789 - 0081533-126	Building 206 - 0081533-4
Building 608 - 0081533-86	Building 1106 - 0081533-166	Building 210 - 0081533-8
Building 620 - 0081533-93	Building 1122 - 0081533-199	Building 293 - 0081533-67
Building 625 - 0081533-96	Building 3027 - 0192486-28	Building 296 - 0081533-69
Building 659 - 0081533-101	Building 9002 - 0192468-1	Building 9017 - 0090029-6
Building 9049 - 0090029-20	Building 697 - 0081533-194	Building 2500 - 0081515-52
Building 9090 - 0090029-30	thru 196	thru 56

If the information provided in this enclosure is inadequate or you require further information with regard to these documents please contact Mr. Appleby at (908) 532-6224.

Sincerely,

James Ott
Director of Public Works

SMITH

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SMITH

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SMITH

EXECUTIVE SUMMARY

UST Closure

On July 14, 1994, a steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) Closure Approval No. C-93-3901 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 090010-7, was located immediately adjacent to Former Building 108 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 090010-7 was a 1,000-gallon No. 2 fuel oil UST. The UST fill port was located directly above the tank. The tank closure was performed by Cleaning Up The Environment Inc. (CUTE).

Site Assessment

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). Soils surrounding the tank were screened visually and with air monitoring instruments for evidence of contamination. Following removal, the UST was inspected for corrosion holes. One small hole was observed in the UST, however, no potentially contaminated soils were observed surrounding the tank.

On July 14, 1994, following removal of the UST, post-excavation soil samples A, B, C, D, E, F, G, and H were collected from eight (8) locations along the sidewalls of the excavation immediately above groundwater. Groundwater was present at approximately 4.5 feet below ground surface (BGS). All samples were analyzed for total petroleum hydrocarbons (TPHC). The piping length was less than 15 feet, therefore no piping samples were collected.

Findings

All post-excavation soil samples collected from the UST excavation at Building 108 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994). Samples B, C, E, F, G, and H contained levels of TPHC ranging in concentration from 26.2 mg/kg to 192.0 mg/kg. All other samples contained non-detectable concentrations of TPHC.

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.

SMITH

Site Assessment Quality Assurance

The sampling and laboratory analysis conducted during the site assessment 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 concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg do not remain in the former location of the UST or associated piping.

No further action is proposed in regard to the closure and site assessment of UST No. 090010-7 at Former Building 108.

SMITH

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 090010-7, was closed at Former Building 108 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on July 14, 1994. Refer to site location map on Figure 1. This report presents the results of the DPW's implementation of the UST Decommissioning/Closure Plan submitted to the NJDEP on July 26, 1993. The plan was approved on September 7, 1993 and assigned TMS No. C-93-3901. The UST was a steel, 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 090010-7 complied with all applicable Federal, State and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to: N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. All permits including but not limited to the NJDEP-approved Decommissioning/Closure Plan were posted onsite for inspection. CUTE Inc., the contractor that conducted the decommissioning activities, is registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 090010-7 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The NJDEP-BUST closure approval and signed certifications for UST No. 090010-7 are included in Appendices A and B, respectively.

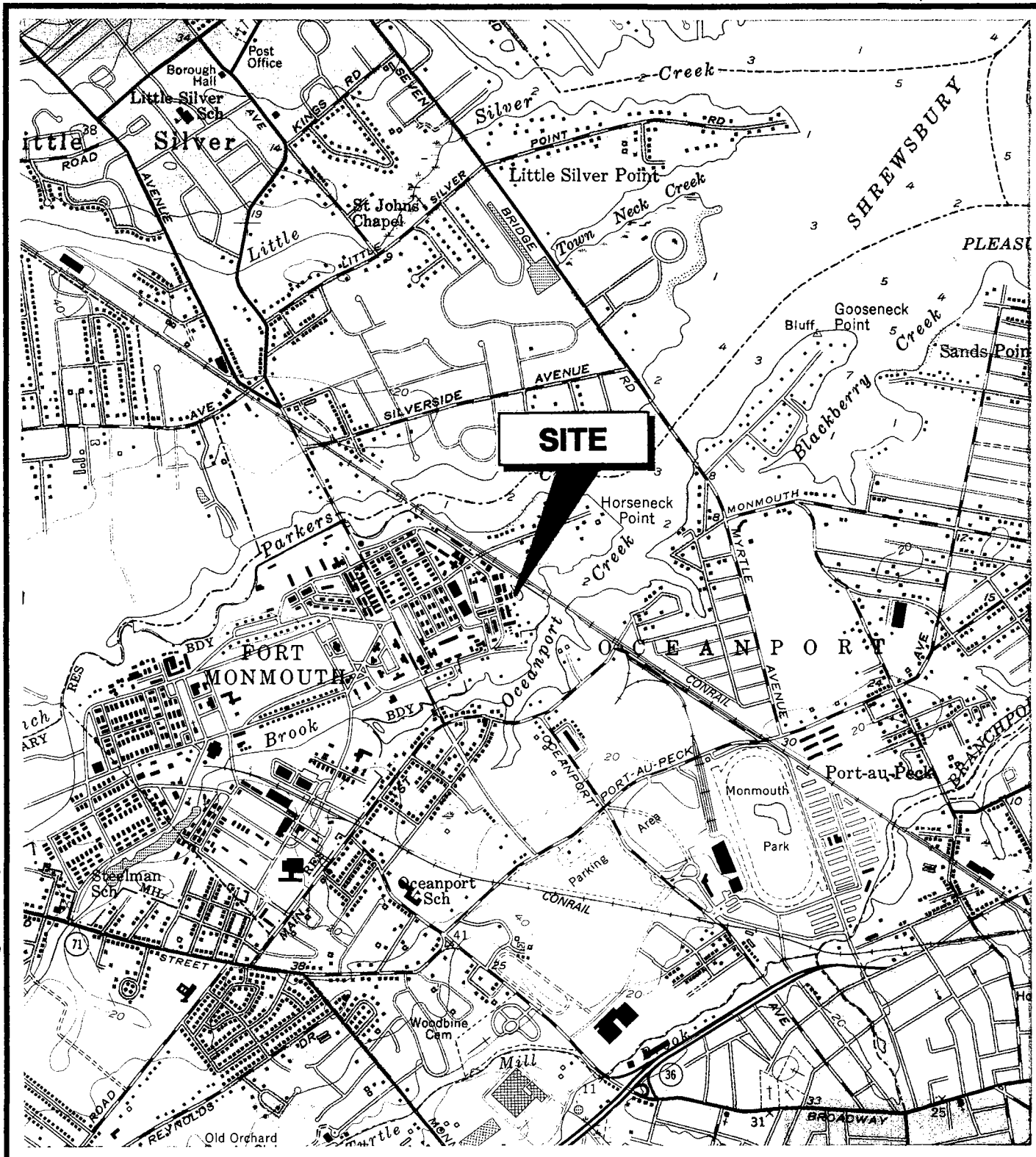
Based on an inspection of the UST, field screening of subsurface soils and analytical results of collected soil samples, the DPW has concluded that no significant historical discharges are associated with the UST or associated piping.

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-BUST regulations. The applicable NJDEP-BUST regulations at the date of closure were the *Interim Closure Requirements for Underground Storage Tank Systems* (N.J.A.C. 7:14B-1 et seq. September 1990 and revisions dated November 1, 1991).

This report was prepared using information required at the time of closure. Section 1 of this UST Closure and Site Investigation Report provides a summary of the UST decommissioning activities. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling investigation, are presented in the final section of this report.

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



N

SCALE
0 2000 FT.

NEW JERSEY

QUADRANGLE LOCATION

Source: BCM/Smith Environmental Technologies Corporation (028)

Project No. 09-5004-07

Figure 1
Site Location Map

1.2 SITE DESCRIPTION

Former Building 108 was located in the eastern portion of the Main Post area of Fort Monmouth as shown on Figure 1. UST No. 090010-7 was located west of Former Building 108 and appurtenant piping ran less than 15 feet west from Former Building 108 to the fill port area. A site map is provided on Figure 2. The fill port area was located directly above the UST.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Former Building 108. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

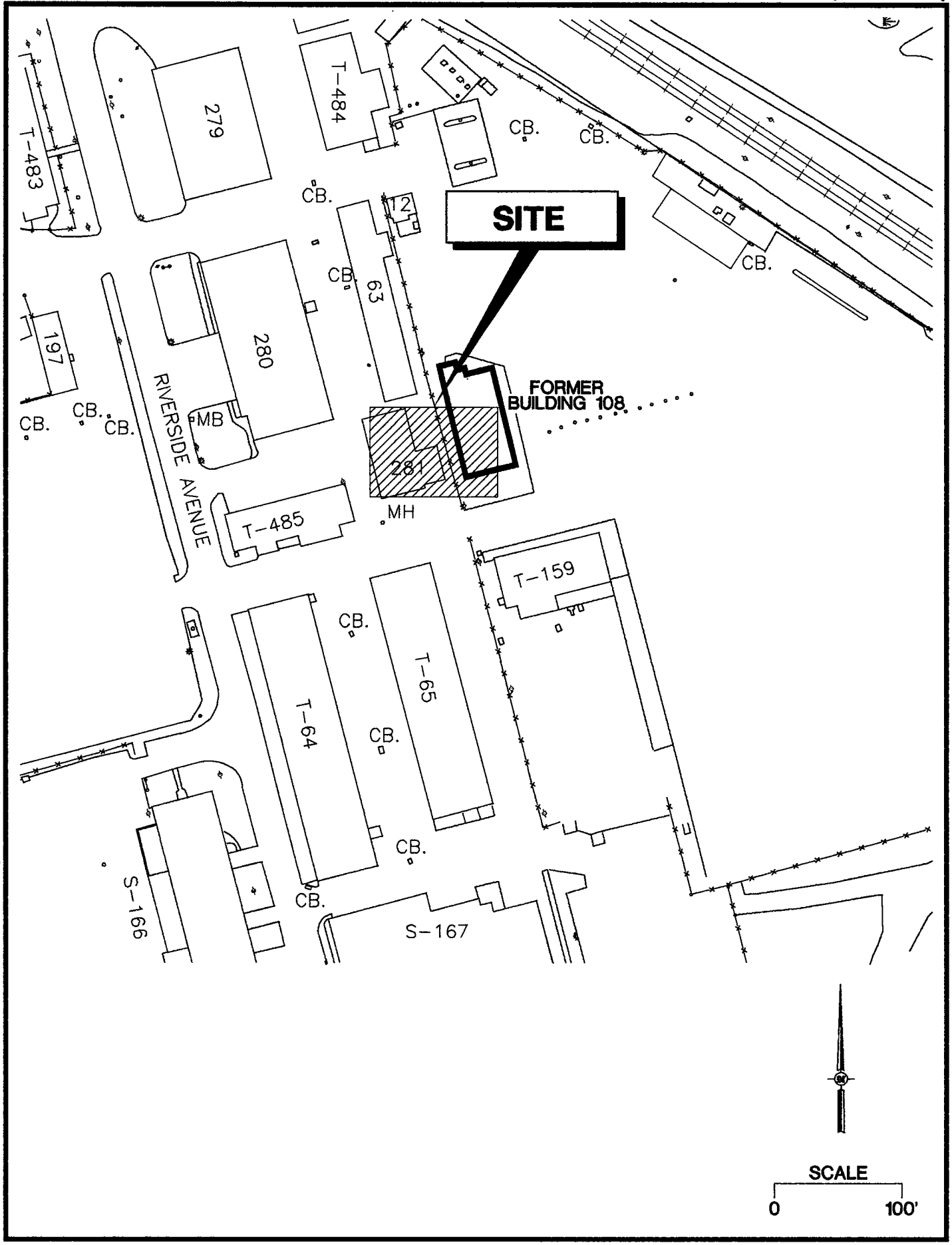
The formations record several major transgressive/regressive cycles and contain units which are generally thicker to the southeast and reflect a deeper water environment. Over 20 regional geologic units are present within the sediments of the Coastal Plain. Regressive, upward coarsening deposits are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

Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile. The upper member (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

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Department of Public Works
Fort Monmouth, New Jersey



Source: BCM/Smith Environmental Technologies Corporation (048)

Project No. 09-5004-07

Figure 2
Former Building 108
Site Map

glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

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

Hydrogeology

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

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

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

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involve with, or were affected by, the decommissioning of the UST system were minimized. All areas which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing a combustible gas indicator (CGI). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

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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 organic vapor analyzer (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 removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. A total of 1,000 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal facility located in Old Bridge, New Jersey. Refer to Appendix C for waste manifest (No. NJA-1603196).

The UST was cleaned prior to removal from the excavation in accordance with NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. One small hole was observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. No evidence of contamination was noted.

Soil screening was also performed along the piping associated with the UST. No contamination was noted anywhere along the piping length.

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1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

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

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

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

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, no soils exhibited signs of contamination. Therefore, the excavated soils were used as backfill following removal of the UST.

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2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities:

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

- Subsurface Evaluator: Joseph M. Fallon
  Employer: U.S. Army, Fort Monmouth
  Phone Number: (908) 532-0989
  NJDEP Certification No.: 0002442

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

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

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Soil excavated from around the tank and appurtenant piping, as well as the UST excavation sidewalls and bottom, were found to be free of potential contamination.

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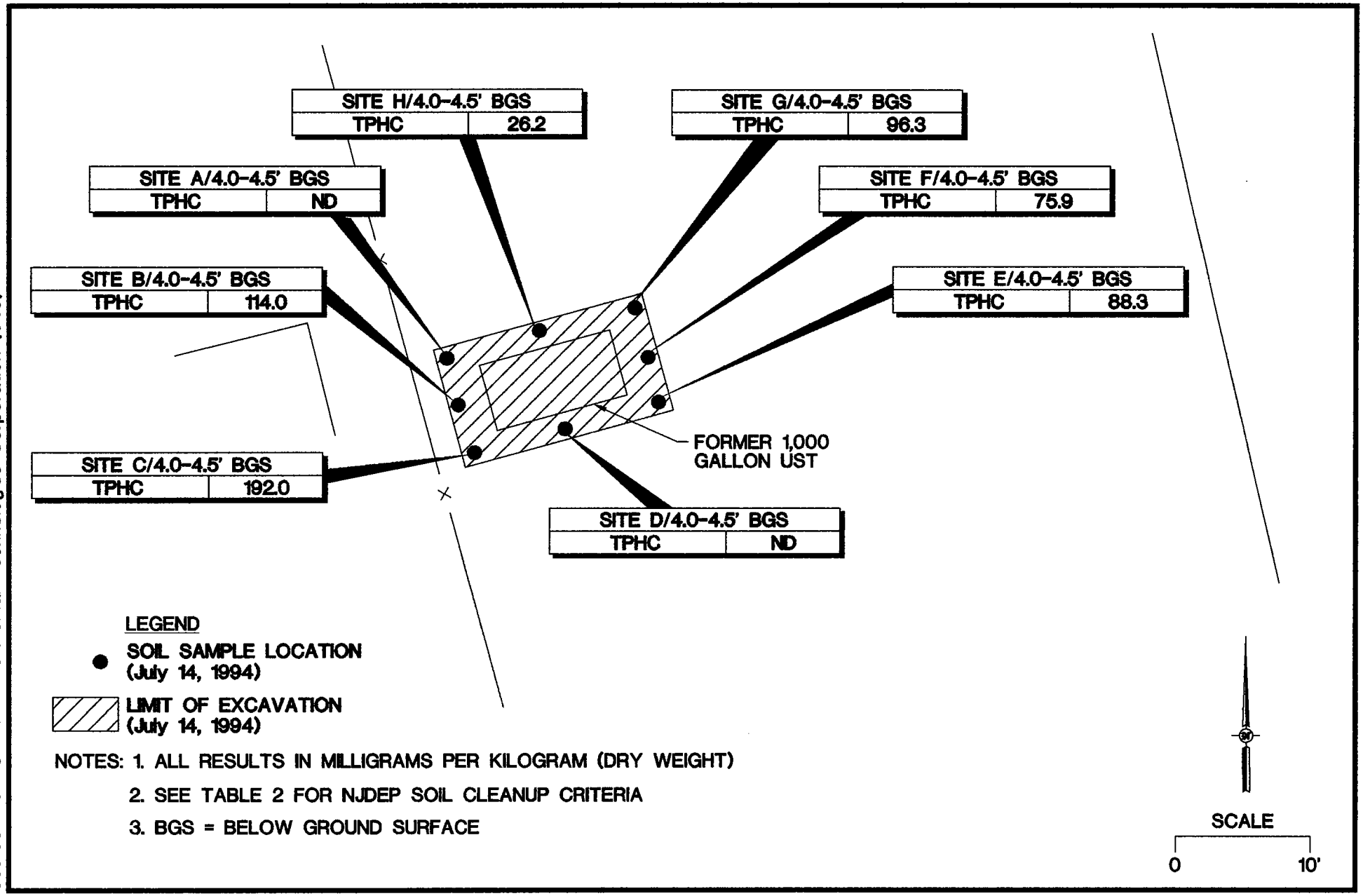
2.3 SOIL SAMPLING

On July 14, 1994, post-excavation soil samples A, B, C, D, E, F, G, and H, were collected from eight (8) locations along the sidewalls of the UST excavation immediately above groundwater. Groundwater was present at approximately 4.5 feet BGS. Samples were not collected along the piping trench due to the length being less than 15 feet. Refer to soil sampling location map on Figure 3. All samples were analyzed for total petroleum hydrocarbons (TPHC). Because none of the post-excavation soil samples exhibited a TPHC concentration exceeding 1,000 milligrams per kilogram (mg/kg), none were analyzed for volatile organic compounds with a forward library search for 10 tentatively identified compounds (VOCs).

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements* and the NJDEP *Field Sampling Procedures Manual*. A summary of sampling activities including parameters analyzed is provided in Table 1. The post-excavation soil samples were collected using polystyrene scoops. Actual soil TPHC values may be higher than reported, due to sample utensil absorbency. If absorbency resulted in reducing the actual soil TPHC concentration by 50 %, the highest soil contaminant would have been 384.0 mg/kg, still below the applicable NJDEP soil cleanup standard for total organic contaminants of 10,000 mg/kg. Following soil sampling activities, the samples were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis.

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



Source: BCM/Smith Environmental Technologies Corporation (049)

Project No. 09-5004-07

Figure 3

Former Building 108
Soil Sampling Results

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 108, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
G	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop

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

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3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected from a total of eight (8) locations on July 14, 1994. All samples were analyzed for TPHC. The post-excavation soil sample results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and the soil sampling results are shown on Figure 3. The analytical data package is provided in Appendix E.

All post-excavation soil samples collected on July 14, 1994, from the UST excavation and from below piping associated with the UST contained either non-detectable concentrations of TPHC or concentrations below the NJDEP soil cleanup criteria. Samples B, C, E, F, G, and H, contained levels of TPHC ranging in concentration from 26.2 mg/kg to 192.0 mg/kg. All other samples contained a non-detectable concentration of TPHC.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Former Building 108 were below the NJDEP soil cleanup criteria for total organic contaminants.

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

No further action is proposed in regard to the closure and site assessment of UST No. 090010-7 at Former Building 108.

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 108
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
A/4.0-4.5'	1565.1	07-14-94	07-18-94	Total Solid	--	--	87 %	--	--
				TPHC	6.6	yes	ND	10,000	--
B/4.0-4.5'	1565.2	07-14-94	07-18-94	Total Solid	--	--	85 %	--	--
				TPHC	6.6	yes	114.0	10,000	--
C/4.0-4.5'	1565.3	07-14-94	07-18-94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	192.0	10,000	--
D/4.0-4.5'	1565.4	07-14-94	07-18-94	Total Solid	--	--	85 %	--	--
				TPHC	6.6	yes	ND	10,000	--
E/4.0-4.5'	1565.5	07-14-94	07-18-94	Total Solid	--	--	85 %	--	--
				TPHC	6.6	yes	88.3	10,000	--
F/4.0-4.5'	1565.6	07-14-94	07-18-94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	75.9	10,000	--
G/4.0-4.5'	1565.7	07-14-94	07-18-94	Total Solid	--	--	83 %	--	--
				TPHC	6.6	yes	96.3	10,000	--
H/4.0-4.5'	1565.8	07-14-94	07-18-94	Total Solid	--	--	82 %	--	--
				TPHC	6.6	yes	26.2	10,000	--

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

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APPENDIX A

NJDEP BUST CLOSURE APPROVAL

UNDERGROUND STORAGE TANK SYSTEM
CLOSURE APPROVAL

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF UNDERGROUND STORAGE TANKS
CN-029, TRENTON, NJ 08625-0029

TMS #	UST #
C-93-3901	0090010

US Army
BLDG. 108
Ft. Monmouth, NJ

Monmouth

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

Removal of: one 1,000 gallon #2 diesel UST(s) and appurtenant piping.
SITE ASSESSMENT: Soil samples will be taken every five (5) feet along the center line of each tank and one (1) soil sample for every 15 feet along all associated piping. Two (2) additional samples will be taken from around the tank and biased to the areas of highest field screened readings. Samples will be analyzed for TPHC. If sample results are greater than 1,000ppm than 25% of the samples will be analyzed for VO+10.

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

OWNER: TELEPHONE:

EFFECTIVE DATE: SEP 07 1993

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

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

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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. 108

090010-7
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-

OWNER'S NAME AND ADDRESS, if different from above

_____
_____
_____

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? ___Yes X No If Yes, Case No._____
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) N/A

C. Have any vapor hazards been mitigated? ___Yes ___No X N/A

III. DECOMMISSIONING OF TANK SYSTEMS Closure Approval No. C-93-3901

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 0

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? ___ Yes X 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. N/A ppb total BTEX, N/A ppb total non-targeted VOC
2. N/A ppb total B/N, N/A ppb total non-targeted B/N
3. 192.0 ppm TPHC
4. N/A ppb _____ (for non-petroleum substance)

C. Remediation of free product contaminated soils N/A

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

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

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

VI. GROUND WATER CONTAMINATION N/A

A. Was ground water contamination found? ___ Yes ___ 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:

1. _____ ppb total BTEX, _____ ppb total non-targeted VOC
2. _____ ppb total B/N, _____ ppb total non-targeted B/N
3. _____ ppb total MTBE, _____ ppb total TBA
4. _____ ppb _____ (for non-petroleum substance)
5. greatest thickness of separate phase product found _____
6. separate phase product has been delineated ___ Yes ___ No ___ 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 ___ N/A

2. The number of these wells identified is _____.

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 _____ 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 _____ feet from the source and its screening begins at a depth of _____ 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 _____ feet below grade. This well is located _____ 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 _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____ feet.

E. A plan for separate phase product recovery has been included. ___Yes ___No ___N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well. ___Yes ___No ___N/A

G. Delineation of contamination

1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. ___Yes ___No

2. The plume is suspected to continue off the property at concentrations greater than MCLs. ___Yes ___No

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

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

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

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

NAME (Print or Type) Joseph M. Fallon SIGNATURE Joseph M. Fallon

COMPANY NAME U.S. Army, Fort Monmouth DATE 2/14/96
(Preparer of Site Assessment Plan)

CERTIFYING ORGANIZATION NJDEP CERTIFICATION NUMBER 0002442

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)1].

"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 2/24/94

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

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

SMITH

APPENDIX C

WASTE MANIFEST

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

Bldg 108

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

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3216020597 — Manifest Document No. 03196

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

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

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

A. State Manifest Document Number: NJA 1603196

B. State Generator's ID:

5. Transporter 1 Company Name: Freehold Cartage Inc

6. US EPA ID Number: NJD054112616

C. State Trans. ID: NJDEPS 2265

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 908 462-7001

E. State Trans. ID:

9. Designated Facility Name and Site Address: Chemical Recovery Co Inc., Runyon & Chesapeake Rd, Old Bridge NJ 08857

10. US EPA ID Number: NJP084104164

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 908 721-0900

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	01000	G	X722
b. X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	00732	G	X722
c. X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	00922	G	X722
d. X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	00454	G	X722

J. Additional Descriptions for Materials Listed Above

a. oil 60% water 40% L,T

c. oil 60% water 40% L,T

b. oil 60% water 40% L,T

d. oil 60% water 40% L,T

K. Handling Codes for Wastes Listed Above

a. T04 Filtration

c. T04 Filtration

b. T04 Filtration

d. T04 Filtration

15. Special Handling Instructions and Additional Information

NOT EPA Regulated. NJ hazardous D NJDEPE 009040-16

24 hr. Emerg # 201-429-2881

*DECAL # 55404

a) NJDEPE 009040-7

b) NJDEPE 009040-13A

c) NJDEPE 009040-13B

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

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

GENERATOR

Printed/Typed Name: Joseph M. Fallon — Signature: Joseph M. Fallon — Month Day Year: 07 13 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: PAULO R. MEDEIROS — Signature: — Month Day Year: 07 13 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

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

Printed/Typed Name — Signature — Month Day Year

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

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

LJG108 - 009001O-7
LJG443 - 009001O-49
LDG364 - 008533-74

MAZZA & SONS, INC.

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

NO. _____

DATE 15 JUL 94

Customer's Name Cute inc

Address _____

Make of Autos

Tires

Tank

Price:

43560 LB G
38740 LB G
4820

JUL 15 1994

	Weight	Price
Cast Iron		
Steel		Min. 40
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum.Clean		
Lead		
Stainless		
Radiators		
Battery		
TOTAL AMOUNT		

Weigher _____ Customer _____

SMITH

APPENDIX E

SOIL ANALYTICAL DATA PACKAGE

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

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

Lab. ID #: 1565.1-.8
Sample Rec'd: 07/14/94
Analysis Start: 07/18/94
Analysis Comp: 07/19/94

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: B. McKee
Ext. Meth: Sonc.

NJDEPE UST Reg.#:
Closure #:
DICAR #:
Location #: **Bldg. 108**

Lab ID.	Description		%Solid	Result (mg/Kg)	MDL
1565.1	Sample A	OVA= ND	87	ND	6.6
1565.2	Sample B	OVA= ND	85	114.	6.6
1565.3	Sample C	OVA= ND	86	192.	6.6
1565.4	Sample D	OVA= ND	85	ND	6.6
1565.5	Sample E	OVA= ND	85	88.3	6.6
1565.6	Sample F	OVA= ND	86	75.9	6.6
1565.7	Sample G	OVA= ND	83	96.3	6.6
1565.8	Sample H	OVA= ND	82	26.2	6.6
M. Bl.	Method Blank		100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1565.8 dup= 100% 1565.8 s=99.7% 1565.8 sd=97.8% RPD= 1.9%

Brian K. McKee
Laboratory Director

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

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

Lab. ID #: 1565.1-.8
Sample Rec'd: 07/14/94
Analysis Start: 07/18/94
Analysis Comp: 07/18/94

Analysis: Munsel

Lab ID#	Soil Color
1565.1	10YR 4/6 Dark Yellowish Brown
1565.2	10YR 3/4 Dark Yellowish Brown
1565.3	5Y 4/2 Olive Gray
1565.4	5Y 4/2 Olive Gray
1565.5	5Y 4/2 Olive Gray
1565.6	5Y 4/2 Olive Gray
1565.7	10YR 3/2 Dark Yellowish Brown
1565.8	10YR 3/6 Dark Yellowish Brown

Brian K. McKee
Laboratory Director

U.S. ARMY FORT MONMOUTH

P.O. #:

Chain of Custody

Project #:	Sampler: Joe Fallon	Date / Time 7/14/XX 2:25 PM	Analysis Parameters
Customer: OPW	Site Name: Bldg 108		Start: / Finish:
Phone:			Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPH	Mas Mussel	Remarks
1565.1	7/14 1:30	Sample A	Soil	1	X		NO OVA Reading
.2	7/14 2:00	Sample B			X		
.3	7/14 2:05	Sample C			X		
.4	7/14 1:55	Sample D			X		
.5	7/14 1:50	Sample E			X		
.6	7/14 1:45	Sample F			X		
.7	7/14 1:40	Sample G			X		
.8	7/14 1:35 PM	Sample H			X		

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Joe Fallon	7/14/XX 2:25 PM	Sarah J. Hubbard	
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time

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

Enviornmental Laboratory

UST Registration # 0090010 ID# 7

1,500 gallon

Certification Number 13461

7/19/94 B-M4

2CM/M 500 MV=CAL

40.75 108mV

81.5 244mV

163 442mV

1565.1 4mV

1565.2 44mV

1565.3 72mV

1565.4 - 6mV

1565.5 - 35mV

1565.6 31mV

1565.7 37mV

1565.8 13mV

1565.8D 13mV

.83pk 105mV

.85D 103mV

PHC Conformance/Non-conformance Summary Report

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

Comments:

Laboratory Authentication Statement

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

Project #1565

Brian K. McKee
Laboratory Manager

ATTACHMENT J

UST 116B File Review and Analyses

Contents:

- Bldg. 116B Underground Storage Tank File Review
- Enclosure 1 – Fort Monmouth 2010 Work Order Report
- Enclosure 2 – 2010 Analytical Data Reports (10192 and 10206)

UNDERGROUND STORAGE TANK FILE REVIEW
FORT MONMOUTH BRAC 05 FACILITY
OCEANPORT, NEW JERSEY

Date: *July 21, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 116B*** Registration ID: 90010-9

Recommended Status of Site: ***Case Closed (no change)***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***None***

Based on the file review, were there indications of a contaminant release? [X] Yes [ ] No

NJDEP Release No. or DICAR (If applicable): 97-4-10-1409-35

Did NJDEP approve No Further Action (NFA) for this site? [X] Yes [ ] No [ ] Not Applicable

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: #2 Fuel Oil

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 4/10/1997

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg

Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

This steel No. 2 fuel oil UST was located adjacent to Building 116. Following tank removal in April 1997, soil samples were collected from the 116B tank excavation and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). The initial soil sample results indicated some residual contamination, and a total of 950 cubic yards of petroleum-contaminated soil was excavated for offsite disposal. The final soil sample results ranged from non-detected (ND) to 399 mg/kg for TPH, except for two samples (at 2913 and 2204 mg/kg TPH) from soils that could not be further remediated due to the proximity to the Building 116 foundation. All results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. After backfilling of the excavation, groundwater was sampled from within the former excavation area on October and December, 1999 and analyzed for VOCs and SVOCs; chloroform and butylbenzylphthalate were detected but at concentration less than the then-current Ground Water Quality Criteria (GWQC); further, these analytes are not directly attributable to fuel oil contamination. A UST closure report for tank 116B was prepared in 2000 by Versar (*Underground Storage Tank Closure and Site Investigation Report, Building 116B, Main Post-East Area*). The site was approved for No Further Action (NFA) by NJDEP in their letter dated October 23, 2000.

Additional sampling of soil and groundwater was completed by FTMM in May 2010 at the former UST 116B site to assess the potential extent of naphthalene and 2-methylnaphthalene, in accordance with recently updated NJDEP guidance. A Scope of Work and additional field notes describing the sampling activities is presented in Enclosure 1, and the resulting analytical data is presented in Enclosure 2. Concentrations of TPH in all of the soil boring samples were ND; consequently none of these samples were analyzed for SVOCs. A groundwater sample from a single temporary well was also analyzed for SVOCs, and no analytes were detected. Therefore, there is no evidence of naphthalene and 2-methylnaphthalene in excess of NJDEP criteria at this site.

In summary, NFA is warranted for soil and groundwater at this site.

Recommendations (if any): Submit for review; however, NFA already approved from NJDEP

Signed: _____

Kent A. Friesen, Parsons

ATTACHMENT J, Enclosure 1

UST 116B - Fort Monmouth 2010 Work Order Report

Scope of Work for Bldg. 116

Background

On April 10, 1997, a steel underground storage tank was closed by removal in accordance with New Jersey Department of Environmental Protection (NJDEP) underground storage tank closure procedures at the Main Post-East area of the US Army, Fort Monmouth, Ft. Monmouth, NJ.(see Figure 1). The UST was assigned the registration number 90010-9. The tank was a 1,000 gallon UST used for the storage of #2-fuel oil. The fill port was located directly above the tank. The tank was removed and a site assessment was performed by US Army personnel in accordance with NJDEP Technical Requirements for Site Remediation (N.J.A.C. 7:26E) and the NJDEP Field Sampling Procedures Manual. Soils surrounding the tank were screen visually and with a calibrated organic vapor analyzer for the evidence of soil impact and potential contamination. The tank was visually inspected for the presence of holes in the shell. Numerous holes were noted in the UST. In addition, visibly impacted soils were observed. The US Army notified NJDEP of the discharge and the discharge number 97-04-10-1409-35 was assigned.

A soil remediation was conducted and approximately 950 cubic yards of petroleum impacted soils were removed. Thirteen post excavation samples were collected of these samples four were in excess of the NJDEP soil clean up criteria of 10,000 ppm.

Additional analysis was performed on these samples and one of the samples was found to be in excess of the current NJDEP impact to groundwater criteria for naphthalene and 2-methylnaphthalene. Current NJDEP soil cleanup protocol requires remediation of soils where these compounds are in excess of the impact to groundwater standards

Purpose

To delineate both the vertical and horizontal extent of naphthalene and 2-methylnaphthalene identified during a previous remedial activity; and to estimate the remaining volume of soils where total organic concentrations are greater than current NJDEP standards.

Scope of Work

Using previously generated maps from GPS co-ordinates, we will attempt relocate the "hot spots" and provided that the topography and the building structures are the same, expand the grid to determine the aerial extent of the remaining impacted soils.
Soil samples will be collected and analyzed for the following parameters:

All soil will be analyzed for TPH; of those TPH w/ 25% of the samples >1,000 being analyzed on a contingency basis for naphthalene and 2-methylnaphthalene. Soil samples will be collected in accordance with FMETL SOP SAM- 0204 and SAM-0203. The proposed sample locations can be found on Figure 2

Groundwater will be collected from the same location as the soil samples. Prior groundwater analysis indicated that no volatile organic compounds (VOCs) were present at concentrations in excess of GWQS. Groundwater will be analyzed only for BN+15 analytical parameters. Sample collection will follow the FMETL SOP SAM - 0228.

The following table summarizes the sample media and proposed analysis:

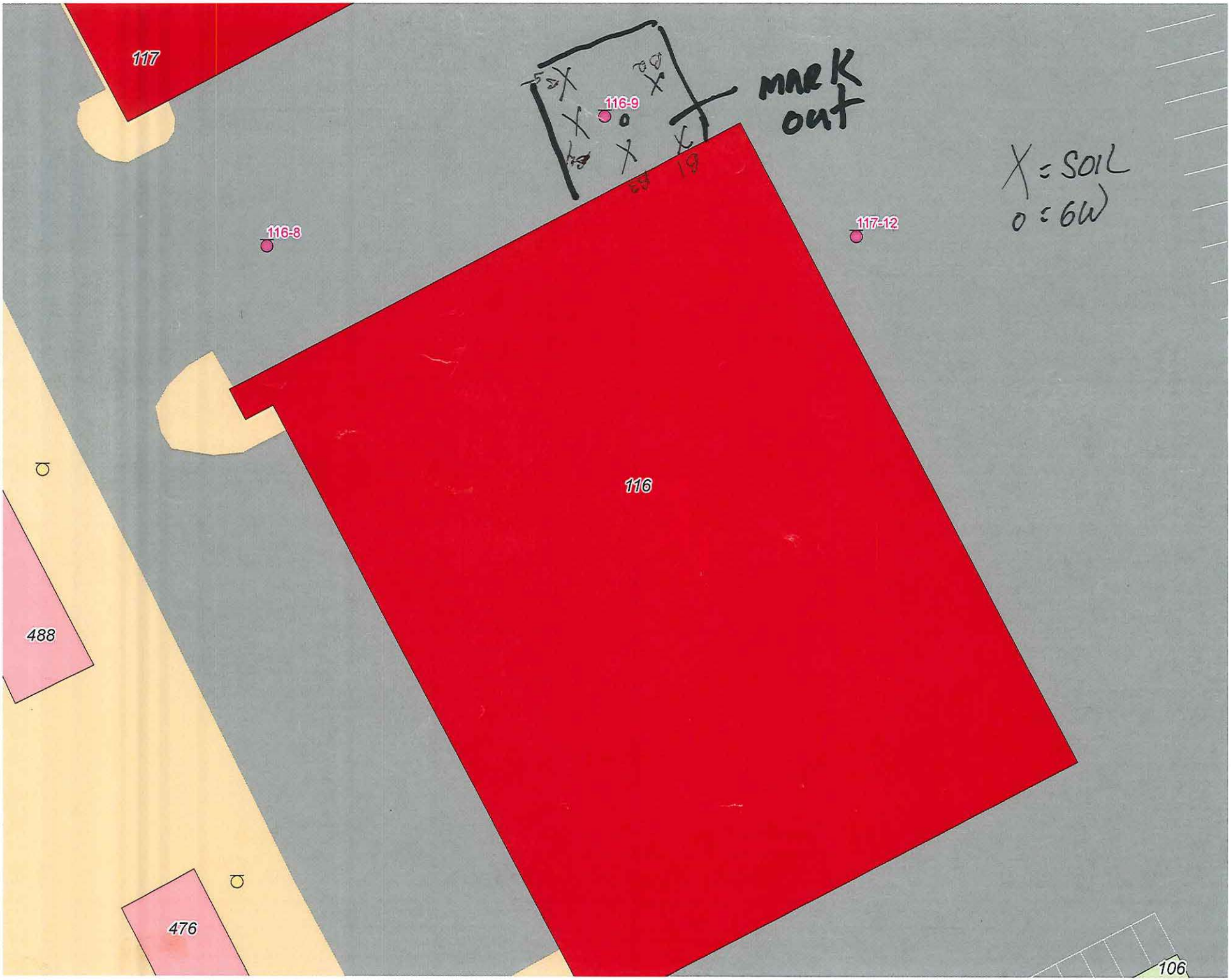
TABLE 1
Summary of Sampling Strategy

Sample media	Frequency	Analysis	Data quality objective
Soil/solids	5-10 (includes duplicates)	TPH w/contingency analysis naphthalene and 2-methylnaphthalene >1000 ppm TPH	Horizontal plume delineation/Identification of additional areas of concern
Groundwater	up to 10 (including duplicate sample)	Naphthalene & 2-methylnaphthalene	Impact to groundwater/groundwater quality

Data Review and Interpretation

Upon receipt of the analytical reports for the field activities, the US Army Directorate of Public Works (DPW), US Army Garrison, Ft. Monmouth, will evaluate the data against current soil and ground water standards to determine if any exceedances have occurred. The data will be summarized and tabulated. The data will also be presented visually to allow for spatial interpretation. Based on the analytical data, any additional field work will be focused on the identified Area(s) of Concern (AOC).

Based on the analytical results, DPW will submit actions to further delineate and/or remediate the AOCs identified. The submission will come in the form of a Site Investigation Report.


117
116-9
MARK
out
X = SOIL
O = GW
116-8
117-12
116
488
476
106

Site	Comment	Northing	Easting
116	B-1	541358.427	623150.716
116	B-2	541369.536	623144.698
116	B-3	541354.015	623139.801
116	B-4	541347.443	623128.340
116	B-5	541362.290	623122.112
116	TMP-1	541361.880	623140.908
483	GW-1	541628.493	623340.280
1104	GW-1	538688.350	618125.429

Bldg 116 5/14/10

		OVM
B-1	0-4" Asphalt	0
	4"-48" green-brown silty sands	0
	48"-96" yellow-orange sands and gravele	0
	72" water	0
	66"-72" sample	0
B-2	0-4" Asphalt	0
	4-60" brown-green clay	0
	60"-96" yellow-orange sands and gravel	0
	72" water	0
	66"-72" Sample	0
B-3	0-4" Asphalt water under asphat	0
	4"-60" green sandy silts	0
	60-96, yellow-orange sands & gravel/	0
	Water 72"	0
	66"-72" sample	0
B-4	0-4 Asphalt water under ashalt	0
	4"-48" No recovery	
	48-96 yellow-orange Sands and gravel/ water (complete sample wet)	0
	66-72 Sample	

Bldg 116 5/14/10

		OVM
B-5	0-4" Asphalt (water under asphalt)	0
	4"-60" green-black clay	0
	water (complete sample wet)	0
	66"-72" Sample	0

Bldg 116 5/21/10

Temp point 1" PVC
3'-5' Casing
5'-8' screen .10 slot

	pH	cond	Turb	DO	Temp	DEP	SAL	TDS	at	ORP
0915	5.9	78	399	5.2	19.8	0	0.0	.50	0	46
0940	6.2	86	-5	4.0	19.5	0	0.0	.53	0	62

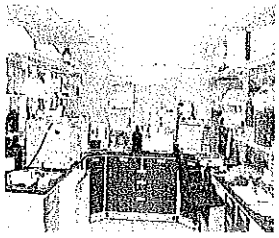
ATTACHMENT J, Enclosure 2

UST 116B – 2010 Analytical Data Reports (10192 and 10206)

(QC data sheets ommitted for brevity)

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: 10-85388

Bldg./116

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
B1/66-72	1019201	Soil	14-May-10 09:50	05/14/10
B2/66-72	1019202	Soil	14-May-10 10:45	05/14/10
B3/66-72	1019203	Soil	14-May-10 11:35	05/14/10
B4/66-72	1019204	Soil	14-May-10 13:40	05/14/10
B5/66-72	1019205	Soil	14-May-10 15:00	05/14/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
TPHC, %SOLIDS

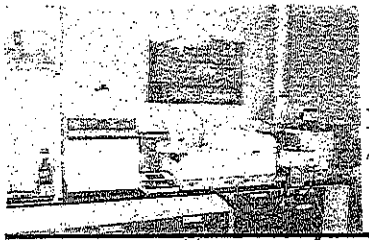
Dean Tardiff/Date: 6/7/10
Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail: dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Howard Syvarth
Phone #: 29254
( )DERA ( )OMA ( )Other:_____

Project No: 10-85388
Location: Bldg 116

Samplers Name / Company:

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH								Remarks / Preservation Method
10192 01	B1 66-72	5/14/10	0950	Soil	1	X								
02	B2 66-72		1045		1	X								
03	B3 66-72		1135		1	X								
04	B4 66-72		1340		1	X								
05	B5 66-72		1500		1	X								

Analysis Parameters

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
George Boyce	5/14/10 1555				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush Wk., ( )ASAP Verbal ___ Hrs.

Comments: Analyze naphthalene and 2 methylnaphthalene > 1000 ppm TPH

00002

SAMPLE RECEIPT FORM

Date Received: 5-14-10 Work Order ID#: 1001913

Site/Proj. Name: Bldg 116 Cooler Temp (°C): 4.0 °C

Received By: J. Cuyler Sign: J. Cuyler
(Print name)

Check the appropriate box

1. Did the samples come in a cooler?	yes	no	n/a
2. Were samples rec'd in good condition?	yes	no	
3. Was the chain of custody filled out correctly and legibly?	yes	no	
4. Was the chain of custody signed in the appropriate place?	yes	no	
5. Did the labels agree with the chain of custody?	yes	no	
6. Were the correct containers/preservatives used?	yes	no	
7. Was a sufficient amount of sample supplied?	yes	no	
8. Were air bubbles present in VOA vials?	yes	no	n/a
9. Were samples received on ice?	yes	no	
10. Were analyze-immediately tests perform within 15 minutes	yes	no	n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative

Comments: _____

METHOD SUMMARY

Method Summary

NJDEP Method OQA-QAM-025 02/08
Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for Petroleum Hydrocarbons covering a range of C8-C42, including Pristane and Phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak. The final concentration of Total Petroleum Hydrocarbons is calculated using percent moisture, sample weight and concentration.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

10192 TPHc

TPHC Conformance/Non-conformance Summary Report

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

Additional comments: _____

Laboratory Manager

6/7/10
Date

6/2/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10192 **Site:** Bldg. 116

	Date	Hold Time
Date Sampled	05/14/10	NA
Receipt/Refrigeration	05/14/10	NA

Analyses

1. TPHC	05/21/10	14 Days

TPHC

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

Client:	U.S. Army DPW. SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	**Project #:** **Location:** **ECP:** **Work Order:**	10-85388 BLDG 116
Analysis:	OQA-QAM-025	**Date Received:**	14-May-10
Matrix:	.	**Date Extracted:**	21-May-10
Inst. ID:	GC TPHC INST. #1	**Extraction Method:**	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	**Analyst:**	Robert Szot
Injection Volume:	1 uL		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB05211001	MB05211001	1.00	15.00	100.00	23	333	not detected		
LCS05211001	LCS05211001	1.00	15.00	100.00	23	333	1036.77		
1019201	116 B1 66-72	1.00	15.12	91.8	25	360	not detected		
1019202	116 B2 66-72	1.00	15.16	89.8	26	367	not detected		
1019203	116 B3 66-72	1.00	15.23	90.1	26	364	not detected		
1019204	116 B4 66-72	1.00	15.13	90.5	26	365	not detected		
1019205	116 B5 66-72	1.00	15.06	88.9	26	373	not detected		

Qualifiers:
MDL = Method Detection Limit
RL = Reporting Limit
E = Result exceeds calibration limit
J = Estimated value, concentration is between MDL and RL
D = Result from dilution
ND = not detected

000011

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature Dennis Tarsell

Date: 6/7/10

Laboratory Certification # 13461

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

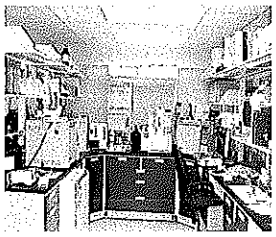
Laboratory Authentication Statement

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

Dean Tardiff 6/7/10
Dean Tardiff
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: 10-85388

Bldg. /116

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
Field Blank	1020601	Aqueous	21-May-10 09:00	05/21/10
116 TMP 1	1020602	Aqueous	21-May-10 09:35	05/21/10

ANALYSIS:
ACCUTEST LABORATORIES
BN+15

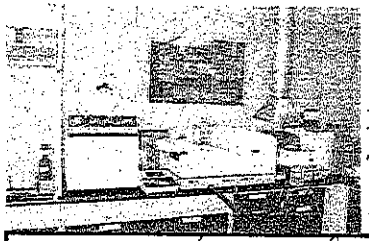
Dean Tardiff/Date: 6/8/10
Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail: dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Howard Syrarth
Phone #: 29254
( )DERA ( )OMA ( )Other:_____

Project No: 10-85388
Location: Bldg 116

Samplers Name / Company: George Boyce (TVS)

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	B/N+15								Remarks / Preservation Method
10206 01	Field Blank	5/21/10	0900	Ag	1	X								
02	116 TMP 1	5/21/10	0935	Ag	1	X								

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
George Boyce	5-21-10 1185				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush Wk., ( )ASAP Verbal ____Hrs.

Comments:

print legibly

new coc._1.XLS4/19/2010

200008

SAMPLE RECEIPT FORM

Date Received: 5-21-10 Work Order ID#: 10206

Site/Proj. Name: Bldg 116 Cooler Temp (°C): 3.0°C

Received By: J. Vergara Sign: J. Vergara
(Print name)

Check the appropriate box

1. Did the samples come in a cooler?	yes	no	n/a
2. Were samples rec'd in good condition?	yes	no	
3. Was the chain of custody filled out correctly and legibly?	yes	no	
4. Was the chain of custody signed in the appropriate place?	yes	no	
5. Did the labels agree with the chain of custody?	yes	no	
6. Were the correct containers/preservatives used?	yes	no	
7. Was a sufficient amount of sample supplied?	yes	no	
8. Were air bubbles present in VOA vials?	yes	no	n/a
9. Were samples received on ice?	yes	no	
10. Were analyze-immediately tests perform within 15 minutes	yes	no	n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative

Comments: _____

_____

_____

_____



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Dean Tardiff
Phone #: (732)532-4359
( )DERA ( )OMA ( )Other:_____

Project No:
Location: Bldg. 116

Samplers Name / Company:

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: BN+15	Analysis Parameters: SIMS	Comments: Remarks / Preservation Method
1020601	Field Blank	5/21/2010	9:00	AQ	1	X	X	
1020602	116 TMP 1	5/21/2010	9:35	AQ	1	X	X	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	5-21-10 1500	[signature]			
[signature]		[signature]			

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, ( )Rush Wk., _(_)ASAP Verbal ____Hrs.

Comments: PO C09-20650

print legibly

Bldg. 116 10206..xls5/21/2010

000003

CONFORMANCE/ NON-CONFORMANCE SUMMARY

ACCUTEST Laboratories

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Fort Monmouth Environmental Testing Lab.	**Job No**	JA47189
Site:	Building 116	**Report Date**	6/7/2010 6:59:54 PM

On 05/21/2010, 1 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.6 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA47189 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Extractables by GCMS By Method SW846 8270C

Matrix: AQ **Batch ID:** OP43735

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA47064-12MS, JA47064-12MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for bis(2-Chloroethyl)ether are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for bis(2-Chloroethyl)ether are outside control limits.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ **Batch ID:** OP43735A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA47064-12MS, JA47064-12MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Acenaphthene, Anthracene, Fluorene, Phenanthrene are outside control limits. Outside of in house control limits.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

METHOD SUMMARY

Method Summary

EPA Method 625
Gas Chromatographic Determination of Semi-volatiles in Water

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

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10206 **Site:** Bldg. 116

	Date	Hold Time
Date Sampled	05/21/10	NA
Receipt/Refrigeration	05/21/10	NA

Analyses

1. Semi-Volatiles	06/01,02/10	7 Days

SEMI-VOLATILE ORGANICS

Raw Data: Z55762.D

Accutest Laboratories

Report of Analysis

Client Sample ID:	1020601 FIELD BLANK		
Lab Sample ID:	JA47189-1	Date Sampled:	05/21/10
Matrix:	AQ - Field Blank Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 116		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55762.D	1	06/02/10	LP	05/24/10	OP43735	EZ2074
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-86-2	Acetophenone	ND	2.0	0.40	ug/l	
1912-24-9	Atrazine	ND	5.0	0.39	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.40	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.35	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.25	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.42	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.42	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/l	
86-74-8	Carbazole	ND	1.0	0.17	ug/l	
105-60-2	Caprolactam	ND	2.0	0.20	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.25	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.35	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	2.0	0.22	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	2.0	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.30	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.40	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.17	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.23	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.13	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	20	0.24	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.21	ug/l	
78-59-1	Isophorone	ND	2.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.66	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.24	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.29	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.18	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1020601 FIELD BLANK		
Lab Sample ID:	JA47189-1	Date Sampled:	05/21/10
Matrix:	AQ - Field Blank Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 116		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	70%		25-112%
321-60-8	2-Fluorobiphenyl	82%		31-106%
1718-51-0	Terphenyl-d14	50%		14-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Internal standard added for SIM test	5.27	4.8	ug/l	J
	unknown	12.06	6.2	ug/l	J
	Total TIC, Semi-Volatile		6.2	ug/l	J

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	1020601 FIELD BLANK		
Lab Sample ID:	JA47189-1	Date Sampled:	05/21/10
Matrix:	AQ - Field Blank Water	Date Received:	05/21/10
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	Building 116		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R80663.D	1	06/01/10	JSE	05/24/10	OP43735A	ER2996
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.029	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.039	ug/l	
120-12-7	Anthracene	ND	0.10	0.026	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.028	ug/l	
218-01-9	Chrysene	ND	0.10	0.022	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.024	ug/l	
86-73-7	Fluorene	ND	0.10	0.027	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.0099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.029	ug/l	
91-20-3	Naphthalene	ND	0.10	0.019	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.036	ug/l	
129-00-0	Pyrene	ND	0.10	0.022	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	106%		18-119%
321-60-8	2-Fluorobiphenyl	67%		18-104%
1718-51-0	Terphenyl-d14	43%		13-109%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: Z55769.D

Accutest Laboratories

Report of Analysis

Client Sample ID:	1020602 116 TMP 1		
Lab Sample ID:	JA47189-2	Date Sampled:	05/21/10
Matrix:	AQ - Ground Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 116		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55769.D	1	06/02/10	LP	05/24/10	OP43735	EZ2074
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-86-2	Acetophenone	ND	2.0	0.40	ug/l	
1912-24-9	Atrazine	ND	5.0	0.39	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.40	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.35	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.25	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.42	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.42	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/l	
86-74-8	Carbazole	ND	1.0	0.17	ug/l	
105-60-2	Caprolactam	ND	2.0	0.20	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.25	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.35	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	2.0	0.22	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	2.0	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.30	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.40	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.17	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.23	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.13	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	20	0.24	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.21	ug/l	
78-59-1	Isophorone	ND	2.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.66	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.24	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.29	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.18	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1020602 116 TMP 1		
Lab Sample ID:	JA47189-2	Date Sampled:	05/21/10
Matrix:	AQ - Ground Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 116		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		25-112%
321-60-8	2-Fluorobiphenyl	65%		31-106%
1718-51-0	Terphenyl-d14	40%		14-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	1020602 116 TMP 1		
Lab Sample ID:	JA47189-2	Date Sampled:	05/21/10
Matrix:	AQ - Ground Water	Date Received:	05/21/10
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	Building 116		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R80671.D	1	06/02/10	JSE	05/24/10	OP43735A	ER2996
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.029	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.039	ug/l	
120-12-7	Anthracene	ND	0.10	0.026	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.028	ug/l	
218-01-9	Chrysene	ND	0.10	0.022	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.024	ug/l	
86-73-7	Fluorene	ND	0.10	0.027	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.0099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.029	ug/l	
91-20-3	Naphthalene	ND	0.10	0.019	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.036	ug/l	
129-00-0	Pyrene	ND	0.10	0.022	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	78%		18-119%
321-60-8	2-Fluorobiphenyl	59%		18-104%
1718-51-0	Terphenyl-d14	33%		13-109%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

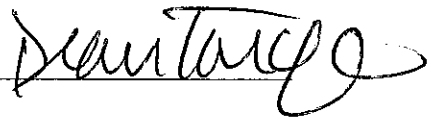
LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature 

Date: 6/18/10

Laboratory Certification # 13461

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

Laboratory Authentication Statement

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

Dean Tardiff
Laboratory Manager 6/18/10

000090

ATTACHMENT K

UST 117C Report

United States Army

Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 117
Main Post

NJDEP UST Registration No. 0090010-72
Emergency UST Removal
Spill Case No. 94-4-28-1944-21

Text, Tables, and Appendices A Through E

July 1998

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 117

MAIN POST
NJDEP UST REGISTRATION NO. 0090010-72
EMERGENCY UST REMOVAL
SPILL CASE NO. 94-4-28-1944-21

JULY 1998

PROJECT NO. 09-5004-08
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:

BCM ENGINEERS
A DIVISION OF ATC
BROMLEY CORPORATE CENTER
THREE TERRI LANE
BURLINGTON, NEW JERSEY 08016

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EXECUTIVE SUMMARY

On April 28, 1994, a previously unknown steel underground storage tank (UST) was closed by removal at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0090010-72, was discovered during a renovation process, and was directed as an emergency removal. The tank was located immediately adjacent to Building 117 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 0090010-72 was a 1,000-gallon petroleum oil UST. The UST fill port was located directly above the tank. The tank closure was performed by U.S.Army Base Operation Contractor, Serv-Air Inc., under the direct supervision of the DPW.

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes. No holes were noted in the UST, however, a small amount of free product was observed along the southern wall of the excavation. Absorbent pads were placed in the excavation to absorb the free product.

On April 28, 1994, following removal of the UST, approximately 5 cubic yards of potentially contaminated soil was removed from the UST excavation due to the presence of free product along the southern wall. Eight post-excavation soil samples were collected along the sidewalls of the excavation, immediately above groundwater. One more sample was collected from the piping portion of the excavation. All samples were analyzed for total petroleum hydrocarbons (TPHC).

Based on field screening of subsurface soils, the DPW has concluded that an historical discharge was associated with the UST. On Aril 28, 1994, a spill was reported to the NJDEP "Hotline" for UST No. 0090010-72 and was assigned Spill Case No. 94-4-28-1944-21.

On April 29, 1994, approximately 10 cubic yards of potentially contaminated soil was removed from areas surrounding soil samples with elevated TPHC levels. Following the removal of the soil, four soil samples were collected and were analyzed for TPHC.

All post-excavation soil samples collected from the UST excavation and from below piping associated with the former UST at Building 117 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994).

Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with a combination of uncontaminated excavated soil and certified clean fill. The excavation site was then restored to its original condition.

In response to the observation of potentially contaminated soil near the shallow water table, one shallow overburden monitoring well (MW-1) was installed at the Building 117 area on September 14, 1994. On May 25, 1995 and June 16, 1995, MW-1 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOCs), semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs), PCB/Pesticides, and Metals. Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation.*

The sample collected from MW-1 on May 25, 1995, and June 16, 1995 contained either non-detectable concentrations of volatile organic compounds or concentrations below the Groundwater Quality Criteria (GWQC). However, the groundwater samples contained aluminum, iron, and manganese at concentrations exceeding the Ground Water Quality Criteria for aluminum of 200 ug/l, for iron of 300 ug/l, and for manganese of 50 ug/l. All other groundwater analytical results from MW-1 were either below the detection limit or in compliance with the New Jersey GWQC.

The depth to the water table was 7.17 feet below grade on May 25, 1995, and the depth to the water table on June 16, 1995 was 7.27 feet below grade.

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

The elevated aluminum, iron, and manganese concentrations detected in groundwater samples may be indicative of natural groundwater quality, interference from sampling induced turbidity, or a byproduct of biodegradation of hydrocarbons in the subsurface. Because the metal may be naturally occurring, the UST and potentially contaminated soils have been removed, and the shallow groundwater is not extracted for use, the metals do not warrant further concern or action.

No further action is proposed in regard to the closure and site assessment of UST No. 0090010-72 at Building 117.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 0090010-72, was closed at Building 117 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on April 28, 1994. Refer to site location map on Figure 1. The UST was a steel 1,000-gallon tank containing petroleum oil.

Decommissioning activities for UST No. 0090010-72 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. Closure of UST No. 0090010-72 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The signed certifications for UST No. 0090010-72 are included in Appendix A.

Based on field screening of subsurface soils, the DPW has concluded that an historical discharge was associated with the UST. On Aril 28, 1994, a spill was reported to the NJDEP "Hotline" for UST No. 0090010-72 and was assigned Spill Case No. 94-4-28-1944-21.

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

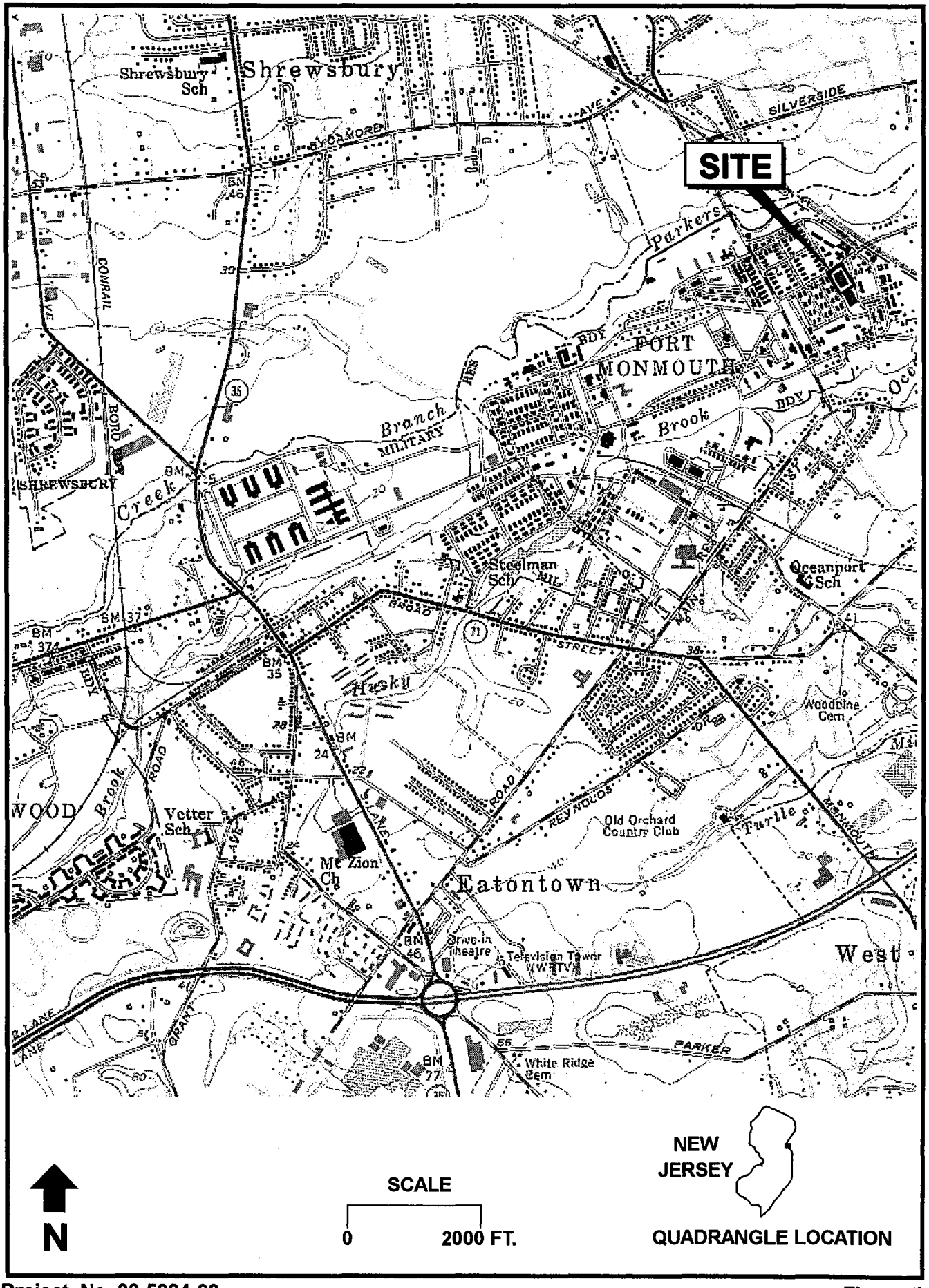
This report was prepared using information required at the time of closure. Section 1 of this UST Closure and Site Investigation Report provides a summary of the UST decommissioning activities. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling investigation, are presented in the final section of this report.

1.2 SITE DESCRIPTION

Building 117 is located in the northeastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 0090010-72 was located east of Building 117 and appurtenant piping ran approximately 4 feet west from the excavation to Building 117. The fill port area was located directly above the tank. A site map is provided on Figure 2.

SMITH

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



Source: Long Branch, New Jersey Quadrangle

Project No. 00-5004-08

Figure 1
Site Location Map
Building 117

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 117. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

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

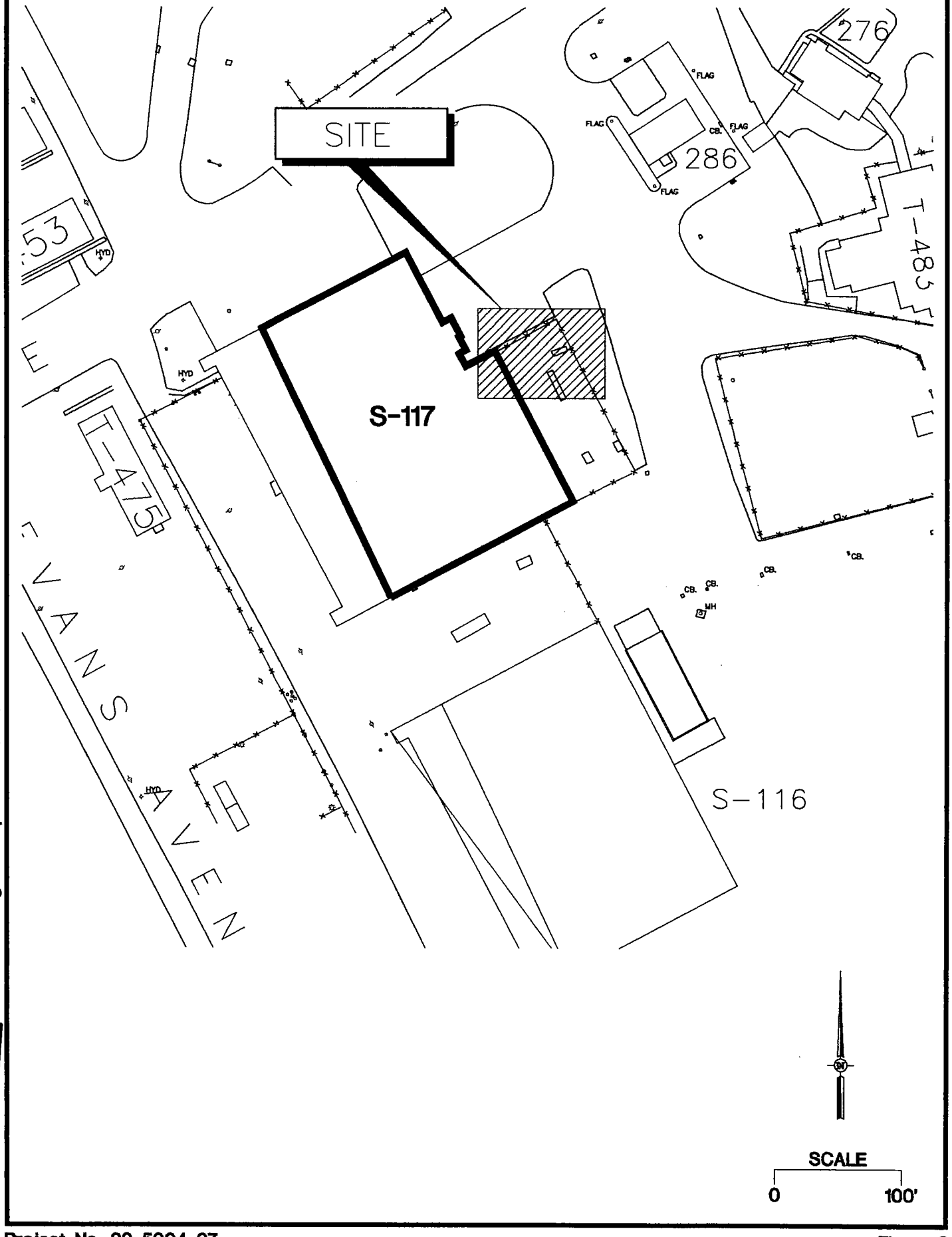
Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile. The upper member (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

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



Source: Smith [redacted] Technologies Corporation (136)

Project No. 09-5004-07

Figure 2
Building 117
Site Map

grayish olive. Glauconite may constitute 60 to 80 percent of the sand fraction in the upper part of the unit (Minard, 1969). The upper part of the Tinton is often highly oxidized and iron oxide encrusted (Minard).

Hydrogeology

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

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

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

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involve with, or were affected by, the decommissioning of the UST system were minimized. All areas which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- All underground obstructions (utilities, etc.) were marked out by the contractor performing the closure prior to excavation activities.
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.

- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.

- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.

- A Sub-Surface Evaluator from the DPW was present during all closure activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. Approximately 260 gallons of liquid were transported by L & L Oil Services to Lionetti Oil Recovery Co., a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix B for the waste manifest (NJA-1889390).

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. No holes or punctures were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. Free product was observed along the southern wall of the UST excavation.

Soil screening was also performed along the piping associated with the UST. No contamination was noted anywhere along the piping length.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

The tank was transported by Serv-Air Inc. to Mazza and Sons Inc. for disposal in compliance with all applicable regulations and laws. The UST Disposal Ticket was not available.

The removal contractor labeled the UST prior to transport with the following information:

- site of origin
- contact person
- NJDEP UST Facility ID number

- name of transporter/contact person
- destination site/contact person

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on visual observations and elevated TPHC results, approximately 15 cubic yards of potentially contaminated soils were removed from the excavation. Potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were transported to T-80 on Main Post for storage prior to ultimate disposal at Soil Remediation of Philadelphia. Soils that did not exhibit signs of contamination were used as backfill following removal of the UST.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities.

- Closure Contractor: U.S. Army Base Operation Contractor
  Closure Supervisor: Joseph M. Fallon
  Phone Number: (732) 532-1475
  NJDEP Company Certification No.: 000244

- Subsurface Evaluator: Joseph M. Fallon
  Employer: U.S. Army, Fort Monmouth
  Phone Number: (908) 532-1475
  NJDEP Certification No.: 000244

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

- Hazardous Waste Hauler: L&L Oil Services
  Contact Person: Not Available
  Phone Number: Not Available
  NJDEP Company Certification No.: Not Available

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Additional soils were removed from the excavation surrounding UST No. 0090010-72 until no evidence of contamination remained.

2.3 SOIL SAMPLING

On April 28, 1994, following removal of the UST, approximately 5 cubic yards of potentially contaminated soil was removed from the UST excavation due to the presence of free product along the southern wall. Post-excavation soil samples A, B, C, D, E, F, G, and H, were collected from a total of eight (8) locations along the sidewalls of the excavation, immediately above groundwater. The samples were collected at a depth of 6.5 feet below ground surface (bgs). Groundwater was present at approximately 7.0 feet bgs. Sample I was collected from the piping portion of the excavation which ran approximately four (4) feet west from the UST to Building 117. The piping sample was collected at a depth of 1.0 foot bgs.

On April 29, 1994, approximately 10 cubic yards of soil from areas surrounding samples A, G, H, and I were excavated due to elevated TPHC levels. Following the removal of the soil, samples
A-2, G-2, H-2, and I-2, were collected in the vicinity of samples A, G, H, and I. Samples A-2, G-2, and H-2 were collected at a depth of 6.5 feet bgs. Sample I-2 was collected at a depth of 1.0 feet bgs. All samples were analyzed for TPHC.

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements* and the NJDEP *Field Sampling Procedures Manual*. A summary of sampling activities including parameters analyzed is provided in Table 1. The post-excavation soil samples were collected using polystyrene scoops. Actual soil TPHC values may be higher than reported, due to sample utensil absorbency. If absorbency resulted in reducing the actual soil TPHC concentration by 50 percent, the highest soil contaminant would have been 1,824.0 mg/kg, still below the applicable NJDEP soil cleanup standard for total organic contaminants of 10,000 mg/kg. Following soil sampling activities, the samples were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis.

2.4 GROUNDWATER SAMPLING

2.4.1 Monitoring Well Installation

In response to the observation of potentially contaminated soil near the shallow water table, one shallow monitoring well (MW-1) was installed at the Building 117 area on September 14, 1994. It was installed approximately 5 feet southeast of the UST excavation in the assumed downgradient direction. It was screened in the 2.5-to 12.5 foot interval, across the water table, which is approximately 7.0 feet below grade surface.

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

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 117, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
G	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
I	4/28/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
A-2	4/29/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
G-2	4/29/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H-2	4/29/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
I-2	4/29/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
MW-1	5/25/95	Aqueous	Groundwater	VOCs, SVOCs, Metals, Pesticides/PCBs	Teflon Bottom Bailer
MW-1	6/16/95	Aqueous	Groundwater	VOCs, SVOCs, Metals, Pesticides/PCBs	Teflon Bottom Bailer

* Note:

TPHC	Total Petroleum Hydrocarbons (Method 418.1 / soil and aqueous)
VOCs	Volatile Organic Cpompounds calibrated for xylene plus 15 tentatively identified compounds (Method 524.2 / aqueous)
SVOCs	Semivolalile Organic Cpompounds plus 15 tentatively identified compounds (Method 625 / aqueous)
Metals	(Method SW-846 / aqueous)
Pesticides/PCBs	(Method 608 / aqueous)

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

The borehole was tremie-grouted with bentonite-cement grout from the top of the sand pack to 6 inches bgs. The well was secured with a steel protective casing with a stickup that is approximately 2.5 feet above ground surface. The steel protective casing was set in place with concrete, which was placed in the remaining open borehole. The elevation of the well riser was surveyed to the nearest 0.01 feet by a New Jersey-licensed surveyor. The well permit number was marked on the well casing as required.

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

2.4.2 Monitoring Well Sampling

On May 25, 1995 and June 16, 1995, MW-1 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOCs), semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs), PCB/Pesticides, and Metals. Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation.*

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples A, B, C, D, E, F, G, H, and I were collected from a total of nine (9) locations on April 28, 1994. Post-excavation soil samples A-2, G-2, H-2, and I-2 were collected from four (4) locations on April 29, 1994. All samples were analyzed for TPHC. The post-excavation sampling results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and the soil sampling results are shown on Figure 3. The analytical data package is provided in Appendix D.

All post-excavation soil samples collected on April 28, 1994 and April 29, 1994 from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. The TPHC concentrations for samples B, C, D, E, and F, collected on April 28, 1994 ranged from 28.0 mg/kg to 912.0 mg/kg. Samples A, G, H, and I, collected on April 28, 1994, contained elevated TPHC concentrations ranging from 1,130.0 mg/kg to 4,440.0 mg/kg. Samples A-2, G-2, H-2, and I-2, collected on April 29, 1994, contained TPHC concentrations ranging from 12.9 mg/kg to 40.5 mg/kg.

3.2 GROUNDWATER SAMPLING RESULTS

The sample collected from MW-1 on May 25, 1995, contained methylene chloride at 0.80 micrograms per liter (ug/l), tert-butylbenzene at 1.2 ug/l, and sec-butylbenzene at 6.4 ug/l. These results were below the Groundwater Quality Criteria (GWQC). The trip blank contained methylene chloride at 1.5 ug/l, 1,2-dichloroethane at 8.4 ug/l, 2-chlorotoluene at 7.7 ug/l, and 4-chlorotoluene at 2.5 ug/l. The 1,2-dichloroethane concentration exceeded the GWQC of 2.0 ug/l. The field blank contained methylene chloride at 1.6 ug/l, 1,2-dichloroethane at 7.3 u/l, toluene at 1.6 ug/l, 2- chlorotoluene at 7.7 ug/l, 4-chlorotoluene at 6.4 ug/l, and 1,4-dichlorobenzene at 0.60 ug/l. The 1,2-dichloroethane concentration exceeded the GWQC of 2.0 ug/l.

The sample also contained aluminum at 650 ug/l, barium at 23 ug/l, calcium at 21,000 ug/l, iron at 1,700 ug/l, magnesium at 12,000 ug/l, manganese at 170 ug/l, and sodium at 48,000 ug/ll. These results exceeded the Ground Water Quality Criteria for aluminum of 200 ug/l, for iron of 300 ug/l, and for manganese of 50 ug/l. The field blank contained iron at 100 ug/l. All other groundwater analytical results from MW-1 on May 25, 1995 were either below the detection limit or in compliance with the New Jersey GWQC.

The sample collected from MW-1 on June 16, 1995, contained methylene chloride at 1.6 ug/l, 1,2-dichloroethane at 9.6 ug/l, tert-butylbenzene at 1.2 ug/l, sec-butylbenzene at 6.4 ug/l, and

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 117
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
A/6.5-7.0'	1465.1	4/28/94	4/29/94	Total Solid	--	--	84 %	--	--
				TPHC	50.0	yes	2,850.0	10,000	--
B/6.5-7.0'	1465.2	4/28/94	4/29/94	Total Solid	--	--	90 %	--	--
				TPHC	6.6	yes	564.0	10,000	--
C/6.5-7.0'	1465.3	4/28/94	4/29/94	Total Solid	--	--	90 %	--	--
				TPHC	6.6	yes	28.0	10,000	--
D/6.5-7.0'	1465.4	4/28/94	4/29/94	Total Solid	--	--	88 %	--	--
				TPHC	9.9	yes	197.0	10,000	--
E/6.5-7.0'	1465.5	4/28/94	4/29/94	Total Solid	--	--	91 %	--	--
				TPHC	20.0	yes	689.0	10,000	--
F/6.5-7.0'	1465.6	4/28/94	4/29/94	Total Solid	--	--	89 %	--	--
				TPHC	20.0	yes	912.0	10,000	--
G/6.5-7.0'	1465.7	4/28/94	4/29/94	Total Solid	--	--	90 %	--	--
				TPHC	20.0	yes	1,480.0	10,000	--
H/6.5-7.0'	1465.8	4/28/94	4/29/94	Total Solid	--	--	91 %	--	--
				TPHC	9.9	yes	1,130.0	10,000	--
I/1.0-1.5'	1465.9	4/28/94	4/29/94	Total Solid	--	--	88 %	--	--
				TPHC	50.0	yes	4,440.0	10,000	--

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

TABLE 2

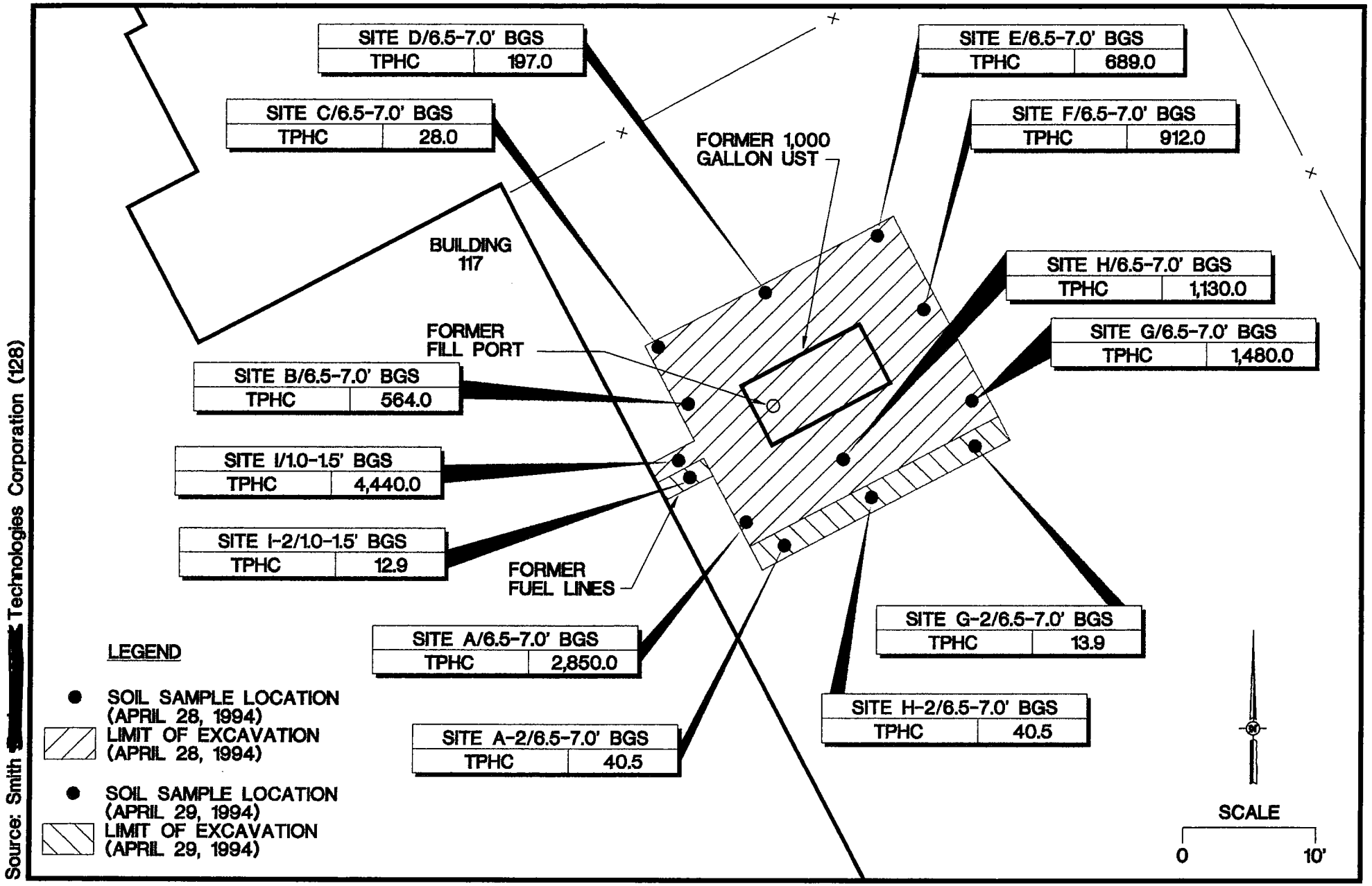
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 117
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
A-2/6.5-7.0'	1469.1	4/29/94	4/29/94	Total Solid	--	--	90 %	--	--
				TPHC	3.3	yes	40.5	10,000	--
G-2/6.5-7.0'	1469.2	4/29/94	4/29/94	Total Solid	--	--	86 %	--	--
				TPHC	3.3	yes	13.9	10,000	--
H-2/6.5-7.0'	1469.3	4/29/94	4/29/94	Total Solid	--	--	90 %	--	--
				TPHC	3.3	yes	40.5	10,000	--
I-2/1.0-1.5'	1469.4	4/29/94	4/29/94	Total Solid	--	--	93 %	--	--
				TPHC	3.3	yes	12.9	10,000	--

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

SMITH

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



Source: Smith [redacted] Technologies Corporation (128)

Project No. 09-5004-08

Figure 3
Building 117
Soil Sampling Results

phenol at 3.0 ug/l. The 1,2-dichloroethane concentration exceeded the GWQC of 2.0 ug/l. The trip blank contained methylene chloride at 0.80 ug/l, and 1,2-dichloroethane at 8.4 ug/l. The field blank contained chloromethane at 0.90 ug/l, methylene chloride at 0.80 ug/l, and 1,2-dichloroethane at 7.3 ug/l.

The sample also contained aluminum at 1,900 ug/l, calcium at 13,000 ug/l, iron at 5,900 ug/l, and magnesium at 6,300 ug/l, manganese at 80 ug/l, sodium at 27,000 ug/l, lead at 2.6 ug/l, and zinc at 76 ug/l. These results exceeded the GWQC for aluminum of 200 ug/l, for iron of 300 ug/l, and for manganese of 50 ug/l. The field blank contained iron at 100 ug/l. All other groundwater analytical results from MW-1 on June 16, 1995 were either below the detection limit, or in compliance with the New Jersey GWQC.

No product or sheen was observed in MW-1 on either of the sampling dates. The depth to the water table was 7.17 feet below grade surface on May 25, 1995 and 7.27 feet below grade surface on June 16, 1995.

All groundwater analytical results are presented in Table 3 and shown on Figure 4. The groundwater analytical data package is provided in Appendix F. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, DPW.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 117 were below the NJDEP soil cleanup criteria for total organic contaminants.

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

Based on the detection of 1,2-dichloroethane in field blanks and trip blanks, the 1,2-dichloroethane detected in the June 16, 1995 sample from MW-1 is attributed to sampling and/or laboratory interference; it is not considered representative of groundwater quality. The elevated aluminum, iron, and manganese concentrations may be indicative of natural groundwater quality, interference from sampling induced turbidity, or a byproduct of biodegradation of hydrocarbons in the subsurface. Because the metal may be naturally occurring, the UST and potentially contaminated soils have been removed, and the shallow groundwater is not extracted for use, the metals do not warrant further concern or action.

No further action is proposed in regard to the closure and site assessment of UST No. 0090010-72 at Building 117.

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	5/25/95	6/08/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.50	--	ND	--	--
			Vinyl Chloride	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			1,1-Dichloroethene	0.50	--	ND	2	--
			Methylene Chloride	0.80	--	0.80 B	100*	--
			1,2-Dichloroethene (trans)	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1,1-Trichloroethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			1,1-Dichloropropene	0.50	--	ND	30	--
			Benzene	0.50	--	ND	--	--
			1,2-Dichloroethane	0.50	--	ND	2	--
			Trichloroethene	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			Dibromomethane	0.50	--	ND	NA	--
			Bromodichloromethane	0.50	--	ND	--	--
			cis-1,3-Dichloropropene	0.50	--	ND	1	--
			Toluene	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	5/25/95	6/8/95	trans-1,3-Dichloropropene	0.50	--	ND	3	--
			1,1,2-Trichloroethane	0.50	--	ND	1	--
			Tetrachloroethene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	4	--
			Dibromochloromethane	0.50	--	ND	10	--
			1,2-Dibromomethane	0.50	--	ND	1*	--
			Chlorobenzene	0.50	--	ND	2	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	1,000	--
			Ethylbenzene	0.50	--	ND	--	--
			Xylenes (Total)	0.50	--	ND	4	--
			Styrene	0.50	--	ND	700	--
			Bromoform	0.50	--	ND	40	--
			Isopropylbenzene	0.50	--	ND	100	--
			Bromobenzene	0.50	--	ND	--	--
			1,1,2,2-Tetrachloroethane	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	1.2	--	1.2	--	--
			1,2,4-Trimethylbenzene	0.50	--	ND	--	--
			sec-Butylbenzene	6.4	--	6.4	--	--
			1,3-Dichlorobenzene	0.50	--	ND	600	--
			4-Isopropyltoluene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	5/25/95	6/8/95	1,4-Dichlorobenzene	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	--	--
			Methyl-tertiary butyl ether	0.50	--	ND	--	--
			Tertiary-butyl alcohol	2.0	--	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

(ND) Indicates compound not detected

(NA) Not available for this constituent

GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
MW-1	5/25/95	6/8/95	NONE FOUND	--	--	--

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tenatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	5/25/95	6/7/95	Phenol	10	--	ND	4000	--
			bis(2 chloroethyl)Ether	10	--	ND	20	--
			2-Chlorophenol	10	--	ND	40	--
			1,3-Dichlorobenzene	10	--	ND	600	--
			1,4-Dichlorobenzene	10	--	ND	75	--
			1,2-Dichlorobenzene	10	--	ND	600	--
			2-Methylphenol	10	--	ND	--	--
			bis(2-chloroisopropyl)Ether	10	--	ND	300	--
			4-Methylphenol	10	-	ND	--	--
			N-Nitroso-Di-n-propylamine	10	--	ND	20	--
			Hexachloroethane	10	--	ND	10	--
			Nitrobenzene	10	--	ND	10	--
			Isophorone	10	--	ND	100	--
			2-Nitrophenol	10	--	ND	--	--
			2,4-Dimethylphenol	10	--	ND	100	--
			bis(2-Chloroethoxy)Methane	10	--	ND	--	--
			2,4-Dichlorophenol	10	--	ND	20	--
			1,2,4-Trichlorobenzene	10	--	ND	9	--
			Naphthalene	10	--	ND	--	--
			4-Chloroaniline	10	--	ND	--	--
			Hexachlorobutadiene	10	--	ND	1	--
			4-Chloro-3-methylphenol	10	--	ND	--	--
			2-methylnaphthanene	10	--	ND	--	--
			Hexachlorocyclopentadiene	10	--	ND	50	--
			2,4,6-Trichlorophenol	10	--	ND	20	--
			2,4,5-Trichlorophenol	25	--	ND	700	--
			2-Chloronaphthalene	10	--	ND	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	5/25/95	6/7/95	2-Nitroanline	25	--	ND	--	--
			Dimethyl Phthalate	10	--	ND	--	--
			Acenaphthylene	10	--	ND	NA	--
			2,6-Dinitrotoluene	10	--	ND	NA	--
			3-Nitroaniline	25	--	ND	--	--
			Acenaphthene	10	--	ND	400	--
			2,4-Dinitrophenol	25	--	ND	40	--
			4-Nitrophenol	25	--	ND	--	--
			Dibenzofuran	10	--	ND	--	--
			2,4-Dinitrotoluene	10	--	ND	10	--
			Diethylphthalate	10	--	ND	5,000	--
			Fluorene	10	--	ND	300	--
			4-Chlorophenyl-phenlyether	10	--	ND	--	--
			4-Nitroaniline	25	--	ND	--	--
			4,6-Dinitro-2-methylphenol	25	--	ND	--	--
			N-Nitrosodiphenylamine	10	--	ND	20	--
			4-Bromophenyl-phenylether	10	--	ND	--	--
			Hexachlorobenzene	10	--	ND	10	--
			Pentachlorophenol	25	--	ND	1	--
			Phenanthrene	10	--	ND	NA	--
			Anthracene	10	--	ND	2,000	--
			Carbazole	10	--	ND	--	--
			Di-n-butylphthalate	10	--	ND	900	--
			Fluoranthene	10	--	ND	300	--
			Pyrene	10	--	ND	200	--
			Butylbenzylphthalate	10	--	ND	100	--
			Benzo(a)Anthracene	10	--	ND	NA	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	5/25/95	6/7/95	3,3-Dichlorobenzidine	20	--	ND	60	--
			Chrysene	10	--	ND	NA	--
			bis(2-Ethylhexyl)Phthalate	10	--	ND	30	--
			Di-n-Octyl Phthalate	10	--	ND	100	--
			Benzo(b)Fluoranthene	10	--	ND	NA	--
			Benzo(k)Fluoranthene	10	--	ND	NA	--
			Benzo(a)Pyrene	10	--	ND	NA	--
			Indeno(1,2,3-cd)pyrene	10	--	ND	NA	--
			Dibenzo(a,h)anthracene	10	--	ND	NA	--
			Benzo(g,h,i)perylene	10	--	ND	NA	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
(NA) Not available for this constituent
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
MW-1	5/25/95	6/7/95	NONE FOUND	--	--	--

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
METALS

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	5/25/95	6/08/95	Silver	50	--	ND	20	--
			Aluminum	650	--	650	200	YES
			Arsenic	5	--	ND	8	--
			Barium	23	--	23	2000	--
			Beryllium	5	--	ND	20	--
			Calcium	21000	--	21000	--	--
			Cadmium	10	--	ND	4	--
			Cobalt	50	--	ND	--	--
			Chromium	50	--	ND	100	--
			Copper	50	--	ND	1000	--
			Iron	1700	--	1700	300	YES
			Mercury	1	--	ND	2	--
			Potassium	3000	--	ND	--	--
			Magnesium	12000	--	12000	--	--
			Manganese	170	--	170	50	YES
			Sodium	48000	--	48000	50000	--
			Nickel	50	--	ND	100	--
			Lead	2.5	--	ND	10	--
			Antimony	5	--	ND	20	--
			Selenium	5	--	ND	50	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
METALS (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	5/25/95	6/08/95	Thallium	5	--	ND	10	--
			Vanadium	50	--	ND	--	--
			Zinc	20	--	ND	5000	--
			Cyanide (total)	10	--	ND	200	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S

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	5/25/95	6/08/95	alpha-BHC	0.02	--	ND	0.02	--
			beta-BHC	0.04	--	ND	0.2	--
			delta-BHC	0.02	--	ND	--	--
			gamma-BHC (Lindane)	0.03	--	ND	--	--
			Heptachlor	0.02	--	ND	0.4	--
			Aldrin	0.04	--	ND	0.04	--
			Heptachlor epoxide	0.04	--	ND	0.2	--
			Endosulfan I	0.02	--	ND	0.4	--
			Dieldrin	0.03	--	ND	0.03	--
			4,4'-DDE	0.04	--	ND	0.1	--
			Endrin	0.04	--	ND	2	--
			Endosulfan II	0.04	--	ND	0.4	--
			4,4'-DDD	0.04	--	ND	0.1	--
			Endosulfan sulfate	0.04	--	ND	0.4	--
			4,4'-DDT	0.04	--	ND	0.1	--
			Endrin aldehyde	0.1	--	ND	--	--
			Chlordane	0.1	--	ND	0.5	--
			Toxaphene	1	--	ND	3	--
			Aroclor-1016	1	--	ND	--	--
			Aroclor-1221	1	--	ND	--	--
			Aroclor-1232	1	--	ND	--	--
			Aroclor-1242	1	--	ND	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S (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	5/25/95	6/08/95	Aroclor-1248	1	--	ND	--	--
			Aroclor-1254	1	--	ND	--	--
			Aroclor-1260	1	--	ND	--	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Trip Blank	5/25/95	6/7/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.50	--	ND	--	--
			Vinyl Chloride	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			1,1-Dichloroethene	0.50	--	ND	2	--
			Methylene Chloride	1.5	--	1.5 B	100*	--
			1,2-Dichloroethene (trans)	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1,1-Trichloroethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			1,1-Dichloropropene	0.50	--	ND	30	--
			Benzene	0.50	--	ND	--	--
			1,2-Dichloroethane	8.4	--	8.4	2	YES
			Trichloroethene	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			Dibromomethane	0.50	--	ND	NA	--
			Bromodichloromethane	0.50	--	ND	--	--
			cis-1,3-Dichloropropene	0.50	--	ND	1	--
			Toluene	1.0	--	1.0	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Trip Blank	5/25/95	6/7/95	trans-1,3-Dichloropropene	0.50	--	ND	3	--
			1,1,2-Trichloroethane	0.50	--	ND	1	--
			Tetrachloroethene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	4	--
			Dibromochloromethane	0.50	--	ND	10	--
			1,2-Dibromomethane	0.50	--	ND	1*	--
			Chlorobenzene	0.50	--	ND	2	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	1,000	--
			Ethylbenzene	0.50	--	ND	--	--
			Xylenes (Total)	0.50	--	ND	4	--
			Styrene	0.50	--	ND	700	--
			Bromoform	0.50	--	ND	40	--
			Isopropylbenzene	0.50	--	ND	100	--
			Bromobenzene	0.50	--	ND	--	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	--	--
			1,2,3-Trichloropropane	0.50	--	ND	--	--
			n-Propylbenzene	0.50	--	ND	--	--
			2-Chlorotoluene	7.7	--	7.7	--	--
			4-Chlorotoluene	2.5	--	2.5	--	--
			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	--
			4-Isopropyltoluene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Trip Blank	5/25/95	6/7/95	1,4-Dichlorobenzene	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	--	--
			Methyl-tertiary butyl ether	0.50	--	ND	--	--
			Tertiary-butyl alcohol	2.0	--	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

(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 117, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	5/25/95	6/7/95	NONE FOUND	--	--	--

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/7/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.50	--	ND	--	--
			Vinyl Chloride	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			1,1-Dichloroethene	0.50	--	ND	2	--
			Methylene Chloride	1.6	--	1.6 B	100*	--
			1,2-Dichloroethene (trans)	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1,1-Trichloroethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			1,1-Dichloropropene	0.50	--	ND	30	--
			Benzene	0.50	--	ND	--	--
			1,2-Dichloroethane	7.3	--	7.3	2	YES
			Trichloroethene	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			Dibromomethane	0.50	--	ND	NA	--
			Bromodichloromethane	0.50	--	ND	--	--
			cis-1,3-Dichloropropene	0.50	--	ND	1	--
			Toluene	1.6	--	1.6	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/7/95	trans-1,3-Dichloropropene	0.50	--	ND	3	--
			1,1,2-Trichloroethane	0.50	--	ND	1	--
			Tetrachloroethene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	4	--
			Dibromochloromethane	0.50	--	ND	10	--
			1,2-Dibromomethane	0.50	--	ND	1*	--
			Chlorobenzene	0.50	--	ND	2	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	1,000	--
			Ethylbenzene	0.50	--	ND	--	--
			Xylenes (Total)	0.50	--	ND	4	--
			Styrene	0.50	--	ND	700	--
			Bromoform	0.50	--	ND	40	--
			Isopropylbenzene	0.50	--	ND	100	--
			Bromobenzene	0.50	--	ND	--	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	--	--
			1,2,3-Trichloropropane	0.50	--	ND	--	--
			n-Propylbenzene	0.50	--	ND	--	--
			2-Chlorotoluene	7.7	--	7.7	--	--
			4-Chlorotoluene	6.4	--	6.4	--	--
			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	--
			4-Isopropyltoluene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/7/95	1,4-Dichlorobenzene	0.60	--	0.60	--	--
			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	--	--
			Methyl-tertiary butyl ether	0.50	--	ND	--	--
			Tertiary-butyl alcohol	2.0	--	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

(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 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/25/95	6/7/95	NONE FOUND	--	--	--

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/7/95	Phenol	10	--	ND	4000	--
			bis(2 chloroethyl)Ether	10	--	ND	20	--
			2-Chlorophenol	10	--	ND	40	--
			1,3-Dichlorobenzene	10	--	ND	600	--
			1,4-Dichlorobenzene	10	--	ND	75	--
			1,2-Dichlorobenzene	10	--	ND	600	--
			2-Methylphenol	10	--	ND	--	--
			bis(2-chloroisopropyl)Ether	10	--	ND	300	--
			4-Methylphenol	10	-	ND	--	--
			N-Nitroso-Di-n-propylamine	10	--	ND	20	--
			Hexachloroethane	10	--	ND	10	--
			Nitrobenzene	10	--	ND	10	--
			Isophorone	10	--	ND	100	--
			2-Nitrophenol	10	--	ND	--	--
			2,4-Dimethylphenol	10	--	ND	100	--
			bis(2-Chloroethoxy)Methane	10	--	ND	--	--
			2,4-Dichlorophenol	10	--	ND	20	--
			1,2,4-Trichlorobenzene	10	--	ND	9	--
			Naphthalene	10	--	ND	--	--
			4-Chloroaniline	10	--	ND	--	--
			Hexachlorobutadiene	10	--	ND	1	--
			4-Chloro-3-methylphenol	10	--	ND	--	--
			2-methylnaphthanene	10	--	ND	--	--
			Hexachlorocyclopentadiene	10	--	ND	50	--
			2,4,6-Trichlorophenol	10	--	ND	20	--
			2,4,5-Trichlorophenol	25	--	ND	700	--
			2-Chloronaphthalene	10	--	ND	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/7/95	2-Nitroanline	25	--	ND	--	--
			Dimethyl Phthalate	10	--	ND	--	--
			Acenaphthylene	10	--	ND	NA	--
			2,6-Dinitrotoluene	10	--	ND	NA	--
			3-Nitroaniline	25	--	ND	--	--
			Acenaphthene	10	--	ND	400	--
			2,4-Dinitrophenol	25	--	ND	40	--
			4-Nitrophenol	25	--	ND	--	--
			Dibenzofuran	10	--	ND	--	--
			2,4-Dinitrotoluene	10	--	ND	10	--
			Diethylphthalate	10	--	ND	5,000	--
			Fluorene	10	--	ND	300	--
			4-Chlorophenyl-phenlyether	10	--	ND	--	--
			4-Nitroaniline	25	--	ND	--	--
			4,6-Dinitro-2-methylphenol	25	--	ND	--	--
			N-Nitrosodiphenylamine	10	--	ND	20	--
			4-Bromophenyl-phenylether	10	--	ND	--	--
			Hexachlorobenzene	10	--	ND	10	--
			Pentachlorophenol	25	--	ND	1	--
			Phenanthrene	10	--	ND	NA	--
			Anthracene	10	--	ND	2,000	--
			Carbazole	10	--	ND	--	--
			Di-n-butylphthalate	10	--	ND	900	--
			Fluoranthene	10	--	ND	300	--
			Pyrene	10	--	ND	200	--
			Butylbenzylphthalate	10	--	ND	100	--
			Benzo(a)Anthracene	10	--	ND	NA	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/7/95	3,3-Dichlorobenzidine	20	--	ND	60	--
			Chrysene	10	--	ND	NA	--
			bis(2-Ethylhexyl)Phthalate	10	--	ND	30	--
			Di-n-Octyl Phthalate	10	--	ND	100	--
			Benzo(b)Fluoranthene	10	--	ND	NA	--
			Benzo(k)Fluoranthene	10	--	ND	NA	--
			Benzo(a)Pyrene	10	--	ND	NA	--
			Indeno(1,2,3-cd)pyrene	10	--	ND	NA	--
			Dibenzo(a,h)anthracene	10	--	ND	NA	--
			Benzo(g,h,i)perylene	10	--	ND	NA	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
(NA) Not available for this constituent
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	5/25/95	6/7/95	Unknown	--	--	5 J
			Unknown	--	--	5 J

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
METALS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/08/95	Silver	50	--	ND	20	--
			Aluminum	200	--	ND	200	--
			Arsenic	5	--	ND	8	--
			Barium	20	--	ND	2000	--
			Beryllium	5	--	ND	20	--
			Calcium	400	--	ND	--	--
			Cadmium	10	--	ND	4	--
			Cobalt	50	--	ND	--	--
			Chromium	50	--	ND	100	--
			Copper	50	--	ND	1000	--
			Iron	100	--	100	300	--
			Mercury	1	--	ND	2	--
			Potassium	3000	--	ND	--	--
			Magnesium	100	--	ND	--	--
			Manganese	20	--	ND	50	--
			Sodium	400	--	ND	50000	--
			Nickel	50	--	ND	100	--
			Lead	2.5	--	ND	10	--
			Antimony	5	--	ND	20	--
			Selenium	5	--	ND	50	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
METALS (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
Field Blank	5/25/95	6/08/95	Thallium	5	--	ND	10	--
			Vanadium	50	--	ND	--	--
			Zinc	20	--	ND	5000	--
			Cyanide (total)	10	--	ND	200	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
Field Blank	5/25/95	6/08/95	alpha-BHC	0.02	--	ND	0.02	--
			beta-BHC	0.04	--	ND	0.2	--
			delta-BHC	0.02	--	ND	--	--
			gamma-BHC (Lindane)	0.03	--	ND	--	--
			Heptachlor	0.02	--	ND	0.4	--
			Aldrin	0.04	--	ND	0.04	--
			Heptachlor epoxide	0.04	--	ND	0.2	--
			Endosulfan I	0.02	--	ND	0.4	--
			Dieldrin	0.03	--	ND	0.03	--
			4,4'-DDE	0.04	--	ND	0.1	--
			Endrin	0.04	--	ND	2	--
			Endosulfan II	0.04	--	ND	0.4	--
			4,4'-DDD	0.04	--	ND	0.1	--
			Endosulfan sulfate	0.04	--	ND	0.4	--
			4,4'-DDT	0.04	--	ND	0.1	--
			Endrin aldehyde	0.1	--	ND	--	--
			Chlordane	0.1	--	ND	0.5	--
			Toxaphene	1	--	ND	3	--
			Aroclor-1016	1	--	ND	--	--
			Aroclor-1221	1	--	ND	--	--
			Aroclor-1232	1	--	ND	--	--
			Aroclor-1242	1	--	ND	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S (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
Field Blank	5/25/95	6/08/95	Aroclor-1248	1	--	ND	--	--
			Aroclor-1254	1	--	ND	--	--
			Aroclor-1260	1	--	ND	--	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	6/16/95	6/27/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	1.1	--	1.1	--	--
			Vinyl Chloride	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			1,1-Dichloroethene	0.50	--	ND	2	--
			Methylene Chloride	1.6	--	1.6 B	100*	--
			1,2-Dichloroethene (trans)	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1,1-Trichloroethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			1,1-Dichloropropene	0.50	--	ND	30	--
			Benzene	0.50	--	ND	--	--
			1,2-Dichloroethane	9.6	--	9.6	2	YES
			Trichloroethene	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			Dibromomethane	0.50	--	ND	NA	--
			Bromodichloromethane	0.50	--	ND	--	--
			cis-1,3-Dichloropropene	0.50	--	ND	1	--
			Toluene	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	6/16/95	6/27/95	trans-1,3-Dichloropropene	0.50	--	ND	3	--
			1,1,2-Trichloroethane	0.50	--	ND	1	--
			Tetrachloroethene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	4	--
			Dibromochloromethane	0.50	--	ND	10	--
			1,2-Dibromomethane	0.50	--	ND	1*	--
			Chlorobenzene	0.50	--	ND	2	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	1,000	--
			Ethylbenzene	0.50	--	ND	--	--
			Xylenes (Total)	0.50	--	ND	4	--
			Styrene	0.50	--	ND	700	--
			Bromoform	0.50	--	ND	40	--
			Isopropylbenzene	0.50	--	ND	100	--
			Bromobenzene	0.50	--	ND	--	--
			1,1,2,2-Tetrachloroethane	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	1.2	--	1.2	--	--
			1,2,4-Trimethylbenzene	0.50	--	ND	--	--
			sec-Butylbenzene	6.4	--	6.4	--	--
			1,3-Dichlorobenzene	0.50	--	ND	600	--
			4-Isopropyltoluene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	6/16/95	6/27/95	1,4-Dichlorobenzene	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

(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 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
MW-1	6/16/95	6/27/95	Ethane, 1-bromo-2-chloro-	--	--	4J

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	6/16/95	7/1/95	Phenol	3	--	3 J B	4000	--
			bis(2 chloroethyl)Ether	10	--	ND	20	--
			2-Chlorophenol	10	--	ND	40	--
			1,3-Dichlorobenzene	10	--	ND	600	--
			1,4-Dichlorobenzene	10	--	ND	75	--
			1,2-Dichlorobenzene	10	--	ND	600	--
			2-Methylphenol	10	--	ND	--	--
			bis(2-chloroisopropyl)Ether	10	--	ND	300	--
			4-Methylphenol	10	-	ND	--	--
			N-Nitroso-Di-n-propylamine	10	--	ND	20	--
			Hexachloroethane	10	--	ND	10	--
			Nitrobenzene	10	--	ND	10	--
			Isophorone	10	--	ND	100	--
			2-Nitrophenol	10	--	ND	--	--
			2,4-Dimethylphenol	10	--	ND	100	--
			bis(2-Chloroethoxy)Methane	10	--	ND	--	--
			2,4-Dichlorophenol	10	--	ND	20	--
			1,2,4-Trichlorobenzene	10	--	ND	9	--
			Naphthalene	10	--	ND	--	--
			4-Chloroaniline	10	--	ND	--	--
			Hexachlorobutadiene	10	--	ND	1	--
			4-Chloro-3-methylphenol	10	--	ND	--	--
			2-methylnaphthanene	10	--	ND	--	--
			Hexachlorocyclopentadiene	10	--	ND	50	--
			2,4,6-Trichlorophenol	10	--	ND	20	--
			2,4,5-Trichlorophenol	25	--	ND	700	--
			2-Chloronaphthalene	10	--	ND	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	6/16/95	7/1/95	2-Nitroanline	25	--	ND	--	--
			Dimethyl Phthalate	10	--	ND	--	--
			Acenaphthylene	10	--	ND	NA	--
			2,6-Dinitrotoluene	10	--	ND	NA	--
			3-Nitroaniline	25	--	ND	--	--
			Acenaphthene	10	--	ND	400	--
			2,4-Dinitrophenol	25	--	ND	40	--
			4-Nitrophenol	25	--	ND	--	--
			Dibenzofuran	10	--	ND	--	--
			2,4-Dinitrotoluene	10	--	ND	10	--
			Diethylphthalate	10	--	ND	5,000	--
			Fluorene	10	--	ND	300	--
			4-Chlorophenyl-phenlyether	10	--	ND	--	--
			4-Nitroaniline	25	--	ND	--	--
			4,6-Dinitro-2-methylphenol	25	--	ND	--	--
			N-Nitrosodiphenylamine	10	--	ND	20	--
			4-Bromophenyl-phenylether	10	--	ND	--	--
			Hexachlorobenzene	10	--	ND	10	--
			Pentachlorophenol	25	--	ND	1	--
			Phenanthrene	10	--	ND	NA	--
			Anthracene	10	--	ND	2,000	--
			Carbazole	10	--	ND	--	--
			Di-n-butylphthalate	10	--	ND	900	--
			Fluoranthene	10	--	ND	300	--
			Pyrene	10	--	ND	200	--
			Butylbenzylphthalate	10	--	ND	100	--
			Benzo(a)Anthracene	10	--	ND	NA	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	6/16/95	7/1/95	3,3-Dichlorobenzidine	20	--	ND	60	--
			Chrysene	10	--	ND	NA	--
			bis(2-Ethylhexyl)Phthalate	10	--	ND	30	--
			Di-n-Octyl Phthalate	10	--	ND	100	--
			Benzo(b)Fluoranthene	10	--	ND	NA	--
			Benzo(k)Fluoranthene	10	--	ND	NA	--
			Benzo(a)Pyrene	10	--	ND	NA	--
			Indeno(1,2,3-cd)pyrene	10	--	ND	NA	--
			Dibenzo(a,h)anthracene	10	--	ND	NA	--
			Benzo(g,h,i)perylene	10	--	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 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
MW-1	6/16/95	7/1/95	Dodecanoic acid	--	--	5 J

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
METALS

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	6/16/95	6/27/95	Silver	50	--	ND	20	--
			Aluminum	1900	--	1900	200	YES
			Arsenic	5	--	ND	8	--
			Barium	20	--	ND	2000	--
			Beryllium	5	--	ND	20	--
			Calcium	13000	--	13000	--	--
			Cadmium	10	--	ND	4	--
			Cobalt	50	--	ND	--	--
			Chromium	50	--	ND	100	--
			Copper	50	--	ND	1000	--
			Iron	5900	--	5900	300	YES
			Mercury	1	--	ND	2	--
			Potassium	3000	--	ND	--	--
			Magnesium	6300	--	6300	--	--
			Manganese	80	--	80	50	YES
			Sodium	27000	--	27000	50000	--
			Nickel	50	--	ND	100	--
			Lead	2.6	--	2.6	10	--
			Antimony	5	--	ND	20	--
			Selenium	5	--	ND	50	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
METALS (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	6/16/95	6/27/95	Thallium	5	--	ND	10	--
			Vanadium	50	--	ND	--	--
			Zinc	76	--	76	5000	--
			Cyanide (total)	10	--	ND	200	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
(NA) Not available for this constituent
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S

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	6/16/95	6/27/95	alpha-BHC	0.02	--	ND	0.02	--
			beta-BHC	0.04	--	ND	0.2	--
			delta-BHC	0.02	--	ND	--	--
			gamma-BHC (Lindane)	0.03	--	ND	--	--
			Heptachlor	0.02	--	ND	0.4	--
			Aldrin	0.04	--	ND	0.04	--
			Heptachlor epoxide	0.04	--	ND	0.2	--
			Endosulfan I	0.02	--	ND	0.4	--
			Dieldrin	0.03	--	ND	0.03	--
			4,4'-DDE	0.04	--	ND	0.1	--
			Endrin	0.04	--	ND	2	--
			Endosulfan II	0.04	--	ND	0.4	--
			4,4'-DDD	0.04	--	ND	0.1	--
			Endosulfan sulfate	0.04	--	ND	0.4	--
			4,4'-DDT	0.04	--	ND	0.1	--
			Endrin aldehyde	0.1	--	ND	--	--
			Chlordane	0.1	--	ND	0.5	--
			Toxaphene	1	--	ND	3	--
			Aroclor-1016	1	--	ND	--	--
			Aroclor-1221	1	--	ND	--	--
			Aroclor-1232	1	--	ND	--	--
			Aroclor-1242	1	--	ND	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S (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	6/16/95	6/27/95	Aroclor-1248	1	--	ND	--	--
			Aroclor-1254	1	--	ND	--	--
			Aroclor-1260	1	--	ND	--	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Trip Blank	6/16/95	6/27/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	1.0	--	1.0	--	--
			Vinyl Chloride	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			1,1-Dichloroethene	0.50	--	ND	2	--
			Methylene Chloride	0.80	--	0.80	100*	--
			1,2-Dichloroethene (trans)	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1,1-Trichloroethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			1,1-Dichloropropene	0.50	--	ND	30	--
			Benzene	0.50	--	ND	--	--
			1,2-Dichloroethane	8.4	--	8.4	2	YES
			Trichloroethene	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			Dibromomethane	0.50	--	ND	NA	--
			Bromodichloromethane	0.50	--	ND	--	--
			cis-1,3-Dichloropropene	0.50	--	ND	1	--
			Toluene	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Trip Blank	6/16/95	6/27/95	trans-1,3-Dichloropropene	0.50	--	ND	3	--
			1,1,2-Trichloroethane	0.50	--	ND	1	--
			Tetrachloroethene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	4	--
			Dibromochloromethane	0.50	--	ND	10	--
			1,2-Dibromomethane	0.50	--	ND	1*	--
			Chlorobenzene	0.50	--	ND	2	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	1,000	--
			Ethylbenzene	0.50	--	ND	--	--
			Xylenes (Total)	0.50	--	ND	4	--
			Styrene	0.50	--	ND	700	--
			Bromoform	0.50	--	ND	40	--
			Isopropylbenzene	0.50	--	ND	100	--
			Bromobenzene	0.50	--	ND	--	--
			1,1,2,2-Tetrachloroethane	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	--
			4-Isopropyltoluene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Trip Blank	6/16/95	6/27/95	1,4-Dichlorobenzene	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

(ND) Indicates compound not detected

(NA) Not available for this constituent

GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Trip Blank	6/16/95	6/27/95	Ethane, 1-bromo-2-chloro	--	--	3 J

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	6/27/95	Dichlorodifluoromethane	0.50	--	ND	--	--
			Chloromethane	0.90	--	0.90	--	--
			Vinyl Chloride	0.50	--	ND	--	--
			Bromomethane	0.50	--	ND	5	--
			Chloroethane	0.50	--	ND	--	--
			Trichlorofluoromethane	0.50	--	ND	--	--
			1,1-Dichloroethene	0.50	--	ND	2	--
			Methylene Chloride	0.80	--	0.80 B	100*	--
			1,2-Dichloroethene (trans)	0.50	--	ND	2*	--
			1,1 Dichloroethane	0.50	--	ND	70	--
			2,2-Dichloropropane	0.50	--	ND	--	--
			cis-1,2-Dichloroethene	0.50	--	ND	--	--
			Bromochloromethane	0.50	--	ND	10*	--
			Chloroform	0.50	--	ND	6	--
			1,1,1-Trichloroethane	0.50	--	ND	--	--
			Carbon Tetrachloride	0.50	--	ND	2	--
			1,1-Dichloropropene	0.50	--	ND	30	--
			Benzene	0.50	--	ND	--	--
			1,2-Dichloroethane	7.3	--	7.3	2	YES
			Trichloroethene	0.50	--	ND	1	--
			1,2-Dichloropropane	0.50	--	ND	1	--
			Dibromomethane	0.50	--	ND	NA	--
			Bromodichloromethane	0.50	--	ND	--	--
			cis-1,3-Dichloropropene	0.50	--	ND	1	--
			Toluene	0.50	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	6/27/95	trans-1,3-Dichloropropene	0.50	--	ND	3	--
			1,1,2-Trichloroethane	0.50	--	ND	1	--
			Tetrachloroethene	0.50	--	ND	NA	--
			1,3-Dichloropropane	0.50	--	ND	4	--
			Dibromochloromethane	0.50	--	ND	10	--
			1,2-Dibromomethane	0.50	--	ND	1*	--
			Chlorobenzene	0.50	--	ND	2	--
			1,1,2,2-Tetrachloroethane	0.50	--	ND	1,000	--
			Ethylbenzene	0.50	--	ND	--	--
			Xylenes (Total)	0.50	--	ND	4	--
			Styrene	0.50	--	ND	700	--
			Bromoform	0.50	--	ND	40	--
			Isopropylbenzene	0.50	--	ND	100	--
			Bromobenzene	0.50	--	ND	--	--
			1,1,2,2-Tetrachloroethane	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	--
			4-Isopropyltoluene	0.50	--	ND	75	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	6/27/95	1,4-Dichlorobenzene	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

(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 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/16/95	6/27/95	Ethane, 1-bromo-2-chloro	--	--	3 J

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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	6/16/95	7/1/95	Phenol	3	--	3 J B	4000	--
			bis(2 chloroethyl)Ether	10	--	ND	20	--
			2-Chlorophenol	10	--	ND	40	--
			1,3-Dichlorobenzene	10	--	ND	600	--
			1,4-Dichlorobenzene	10	--	ND	75	--
			1,2-Dichlorobenzene	10	--	ND	600	--
			2-Methylphenol	10	--	ND	--	--
			bis(2-chloroisopropyl)Ether	10	--	ND	300	--
			4-Methylphenol	10	-	ND	--	--
			N-Nitroso-Di-n-propylamine	10	--	ND	20	--
			Hexachloroethane	10	--	ND	10	--
			Nitrobenzene	10	--	ND	10	--
			Isophorone	10	--	ND	100	--
			2-Nitrophenol	10	--	ND	--	--
			2,4-Dimethylphenol	10	--	ND	100	--
			bis(2-Chloroethoxy)Methane	10	--	ND	--	--
			2,4-Dichlorophenol	10	--	ND	20	--
			1,2,4-Trichlorobenzene	10	--	ND	9	--
			Naphthalene	10	--	ND	--	--
			4-Chloroaniline	10	--	ND	--	--
			Hexachlorobutadiene	10	--	ND	1	--
			4-Chloro-3-methylphenol	10	--	ND	--	--
			2-methylnaphthanene	10	--	ND	--	--
			Hexachlorocyclopentadiene	10	--	ND	50	--
			2,4,6-Trichlorophenol	10	--	ND	20	--
			2,4,5-Trichlorophenol	25	--	ND	700	--
			2-Chloronaphthalene	10	--	ND	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	7/1/95	2-Nitroanline	25	--	ND	--	--
			Dimethyl Phthalate	10	--	ND	--	--
			Acenaphthylene	10	--	ND	NA	--
			2,6-Dinitrotoluene	10	--	ND	NA	--
			3-Nitroaniline	25	--	ND	--	--
			Acenaphthene	10	--	ND	400	--
			2,4-Dinitrophenol	25	--	ND	40	--
			4-Nitrophenol	25	--	ND	--	--
			Dibenzofuran	10	--	ND	--	--
			2,4-Dinitrotoluene	10	--	ND	10	--
			Diethylphthalate	10	--	ND	5,000	--
			Fluorene	10	--	ND	300	--
			4-Chlorophenyl-phenlyether	10	--	ND	--	--
			4-Nitroaniline	25	--	ND	--	--
			4,6-Dinitro-2-methylphenol	25	--	ND	--	--
			N-Nitrosodiphenylamine	10	--	ND	20	--
			4-Bromophenyl-phenylether	10	--	ND	--	--
			Hexachlorobenzene	10	--	ND	10	--
			Pentachlorophenol	25	--	ND	1	--
			Phenanthrene	10	--	ND	NA	--
			Anthracene	10	--	ND	2,000	--
			Carbazole	10	--	ND	--	--
			Di-n-butylphthalate	10	--	ND	900	--
			Fluoranthene	10	--	ND	300	--
			Pyrene	10	--	ND	200	--
			Butylbenzylphthalate	10	--	ND	100	--
			Benzo(a)Anthracene	10	--	ND	NA	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	7/1/95	3,3-Dichlorobenzidine	20	--	ND	60	--
			Chrysene	10	--	ND	NA	--
			bis(2-Ethylhexyl)Phthalate	10	--	ND	30	--
			Di-n-Octyl Phthalate	10	--	ND	100	--
			Benzo(b)Fluoranthene	10	--	ND	NA	--
			Benzo(k)Fluoranthene	10	--	ND	NA	--
			Benzo(a)Pyrene	10	--	ND	NA	--
			Indeno(1,2,3-cd)pyrene	10	--	ND	NA	--
			Dibenzo(a,h)anthracene	10	--	ND	NA	--
			Benzo(g,h,i)perylene	10	--	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 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILE TICS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)
Field Blank	6/16/95	7/1/95	NONE FOUND	--	--	--

Notes:
-- Not applicable / does not exceed criteria
(J) Indicates detected below sample quantitation limit
TICS Tentatively Identified Compounds

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
METALS

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	6/27/95	Silver	50	--	ND	20	--
			Aluminum	200	--	ND	200	--
			Arsenic	5	--	ND	8	--
			Barium	20	--	ND	2000	--
			Beryllium	5	--	ND	20	--
			Calcium	400	--	ND	--	--
			Cadmium	10	--	ND	4	--
			Cobalt	50	--	ND	--	--
			Chromium	50	--	ND	100	--
			Copper	50	--	ND	1000	--
			Iron	100	--	100	300	--
			Mercury	1	--	ND	2	--
			Potassium	3000	--	ND	--	--
			Magnesium	100	--	ND	--	--
			Manganese	20	--	ND	50	--
			Sodium	400	--	ND	50000	--
			Nickel	50	--	ND	100	--
			Lead	2.5	--	ND	10	--
			Antimony	5	--	ND	20	--
			Selenium	5	--	ND	50	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
METALS (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
Field Blank	6/16/95	6/27/95	Thallium	5	--	ND	10	--
			Vanadium	50	--	ND	--	--
			Zinc	20	--	ND	5000	--
			Cyanide (total)	10	--	ND	200	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
GWQC Ground Water Quality Criteria

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	6/27/95	alpha-BHC	0.02	--	ND	0.02	--
			beta-BHC	0.04	--	ND	0.2	--
			delta-BHC	0.02	--	ND	--	--
			gamma-BHC (Lindane)	0.03	--	ND	--	--
			Heptachlor	0.02	--	ND	0.4	--
			Aldrin	0.04	--	ND	0.04	--
			Heptachlor epoxide	0.04	--	ND	0.2	--
			Endosulfan I	0.02	--	ND	0.4	--
			Dieldrin	0.03	--	ND	0.03	--
			4,4'-DDE	0.04	--	ND	0.1	--
			Endrin	0.04	--	ND	2	--
			Endosulfan II	0.04	--	ND	0.4	--
			4,4'-DDD	0.04	--	ND	0.1	--
			Endosulfan sulfate	0.04	--	ND	0.4	--
			4,4'-DDT	0.04	--	ND	0.1	--
			Endrin aldehyde	0.1	--	ND	--	--
			Chlordane	0.1	--	ND	0.5	--
			Toxaphene	1	--	ND	3	--
			Aroclor-1016	1	--	ND	--	--
			Aroclor-1221	1	--	ND	--	--
			Aroclor-1232	1	--	ND	--	--
			Aroclor-1242	1	--	ND	--	--

TABLE 3

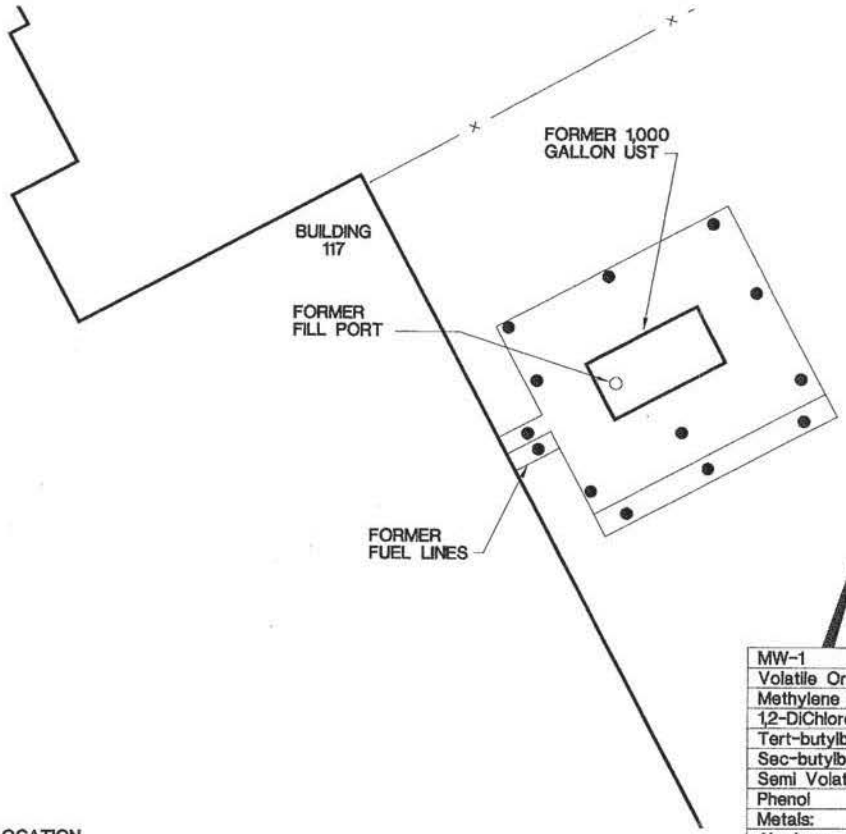
GROUNDWATER SAMPLING RESULTS
BUILDING 117, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
PESTICIDES/PCB'S (Continued)

Sample ID	Sample Date	Analysis Date	Compound Nane	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
Field Blank	6/16/95	6/27/95	Aroclor-1248	1	--	ND	--	--
			Aroclor-1254	1	--	ND	--	--
			Aroclor-1260	1	--	ND	--	--

Notes:
-- Not applicable / does not exceed criteria
(ND) Indicates compound not detected
GWQC Ground Water Quality Criteria

SMITH

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



MW-1	
Volatile Organic Compounds:	
Methylene Chloride	0.8
Tert-butylbenzene	1.2
Sec-butylbenzene	6.4
Metals:	
Aluminum	650.0
Barium	23.0
Calcium	21,000.0
Iron	1,700.0
Magnesium	12,000.0
Manganese	170.0
Sodium	48,000.0

MW-1	
Volatile Organic Compounds:	
Methylene Chloride	1.6
1,2-DiChloroethane	9.6
Tert-butylbenzene	1.2
Sec-butylbenzene	6.4
Semi Volatile Organic Compounds:	
Phenol	3.0
Metals:	
Aluminum	1,900.0
Calcium	13,000.0
Iron	5,900.0
Magnesium	6,300.0
Manganese	80.0
Sodium	27,000.0
Lead	2.6
Zinc	76

LEGEND

- SOIL SAMPLE LOCATION
- MONITORING WELL LOCATION (MAY 25, 1995) (JUNE 16, 1995)

NOTES:
1. ALL RESULTS IN MICROGRAMS PER LITER
2. SEE TABLE 3 FOR GROUNDWATER QUALITY CRITERIA

SCALE
0 10'

Source: Smith [redacted] Technologies Corporation (131)

Project No. 09-5004-08

Figure 4
Building 117
Monitoring Well Location

APPENDIX A

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 USTs, 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. 117 — 0090010-72
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

U.S. Army Fort Monmouth, New Jersey
Directorate of Engineering and Housing, Building 167
Fort Monmouth, NJ 07703 County Monmouth
Telephone No. (908) 532-1475

OWNER'S NAME AND ADDRESS, if different from above

_____
_____
_____

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? __X__Yes ___ No If Yes, Case No. 94-4-28-1944-21
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) oil

C. Have any vapor hazards been mitigated? ___Yes ___No __X__ N/A

III. DECOMMISSIONING OF TANK SYSTEMS Closure Approval No._____

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? ___ Yes X No
If "Yes", please answer Question B-E
If "No", please answer Question B
(Refer to Table 2 for other parameters)

B. The highest soil contamination still remaining in the ground has been determined to be:
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. 912.0 ppm TPHC
4. _____ ppb _____ (for non-petroleum substance)

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? ___ Yes ___ No X N/A

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

VI. GROUND WATER CONTAMINATION

A. Was ground water contamination found? X Yes ___ No
If "Yes", please answer Questions B-G.
If "No", please answer only Question B.
(Refer to Table 3 for other parameters)

B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be:

1. ND ppb total BTEX, 7.3 ppb total non-targeted VOC
2. ND ppb total B/N, ND ppb total non-targeted B/N
3. ND ppb total MTBE, _____ 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 N/A

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 ___ N/A

2. The number of these wells identified is _____.

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 _____ 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 _____ feet from the source and its screening begins at a depth of _____ 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 _____ feet below grade. This well is located _____ 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 _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____ feet.

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

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

G. Delineation of contamination

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

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

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

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) Joe Fallon SIGNATURE _____

COMPANY NAME U.S. Army Fort Monmouth DATE _____
(Preparer of Site Assessment Plan)

CERTIFYING ORGANIZATION NJDEP CERTIFICATION NUMBER 000244

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 _____

COMPANY NAME U.S. Army Fort Monmouth DATE _____

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 _____

APPENDIX B

WASTE MANIFEST

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210015574 Manifest Document No.
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
E.I. DU PONT DE NEMOURS & COMPANY
MAIN POST-CO-JAMES SHILLITO (609) 299-2304
4. Generator's Phone (302) 892-8000

A. State Manifest Document Number: NJA 1888390
B. State Generator's ID (Generator Address)
C. State Trans. ID-NJDEPE
D. Transporter's Phone
E. State Trans. ID-NJDEPE
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone 908 721-0900

5. Transporter 1 Company Name: L&L OIL SERVICES T/A LORCO
6. US EPA ID Number: NJD986566222
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address: LIONETTI OIL RECOVERY CO., INC. T/A LORCO
RUNYON & CHEESEQUAKE RDS.
OLD BRIDGE NJ 08857
10. US EPA ID Number: NJD002146666
Decal No.

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. PETROLEUM OIL NOS CLASS 3 (PETROLEUM OIL) COMBUSTIBLE LIQUID UN 1270 PG III	X	001	CT	02606		X722
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. T.L PETROLEUM OIL 7%
WATER 3% Petroleum based and unused waste oil 784-FILTRATION
b. machine oil, gasoline, lubricating oil, diesel, lubricating oil and

K. Handling Codes for Wastes Listed Above
a.
b.

15. Special Handling Instructions and Additional Information
NOT EPA REGULATED, REGULATED AS HAZARDOUS WASTE IN NEW JERSEY Bldg # 117
24 HOUR EMERGENCY RESPONSE # (908)721-0900
DECAL # 7754 ERG # 27 DEXSIL TEST RESULTS 2 1000 PPM

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

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

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
Joseph M. Fallon	Joseph M. Fallon	11	14	94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
		11	14	94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

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

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJ3210002059 — Manifest Document No.: 50927
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
U. S. Army Communications Electronics Command Main Post
C/O James Shirghio, Bldg. 2504 ATTN: SELFM-DL-EM-MS
Fort Monmouth, NJ 07703
4. Generator's Phone (908) 532-4359

A. State Manifest Document Number: **NJA 1908880**
B. State Generator's ID-(Gen. Site Address)
C. State Trans. ID-NJDEPE: S61747 — Decal No.: 53438
D. Transporter's Phone (609) 696-4401
E. State Trans. ID-NJDEPE — Decal No.:
F. Transporter's Phone ( )
G. State Facility's ID: 0614D111P02
H. Facility's Phone (609) 696-4401

5. Transporter 1 Company Name: Casie Ecology Oil Salvage, Inc. TA Casie/Protank
6. US EPA ID Number: NJD045995693
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Casie Ecology Oil Salvage, Inc. TA Casie/Protank
3209 N. Mill Road
Vineland, NJ 09360
10. US EPA ID Number: NJD045995693

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Oil contaminatedd solids Non D.O.T. regulated		X30	DM	15000 X75	XJV	X728
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. XXXX S,T
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. S01
b.
c.
d.

15. Special Handling Instructions and Additional Information
CI # 644844 7A
XX This is a NJ regulated waste not a RCRA hazardous waste.
24 hr emergency response #609-696-4401 Greg Clifford

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: X Joseph M. Fallon — Signature: X Joseph M. Fallon — Month Day Year: 06 28 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JIM VANSCY — Signature — Month Day Year: 06 28 94

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

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name — Signature — Month Day Year

NJA 1908880

APPENDIX C

NJDEP WELL PERMIT AND WELL CONSTRUCTION LOG

U.S. ARMY
FORT MONMOUTH
SELFM PW EV

LOG OF BORING 117-MW1

Produced for Charles Appleby

Project Name	: BLDG 117	Completion Date	: 9/14/94
NJDEP Case #	: 94-4-28-1994-21	Northing	: N 541246.363
Logged By	: TYREE INC.	Easting	: E 2177798.795
Start Date	: 9/14/94	Driller	: E. Plye

29-31772
ELEV: 11.02

Depth in Feet	DESCRIPTION	GRAPHIC	USCS	Samples	Blows/Ft	% Rec-overy
0	Asphalt/Sub-base		14			
.6	Dark medium stiff clay w/medium brown, medium sand		CL			
1.5						
2	Brown silts with stiff dark gray clay		CL			
2.5						
	Light brown, medium sand w/fines		CL	1	9	100
4						
	Brown silts and clays, moist at 6'		SP	2	32	82
6	Light brown medium sand w/fines		CL			
8	Light brown medium sand w/fines wet		SP			
10						
12						
12.5						
14						

0/94

Well Construction Information

WELL CONSTRUCTION

Date Compl.	: 10/05/95
Hole Diameter	: 8 in
Drill. Method	: HSA
Company Rep.	: E. Plye

WELL CASING

Material	: PVC
Diameter	: 4 in.
Joints	: threaded

WELL SCREEN

Material	: PVC
Diameter	: 4 in.
Joints	: threaded
Opening	: 20 slot
SAND PACK	: #2 MORIE SAND
ANNULUS SEAL	: Bentonite/Portland : TREMMIE
Cap	:

NOTES

Well #1 is 117 MW1
Stick up 2.5'
Water level 7'

3-6-1996 C:\117-1\GEO\117mw1.ge3

APPENDIX D

SOIL ANALYTICAL DATA PACKAGE

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

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

Lab. ID #: 1465.1-.9
Sample Rec'd: 04/28/94
Analysis Start: 04/29/94
Analysis Comp: 04/29/94

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

NJDEPE UST Reg.#:
Closure #:
DICAR #:
Location #: **Bldg. 117**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1465.1	117- A hNu= 40.	84	2850.	50.
1465.2	117- B hNu= 3.0	90	564.	6.6
1465.3	117- C hNu= 2.0	90	28.0	6.6
1465.4	117- D hNu= 5.0	88	197.	9.9
1465.5	117- E hNu= 2.0	91	689.	20.
1465.6	117- F hNu= 10.	89	912.	20.
1465.7	117- G hNu= 25.	90	1480.	20.
1465.8	117- H hNu= 6.0	91	1130.	9.9
1465.9	117- I hNu= 15.	88	4440.	50.
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1465.3dup= 100% 1465.3spike= 90% 1465.3spike dup= 97% RPD= 3.7%

Brian K. McKee
Laboratory Director

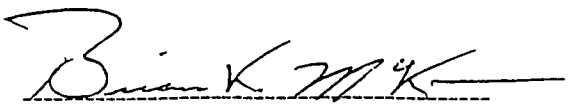
Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEPE Certification # 13461

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

Lab. ID #: 1465.1-.9
Sample Rec'd: 04/28/94
Analysis Start: 04/29/94
Analysis Comp: 04/29/94

Analysis: Munsel

Lab ID#	Soil Color
1465.1	2.5Y 4/1 Dark Gray
1465.2	2.5Y 4/3 Olive Brown
1465.3	2.5Y 4/4 Olive Brown
1465.4	2.5Y 4/4 Olive Brown
1465.5	2.5Y 4/3 Olive Brown
1465.6	2.5Y 4/2 Dark Grayish Brown
1465.7	2.5Y 4/2 Dark Grayish Brown
1465.8	2.5Y 4/4 Olive Brown
1465.9	2.5Y 4/1 Dark Gray



Brian K. McKee
Laboratory Director

SERV-AIR, INC.

P.O. #:

Chain of Custody

Project #:	Sampler: Joe Fallon	Date / Time 4/28/94	Analysis Parameters	Start:
Customer: Serv-Air Inc	Site Name: B117			Finish:
Phone (908) 532-4359				

Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPH	625	Mussel	Remarks
1465.1	4/28/94	0850	B117 - A	Soil				X	HNU 40 ppm
.2		0840	B			X	X	X	3
.3		0806	C			X	X	X	2
.4		0811	D			X	X	X	5
.5		0815	E			X	X	X	2
.6		0819	F			X	X	X	10
.7		0825	G			X	X	X	25
.8		0856	H			X	X	X	6
.9		0832	I			X	X	X	15
~~Dup~~									

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Joe Fallon	04/29/94 1005AM		
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		Sarah J. Hubbard	4/29/94 1005

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

April 29, 1994 1112

Sarah J. Hubbard

BLANK

40.75 104 MV

81.5 210 MV

163 407 MV

1465.1 118 mV

1465.2 193 mV

1465.3 22 mV

1465.3 dup 12 mV

1465.3 spike 73 mV

1465.3 ms 78 mV

1465.4 46 mV

1465.5 182 mV

1465.6 104 mV

1465.7 169 mV

1465.8 259 mV

1465.9 198 mV

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

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

Lab. ID #: 1469.1-.4
Sample Rec'd: 04/29/94
Analysis Start: 04/29/94
Analysis Comp: 04/29/94

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

NJDEPE UST Reg.#:
Closure #:
DICAR #:
Location #: **BLDG. 117**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1469.1	117-A-2 hNu= 1.0	90	40.5	3.3
1469.2	117-G-2 hNu= 1.0	86	13.9	3.3
1469.3	117-H-2 hNu= 1.0	90	40.5	3.3
1469.4	117-I-2 hNu= 1.0	93	12.9	3.3
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1469.1dup= 104% 1469.1spike= 90% 1469.1spike dup= 100% RPD= 5.0%

Brian K. McKee
Laboratory Director

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

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

Lab. ID #: 1469.1-.4
Sample Rec'd: 04/29/94
Analysis Start: 04/29/94
Analysis Comp: 04/29/94

Analysis: Munsel

Lab ID#	Soil Color
1469.1	10YR 5/6 Yellowish Brown
1469.2	10YR 4/4 Dark Yellowish Brown
1469.3	10YR 4/4 Dark Yellowish Brown
1469.4	10YR 4/4 Dark Yellowish Brown

Brian K. McKee
Laboratory Director

SERV-AIR, INC.

P.O. #:

Chain of Custody

Project #:	Sampler: Joe Fallon	Date / Time 4/29/94 5:15	Analysis Parameters TPH
Customer:	Site Name: Fort Monmouth Main Post Bldg 117		Start: / Finish:
Phone:			Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPH	% Solids	Mansfield	Remarks
1469.1	4/29	4:10	117-A-2	Soil	1	X	X	X	HNu - 1 ppm
.2	4/29	4:25	117-G-2	Soil	1	X	X	X	1 ppm
.3	4/29	4:17	117-H-2	Soil	1	X	X	X	1 ppm
.4	4/29	4:00	117-I-2	Soil	1	X	X	X	1 ppm

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Joe Fallon	4/29/94 5:15		
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		B. M K	4/30/94 1715

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

4/29 B. [illegible]

Blank R = 99995

40.76 105 mV

81.5 214 mV

163 421 mV

Blank Wash

1466.1 206 mV

1466.2 187 (3x Dil)

1466.3 490 mV

1466.3 175 (3x)

1466.4 164 (3x)

1466.5 374 mV

Rinse Check

1466.6 167 (3)

1466.7 396 mV

1466.8 263 (3x)

1466.9 178 (3x)

1466.10 277 (3x)

1466.11 378 (3x)

1466.12 193 (3x)

Rinse Check

1466.13 301 (3x)

1466.14 418 (3x)

1467.1 369 (6x)

1467.2 300 (3x)

1464.1 205

1464.2 171 mV

1464.3 420 mV

1464.3 Dup 440 mV

1464.4 375 (4x)

1464.5 371 (3x)

1464.3 sp 169 (3x)

1464.3 sp Dup 158 (3x)

1468.1 170 (6x)

Rinse Check

1469.1 29 mV

1469.2 10 mV

1469.3 29 mV

1469.4 10 mV

1469.1 Dup 31 mV

1469.1 spK -92 mV

1469.1 spK D 99 mV

APPENDIX E

GROUNDWATER ANALYTICAL DATA PACKAGE

ANALYTICAL SERVICES

001

environmental
naterials
asbestos

New Jersey

**orporate Office &
Main Laboratory**
108 Haddon Avenue
Westmont, NJ 08108
609) 858-4800

3 Cooper Street
Westmont, NJ 08108
609) 858-9573

2056 Stelton Road
Piscataway, NJ 08854
(908) 981-0550

New York

208 Stonehenge Lane
arle Place, NY 11514
516) 997-7251

Georgia

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

Florida

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

Michigan

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

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

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

PROJECT : **94428194421**

EMSL Project: # 9508473

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection	Date Received
1851.1 Bldg. 117 MW1-2931772	**95-24205**	**Aqueous**	**5/25/95 @ 1435**	**5/26/95**
1850.2 Trip Blank	**95-24197**	**Aqueous**	**5/25/95 @ 0610**	**5/26/95**
1850.3 Field Blank	**95-24198**	**Aqueous**	**5/25/95 @ 1350**	**5/26/95**

Laboratory Name: EMSL ANALYTICAL, INC.

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

Supervisor/Manager Signature: Paul Laraia

Printed Name: Paul V. Laraia

Date: 06-27-95

EMSL

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. Initial Calibration Data	
. Continuing Calibration BFB Tune	
. Continuing Calibration Data	
. Internal Standards Area Summary	
. Sample Results	
. Surrogate Recovery Form	
. Method Blank Data	
. Matrix Spike/Matrix Spike Duplicate Data	
GC/MS Semivolatile Organic Data Package	136-235
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. Initial Calibration Data	
. Continuing Calibration DFTPP Tune	
. Continuing Calibration Data	
. Internal Standards Area Summary	
. Sample Results	
. Surrogate Recovery Form	
. Method Blank Data	
. Matrix Spike/Matrix Spike Duplicate Data	
Pesticides & PCB Analysis Data Package	236-344
. Standard Data	
. Sample Results	
. Surrogate Recovery Form	
. Method Blank	
. Matrix Spike/Matrix Spike Duplicate Data	

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EMSL

SAMPLE DATA SUMMARY PACKAGE

EMSL

Date of Report: 06/25/95
Project Number: 09508473
Lab ID: 95-0024205
Date Collected: 05/25/95 14:35
Collected By: Client
Date Received: 05/26/95 07:00

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

Client Project: 94428194421

Client Designation: Bldg.117 MW1-2931772 FMETL #1851.1

	Conc.	Unit
LIMITED		
Total Cyanide	<0.010	mg/l
METALS		
Ag-CLP	<0.050	mg/l
Aluminum-CLP	0.65	mg/l
Arsenic-CLP	<0.0050	mg/l
Barium-CLP	0.023	mg/l
Beryllium-CLP	<0.0050	mg/l
Calcium-CLP	21	mg/l
Cadmium-CLP	<0.010	mg/l
Cobalt-CLP	<0.050	mg/l
Chromium-CLP	<0.050	mg/l
Copper-CLP	<0.050	mg/l
Iron-CLP	1.7	mg/l
Mercury, CLP	<0.001	mg/l
Potassium-CLP	<3.0	mg/l
Magnesium-CLP	12	mg/l
Manganese-CLP	0.17	mg/l
Sodium-CLP	48	mg/l
Nickel-CLP	<0.050	mg/l
Lead-CLP	<0.0025	mg/l
Antimony-CLP	<0.0050	mg/l
Selenium-CLP	<0.0050	mg/l
Thallium-CLP	<0.0050	mg/l
Vanadium-CLP	<0.050	mg/l
Zinc-CLP	<0.020	mg/l
ORGANIC		
Pesticides		
Pesticides and PCBs by 608	see attached	ug/l
Semi-Volatiles		
TCL BNA's with Library Search	see attached	ug/l
Volatiles		
Methyl tertiary-butyl ether	see attached	ug/l
tert-Butyl alcohol	see attached	ug/l
Volatiles by 524.2 w/ Library Search	see attached	ug/l

US ARMY Ft. Monmouth NJ.

006

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FmETL#18511
Bldg 117 Mwi-293772

Lab Name: EMSL Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix: (soil/water) water Lab Sample ID: 95-24205

Sample wt/vol: 890 (g/mL) mL Lab File ID: E:JU06E58

% Moisture N/A decanted: (Y/N) N Date Received: 05/24/95

Extraction: (SepF/Cont/Sonc) Cont Date Extracted: 06/01/95

Concentrated Extract Volume: 10 (ml) Date Analyzed: 06/08/95

Injection Volume: 1 (uL) Dilution Factor 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.02	U
319-85-7	beta-BHC	0.04	U
319-86-8	delta-BHC	0.02	U
58-89-9	gamma-BHC (Lindane)	0.03	U
76-44-8	Heptachlor	0.02	U
309-00-2	Aldrin	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U
959-98-8	Endosulfan I	0.02	U
60-57-1	Dieldrin	0.03	U
72-55-9	4,4'-DDE	0.04	U
72-20-8	Endrin	0.04	U
33213-65-9	Endosulfan II	0.04	U
72-54-8	4,4'-DDD	0.04	U
1031-07-8	Endosulfan sulfate	0.04	U
50-29-3	4,4'-DDT	0.04	U
7421-36-3	Endrin aldehyde	0.1	U
57-74-9	Chlordane	0.1	U
8001-35-2	Toxaphene	1	U
12674-11-2	Aroclor-1016	1	U
11104-28-2	Aroclor-1221	1	U
11141-16-5	Aroclor-1232	1	U
53469-21-9	Aroclor-1242	1	U
12672-29-6	Aroclor-1248	1	U
11097-69-1	Aroclor-1254	1	U
11096-82-5	Aroclor-1260	1	U

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 007

FMETL#1851.1
9524205B
Bldg 117 Mdi-2931772

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9524205B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7861.D

Level: (low/med) _____ Date Received: 5/26/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 6/1/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/7/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

US ARMY Ft. Monmouth N.J.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
FMETL # 1851, 1
9524205B
Bldg 117 Mail-283177

008

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9524205B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7861.D

Level: (low/med) _____ Date Received: 5/26/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 6/1/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/7/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	n-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-08	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
56-55-3	Benzo[a]anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

US ARMY Ft. Monmouth N.J.

010

FMETLH 1851,1

NJDEPA

Bldg 117 MW1-293172

1A

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA 524.2

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

Lab Sample ID: 9524205
Lab File ID: C8414.D
Date Received: 05/26/95
Date Analyzed: 06/08/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

U= Not Detected

US ARMY Ft. Monmouth N.J. 011

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET FMETL #1851,1
EPA 524.2
Bldg 117 MW1-2931772

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

Lab Sample ID: 9524205
Lab File ID: C8414.D
Date Received: 05/26/95
Date Analyzed: 06/08/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U
1634-04-4	Methyl-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

COMMENT
U= Not Detected

US ARMY Ft. Monmouth N.J

FMETC # 1551.1

1E

SAMPLE NO.

Bldg 117
9524205V
MW01-29317-72

012

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9524205V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8414.D

Level: (low/med) LOW Date Received: 5/26/95

% Moisture: not dec. NA Date Analyzed: 6/8/95

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

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

BLDG.#: 117 MW#: 1 NJDEPE WELL ID # 2931772

U.S. ARMY FORT MONMOUTH

MONITORING WELL SAMPLING DATASHEET

DATE: 5-25-95

IJO#95-0091

SAMPLING CONTRACTOR: EMSL Analytical Services Inc.

LABORATORY: EMSL Analytical Services, NJDEP CERT #: 04653

SAMPLERS NAMES: Tom Baxter Susan Palilonis

WEATHER CONDITIONS: overcast, cool breeze

ELEVATION OF CASING SURVEY MARK: ____.____

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 12.88 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____FT

LENGTH OF SCREENED SECTION: ____FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 7.17 FT

ELEVATION OF GW PRIOR TO PURGING: ____.___FT

THICKNESS OF LNAPL PRIOR TO PURGING : ____.___FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: 21 PPM none detected 1402 D.O. 1.8 ppm

① pH: 5.28 TEMP: 19.2 C, SPECIFIC CONDUCTIVITY: 604 us/cm

DEPTH OF WELL: ____.___FT

HEIGHT OF WATER: ____.____FT

EVACUATED GAL. H2O: 12 GAL (5.7 X .65 X 3 = 11.134

PURGING START TIME: 1408 END TIME: 1415

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

PURGE RATE (<0.5 GPM): 2 GPM

TOTAL VOLUME PURGED: 12 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 7.20 FT

② DISSOLVED OXYGEN: 1.6 ppm pH: 5.22 TEMP: 12.7 °C

SPECIFIC CONDUCTIVITY: 592 us/cm

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

START TIME OF SAMPLING: 1425 END TIME: 1435

③ DISSOLVED OXYGEN: 1.5 ppm pH: 5.41 TEMP: 12.3 °C

SPECIFIC CONDUCTIVITY: 566 us/cm

COMMENTS: on site 1402 flush surface well
Excessive mineral deposits & Grease over inside well cap.
purge water contained on site - pumped directly into drum.

013a

EMSL

Date of Report: 06/23/95
Project Number: 09508471
Lab ID: 95-0024197
Date Collected: 05/25/95 06:10
Collected By: Client
Date Received: 05/26/95 07:00

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

Client Project: None

lient Designation: Trip Blank

	Conc.	Unit
ORGANIC		
Volatiles		
Methyl tertiary-butyl ether	see attached	ug/l
tert-Butyl alcohol	see attached	ug/l
Volatiles by 524.2 w/ Library Search	see attached	ug/l

US ARMY Ft. Monmouth N.J.

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMETL # 1850.2
Bldg 117
TRIP BLANK

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

Lab Sample ID: 9524197
Lab File ID: C8401.D
Date Received: 05/26/95
Date Analyzed: 06/07/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	1.5	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	1.0	
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U= Not Detected

US ARMY Ft. Monmouth N.J.

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMETC # 1850.2
Bldg 117
TRIP Blank

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

Lab Sample ID: 9524197
Lab File ID: C8401.D
Date Received: 05/26/95
Date Analyzed: 06/07/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	7.7	
106-43-4	4-Chlorotoluene	2.5	
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.60	
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U
1634-04-4	Methyl-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

COMMENT
U= Not Detected

US Army Ft. Monmouth NJ.

FMETL # 1850.2

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
Bldg 117
9524197V
TB

011

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9524197V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8401.D

Level: (low/med) LOW Date Received: 5/26/95

% Moisture: not dec. NA Date Analyzed: 6/7/95

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

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

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

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

Date of Report: 06/25/95
Project Number: 09508471
Lab ID: 95-0024198
Date Collected: 05/25/95 13:50
Collected By: Client
Date Received: 05/26/95 07:00

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

Client Project: None

Client Designation: Field Blank FMETL #1850.3 Bldg 117

	Conc.	Unit
LIMITED		
Total Cyanide	<0.010	mg/l
METALS		
Ag-CLP	<0.050	mg/l
Aluminum-CLP	<0.20	mg/l
Arsenic-CLP	<0.0050	mg/l
Barium-CLP	<0.020	mg/l
Beryllium-CLP	<0.0050	mg/l
Calcium-CLP	<0.40	mg/l
Cadmium-CLP	<0.010	mg/l
Cobalt-CLP	<0.050	mg/l
Chromium-CLP	<0.050	mg/l
Copper-CLP	<0.050	mg/l
Iron-CLP	0.10	mg/l
Mercury, CLP	<0.001	mg/l
Potassium-CLP	<3.0	mg/l
Magnesium-CLP	<0.10	mg/l
Manganese-CLP	<0.020	mg/l
Sodium-CLP	<0.40	mg/l
Nickel-CLP	<0.050	mg/l
Lead-CLP	<0.0025	mg/l
Antimony-CLP	<0.0050	mg/l
Selenium-CLP	<0.0050	mg/l
Thallium-CLP	<0.0050	mg/l
Vanadium-CLP	<0.050	mg/l
Zinc-CLP	<0.020	mg/l
ORGANIC		
Pesticides		
Pesticides and PCBs by 608	see attached	ug/l
Semi-Volatiles		
TCL BNA's with Library Search	see attached	ug/l
Volatiles		
Methyl tertiary-butyl ether	see attached	ug/l
tert-Butyl alcohol	see attached	ug/l
Volatiles by 524.2 w/ Library Search	see attached	ug/l

US ARMY Ft. Monmouth N.J.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FMETL # 1850.3
BLG 117
Field Blank

Lab Name: EMSL Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix: (soil/water) water Lab Sample ID: 95-24198

Sample wt/vol: 1000 (g/mL) mL Lab File ID: E:JU06E63

% Moisture N/A decanted: (Y/N) N Date Received: 05/16/95

Extraction: (SepF/Cont/Sonc) Cont Date Extracted: 06/01/95

Concentrated Extract Volume: 10 (ml) Date Analyzed: 06/08/95

Injection Volume: 1 (uL) Dilution Factor 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.02	U
319-85-7	beta-BHC	0.04	U
319-86-8	delta-BHC	0.02	U
58-89-9	gamma-BHC (Lindane)	0.03	U
76-44-8	Heptachlor	0.02	U
309-00-2	Aldrin	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U
959-98-8	Endosulfan I	0.02	U
60-57-1	Dieldrin	0.03	U
72-55-9	4,4'-DDE	0.04	U
72-20-8	Endrin	0.04	U
33213-65-9	Endosulfan II	0.04	U
72-54-8	4,4'-DDD	0.04	U
1031-07-8	Endosulfan sulfate	0.04	U
50-29-3	4,4'-DDT	0.04	U
7421-36-3	Endrin aldehyde	0.1	U
57-74-9	Chlordane	0.1	U
8001-35-2	Toxaphene	1	U
12674-11-2	Aroclor-1016	1	U
11104-28-2	Aroclor-1221	1	U
11141-16-5	Aroclor-1232	1	U
53469-21-9	Aroclor-1242	1	U
12672-29-6	Aroclor-1248	1	U
11097-69-1	Aroclor-1254	1	U
11096-82-5	Aroclor-1260	1	U

US Army Ft. Monmouth N.J.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
FMETL # 1850.3
9524198B
Field Blank

019

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9524198B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7860.D

Level: (low/med) Date Received: 5/26/95

% Moisture: decanted: (Y/N): N Date Extracted: 6/1/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/7/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

US ARMY Ft. Monmouth N.J.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

FMETL # 1850, 3
9524198B
Field Blank

020

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9524198B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7860.D

Level: (low/med) _____ Date Received: 5/26/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 6/1/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/7/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	n-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-08	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
56-55-3	Benzo[a]anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

FORM I SV

3/90

US ARMY FH, Monmouth N.J.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
FMETC4
9524198B
Field Blank

021

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9524198B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B7860.D

Level: (low/med) Date Received: 5/26/95

% Moisture: decanted: (Y/N) N Date Extracted: 6/1/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/7/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 2 Concentration Units: (ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc	Q
1.	Unknown	6.21	5	J
2.	Unknown	29.89	5	J
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US ARMY Ft. Monmouth NJ.

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMEPL # 1850.3
Bldg 117
Field Blank

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

Lab Sample ID: 9524198
Lab File ID: C8402.D
Date Received: 05/26/95
Date Analyzed: 06/07/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	1.6	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	1.6	
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U= Not Detected

US Army Ft. Monmouth N.J.

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

FMETL #1850.3
Blank
Field Blank

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

Lab Sample ID: 9524198
Lab File ID: C8402.D
Date Received: 05/26/95
Date Analyzed: 06/07/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	7.7	
106-43-4	4-Chlorotoluene	6.4	
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.60	
99-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U
1634-04-4	Methyl-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

COMMENT
U= Not Detected

US ARMY Ft. Monmouth NJ. FMETC # 1850.3

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
Bldg 117
9524198V
FB

024

Lab Name: EMSL ANALYTICAL Contract:

Project No. Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9524198V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8402.D

Level: (low/med) LOW Date Received: 5/26/95

% Moisture: not dec. NA Date Analyzed: 6/7/95

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

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
2.				
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0.25

LABORATORY DELIVERABLES

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

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The proposed "Technical Requirements for Site Remediation" rules, which appeared in the May 4, 1992 New Jersey Register, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits be included in one section of the data package and in the main body of the report.

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

Laboratory Manager or Environmental Consultant's Signature

06-25-95
Date

EMSL

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

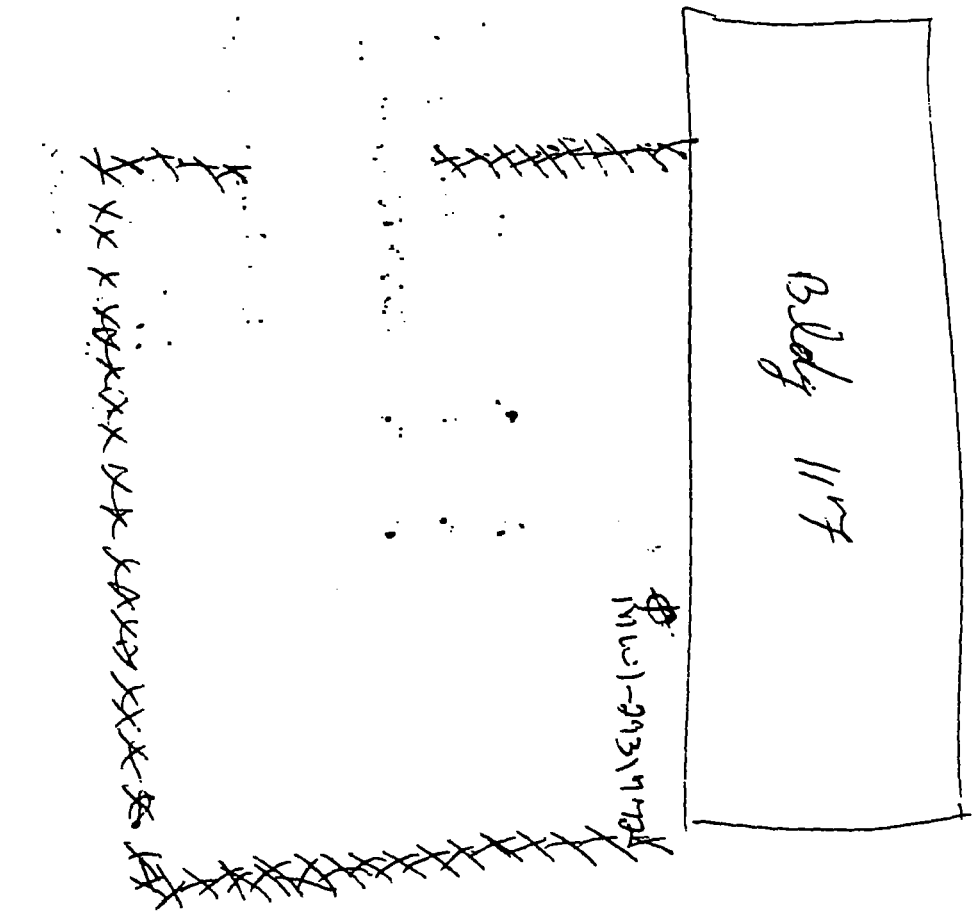
A. Checklist which must be attached to the Summary

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

Page #		
1	1.	Name and address of the facility.
1	2.	Name of the laboratory performing the sample analysis.
1	3.	NJDEP certification number assigned to the laboratory pursuant to N.J.A.C. 7:18.
1	4.	Laboratory sample identification number.
1	5.	Customer sample identification number corresponding to the laboratory sample identification.
1	6.	Sample Location (also on the site diagram).
1	7.	Matrix of the sample analyzed (i.e., water or sediments; including soil, sediment, and sludges). All sediment results must be reported on a dry weight basis.
33-34	8.	The reference for the method used (e.g., EPA Method 625, 40 CFR Part 136).
1	9.	The signature of the person completing the report form.
1	10.	The dates the laboratory report form was prepared, as well as the dates the sample were collected, submitted and analyzed.
35	11.	A list of all parameters (constituents and conditions) for which the analyses were performed.
4-24	12.	Sample results and corresponding units for each parameter.

EMSL

CHAIN OF CUSTODY AND PRESERVATION CHECKLIST



5-25-95

MP-7	MW13-2932566	DTW ⇒ 9.9'
MP-7	MW11-2032575	DTW ⇒ 7.5'

To be completed upon sample receipt

[redacted]

[redacted] an X in box if okay.
[redacted] actual pH if outside
[redacted] range
[redacted] temperature of cool blank
[redacted] Y/N if samples are cooled.
[redacted] corrective action in remarks.

			pH ≤ 2										>9	≥ 12	deg.C	SAMPLES	
[illegible]	TKN	TOX	VOA*	PHENOL	TOC	PHC	O&G	METALS	HARD	TPO4	NO2&3		SO2	TCN	TEMP	EMSL #	REMARK
[illegible]	[illegible]	H2SO4	HCL	H2SO4	H2SO4	H2SO4	H2SO4	HNO3	HNO3	H2SO4	H2SO4		NaOH ZNAC	NaOH			
			X					X						X	4	24305	

U.S. ARMY FORT MONMOUTH

G508473

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

Chain of Custody

ject #: 944 28 194421

Sampler: EMSL (Baxter)

Date / Time: 5/25/15 —

Site Name: Bldg 117 mw sampling

Start: —

Finish: —

omer:
RDS Applied SCIENCES-RVS-EV

e: 908 933 6004

Analysis Parameters: TCL +30 / TAL (24 hr turnaround) / VOA 524.2 (benzene, MTBE, TBA, xylenes)

Preservation Method

Sample umber	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TCL +30	TAL (24 hr turnaround)	VOA 524.2 (benzene, MTBE, TBA, xylenes)			Remarks
5/.1	5/25	1435	Bldg 117 mw1-2931772	Aq	9	X		24205			
E.2	↓	0610	TRIP Blank	↓	3		X	24197			
5D:3	↓	1350	Field Blank	↓	9	X		24198			

nquished By (signature): [signature]

Date / Time: 5-25-15 1520

Received By (signature): [signature]

Shipped By: EMSL

nquished By (signature):

Date / Time:

Received for Lab by (signature): [signature]

Date / Time: 5/26 07:40

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

ENV COC Form 01

Page 1 of 1 Pages

Rev. A Date: 02 Apr 93

Enviornmental Laboratory

030

EMSL ANALYTICAL, INC.

INTERNAL CHAIN OF CUSTODY

EMSL LAB ID NO. 95-24198, 95-24215 PROJECT NO. 951473

SAMPLE/CONTAINERS

PARAMETERS

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
6/1/95		Oil Extraction Prep	Charles Bastoline	Charles Bastoline
6/5,8/95		Cyanide Prep	Paritark Singh	P Singh
6/5/95		Metals Prep	Domenic Tepedzi	D Tepedzi
6/1/95		Pesticides Prep	James J. Kelley	J Kelley
5/31/95		Mercury Prep	John Lewis	J Lewis

INTERNAL CUSTODY

Project #: 96084173

Lab ID #'s: 95-24197, 95-24198, 95-24205

Analyst

Analyst	Name (please print)	Signature	Date
1. Base/Neutrals	Scott Van Etten		6/7/95
2. Acids			
3. Pesticides			
4. Herbicides			
5. PCB's	David Roberts	David Roberts	6/8/95
6. Metals:			
Flame			
Furnace	Mike Boyle		6/7/95
ICP	David Klinger		6/6/95
7. Volatiles:			
GC			
GC/MS	Scott Kessler		6/7,8/1995
8. TOC			
9. TOX			
10. Phenols (Total)			
11. Cyanide (Total)	Pavitaar Singh	PPSingh	6/5,8/95
12. TPH -IR			
13. Mercury	John Lewis		5/31/95
14. Other			
15. Other			

EMSL

METHODOLOGY SUMMARY

METHODOLOGY SUMMARY

EPA Method 524.2 - Aqueous

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

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

Method detection limits are as stated.

Semivolatiles by GC/MS - Aqueous

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

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

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

Method detection limits are as stated.

Pesticides/PCB's - Aqueous

EPA Method 608 - This method covers the determination of pesticides and polychlorinated biphenyls (PCB's) in samples by extraction/concentration with organic solvents and subsequent qualification/quantification by Gas Chromatography. The gas chromatograph utilizes an electron capture detector (ECD) which is applicable for the determination of the compounds listed for this method in the U.S.E.P.A. Manual entitled "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater".

Cyanide

An aliquot of sample is acidified under analysis conditions liberating cyanide as HCN. A distillation follows leaving behind interferences and scrubbing the distilled HCN in sodium hydroxide solution. An aliquot of the NaOH solution is analyzed colorimetrically for cyanide ion. Reference method is EPA Method 335.2.

Metals - Aqueous (Total)

This is a procedure used to determine metals concentrations in aqueous matrices. It involves an acidic digestion under oxidizing conditions of approximately 100 milliliters of sample. Nitric and hydrochloric acids as well as hydrogen peroxide are employed in the digestion. The digested sample is filtered and diluted to 100 milliliters. The analysis is performed by ICP, furnace atomic absorption or flame atomic absorption. Reference methods are SW-846 3rd Edition, September 1986, Revised July 1992, EPA Methods for the Chemical Analysis of Water and Wastes, Revised, March 1983 and Methods for the Determination of Metals in Environmental Samples EPA/600/4-91/010 June 1991.

EMSL

LABORATORY CHRONICLE

Lab ID: **95-24205, 95-24197 & 95-24198** Client: **U.S. Army, Fort Monmouth**

	I DATE	II Hold Time
Date Sampled	5/25/95	
Receipt/Refrigeration	5/26/95	
Extractions		
1. Semivolatile Organics	**6/1/95**	**7 days**
2. Metals Prep.	**6/5/95**	**6 months**
3. Pest/PCBs	**6/1/95**	**7 days**
Analyses		
1. Semivolatile Organics	**6/7/95**	**40 days**
2. Metals	**6/6-7/95**	**6 months**
3. Mercury	**5/31/95**	**28 days**
4. Pest/PCBs	**6/8/95**	**40 days**
5. T. Cyanide	**6/5, 8/95**	**28 days**
6. Volatiles	**6/7-8/95**	**14 days**

QC Supervisor
Review & Approval

(Signature) Peter B. Panton
(Printed Name) Peter B. Panton
(Date) 07/19/95

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

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GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)		X
2.	GC/MS Tune Specifications		
	a. BFB Meet Criteria		X
	b. DFTPP Meet Criteria		X
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.		X
4,	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of. sample analysis for 600 series and 12 hours for 8000 series.		X
5.	GC/MS Calibration - Initial Requirements		
	a. Calibration Check Compounds		X
	b. System Performance Check Compounds		X
6.	Blank Contamination - If yes, list compounds and concentrations in each blank:		X
	a. VOA Fraction **Methylene Chloride 1.4 - 2.2 ppb.**		
	b. B/N Fraction		
	c. Acid Fraction		
7.	Surrogate Recoveries Meet Criteria		X
	If not met, list those compounds and their recoveries which fall outside the acceptable range:		
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
	If not met, were the calculations checked and the results qualified as "estimated"?		
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	X	
	a. VOA Fraction **See MS/MSD form.**		
	b. B/N Fraction		
	c. Acid Fraction		
9.	Internal Standard Area/Retention Time Shift Meet Criteria		X

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

		No	Yes
10.	Extraction Holding Time Met		X

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

		No	Yes
11.	Analysis Holding Time Met		X

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

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

Additional Comments:

Laboratory Manager Paul Farag Date: 06-27-95

EMSL

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	No	Yes
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)		X
2. Standards Summary Submitted		X
3. Calibration-Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis.	X *	
4. Blank Contamination - If yes, list compounds and concentrations in each blank:	X	
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
d. Pesticides/PCB's		
e. Other		
5. Surrogate Recoveries Meet Criteria (If Applicable)		X
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
d. Pesticides/PCB's		
e. Other		
If not Met, were the calculations checked and the results qualified (if applicable)	NA	
6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (if applicable)		X
(if not met, list those compounds and their recoveries which fall outside the acceptable range)		
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
d. Pesticides/PCB's		
e. Other		
7. Retention Time Shift Meet Criteria (if applicable)		X

EMSL

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

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

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

Additional Comments: *** Initial Calibration performed greater than 30 days. Continuing Calibration performed within 24 hours of sample analysis**

Laboratory Manager: Paul Lorais Date: 07-18-95

EMSL

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Calibration Summary Meet Criteria		X
2.	ICP Interference Check Sample Results Summary Submitted (if applicable) Meet Criteria		X
3.	Serial Dilution Summary Submitted (if applicable) / Meet Criteria	NA	
4.	Laboratory Control Sample Summary Submitted (if applicable) / Meet Criteria		X
5.	Blank Contamination - If yes, list compounds and concentrations in each blank.	X	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (if not met, list those compounds and their recoveries which fall outside the acceptable range) **Calcium 1% R, Magnesium 44% R, Sodium 416% R.**	X	
7.	Extraction Holding Time Met		X
	If not met, list number of days exceeded for each sample:		
8.	Analysis Holding Time Met		X
	If not met, list number of days exceeded for each sample:		

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

Additional Comments: _____

Laboratory Manager: Paul Jaraig Date: 07-18-95

EMSL ANALYTICAL, INC. Asbestos - Lead - Environmental - Materials

Bldg #117

001

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

PROJECT : **94428194421**

EMSL Project: # 95064014

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection	Date Received
1876.1, Trip Blank	**95-26797**	**Aqueous**	**6/16/95 @ 0545**	**6/16/95**
1876.2, Field Blank	**95-26798**	**Aqueous**	**6/16/95 @ 1345**	**6/16/95**
1878.1, MW1-2931772, Bldg. #117	**95-26800**	**Aqueous**	**6/16/95 @ 1119**	**6/16/95**

Laboratory Name: EMSL ANALYTICAL, INC.

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

Supervisor/Manager Signature: Paul Laraia

Printed Name: Paul V. Laraia

Date: 07-18-95

REPORT NARRATIVE

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

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

A 1

EMSL

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EMSL

SAMPLE DATA SUMMARY PACKAGE

EMSL

Date of Report: 07/14/95
Project Number: 95064013
Lab ID: 95-0026797
Date Collected: 06/16/95 05:45
Collected By: Client
Date Received: 06/16/95 18:10

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

Client Project: None

Client Designation: Trip Blank

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL#

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

Project No.: FT. MONMOUTH NJ Bldg#: NJDEP MW#: TRIP BLANK

006

Matrix: (soil, water) WATER Lab Sample ID: 9526797

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8686.D

Level: (low med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	1.0	
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	.80	
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	8.4	
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA/EMSL#

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

Project No.: FT. MONMOUTH NJ Bldg#: NJDEP MW#: TRIP BLANK

Matrix: (soil/water) WATER Lab Sample ID: 9526797 007

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8686.D

Level: (low/med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

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

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EMETLA

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

Project No. FT. MONMOUTH NJ Bldg#: NJDEPMW#: TRIP BLANK

Matrix: (soil/water) WATER Lab Sample ID: 9526797V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8686.D

Level: (low/med) LOW Date Received: 6.16.95

% Moisture: not dec. NA Date Analyzed: 6/27.95

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

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

Concentration Units:

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 107-04-0	Ethane, 1-bromo-2-chloro-	13.88	3	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

EMSL

Date of Report: 07/18/95
Project Number: 95064013
Lab ID: 95-0026798
Date Collected: 06/16/95 13:54
Collected By: Client
Date Received: 06/16/95 18:10

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

Client Project: None

Client Designation: Field Blank
FM ETL #1876.2

	Conc.	Unit
LIMITED		
Total Cyanide	<0.010	mg/l
METALS		
Ag-CLP	<0.050	mg/l
Aluminum-CLP	<0.20	mg/l
Arsenic-CLP	<0.0050	mg/l
Barium-CLP	<0.020	mg/l
Beryllium-CLP	<0.0050	mg/l
Calcium-CLP	<0.40	mg/l
Cadmium-CLP	<0.010	mg/l
Cobalt-CLP	<0.050	mg/l
Chromium-CLP	<0.050	mg/l
Copper-CLP	<0.050	mg/l
Iron-CLP	<0.10	mg/l
Mercury, CLP	<0.0010	mg/l
Potassium-CLP	<3.0	mg/l
Magnesium-CLP	<0.10	mg/l
Manganese-CLP	<0.020	mg/l
Sodium-CLP	<0.40	mg/l
Nickel-CLP	<0.050	mg/l
Lead-CLP	<0.0025	mg/l
Antimony-CLP	<0.0050	mg/l
Selenium-CLP	<0.0050	mg/l
Thallium-CLP	<0.0050	mg/l
Vanadium-CLP	<0.050	mg/l
Zinc-CLP	<0.020	mg/l
ORGANIC		
Pesticides		
Pesticides and PCBs by 608	see attached	ug/l
Semi-Volatiles		
TCL BNA's with Library Search	see attached	ug/l
Volatiles		
Volatiles by 524.2 w/ Library Search	see attached	ug/l

US Army Fort Monmouth, NJ
Bldg # 697 FMETL # 1876.2 Hydrex Field Blank 010

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: EMSL Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix: (soil/water) water Lab Sample ID: 95-26798

Sample wt/vol: 960 (g/mL) mL Lab File ID: E:JU20E42

% Moisture N/A decanted: (Y/N) N Date Received: 06/16/95

Extraction: (SepF/Cont/Sonc) SepF Date Extracted: 06/21/95

Concentrated Extract Volume: 10 (ml) Date Analyzed: 06/29/95

Injection Volume: 1 (uL) Dilution Factor 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.02	U
319-85-7	beta-BHC	0.04	U
319-86-8	delta-BHC	0.02	U
58-89-9	gamma-BHC (Lindane)	0.03	U
76-44-8	Heptachlor	0.02	U
309-00-2	Aldrin	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U
959-98-8	Endosulfan I	0.02	U
60-57-1	Dieldrin	0.03	U
72-55-9	4,4'-DDE	0.04	U
72-20-8	Endrin	0.04	U
33213-65-9	Endosulfan II	0.04	U
72-54-8	4,4'-DDD	0.04	U
1031-07-8	Endosulfan sulfate	0.04	U
50-29-3	4,4'-DDT	0.04	U
7421-36-3	Endrin aldehyde	0.1	U
57-74-9	Chlordane	0.1	U
8001-35-2	Toxaphene	1	U
12674-11-2	Aroclor-1016	1	U
11104-28-2	Aroclor-1221	1	U
11141-16-5	Aroclor-1232	1	U
53469-21-9	Aroclor-1242	1	U
12672-29-6	Aroclor-1248	1	U
11097-69-1	Aroclor-1254	1	U
11096-82-5	Aroclor-1260	1	U

US Army Fort Monmouth, NJ
Bldg #609
FMETL = 1876.2

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
9526798B
Field Blank

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9526798B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8087.D

Level: (low/med) _____ Date Received: 6/16/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 6/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/1/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	3	JB
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

US Army Fort Harrison, IN
Bldg #697
FMETL #1876.2

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

9526798B
Field Blank

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9526798B

Sample wt/vol: 1000.0 g/mL ML Lab File ID: B8087.D

Level: (low/med) _____ Date Received: 6/16/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 6/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/1/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	n-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-08	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
56-55-3	Benzo[a]anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

US Army Fort Monmouth, NJ
Bldg # 697
Fuel IL #1676.2

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9526798B
Fuel Blank

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9526798B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B8087.D

Level: (low/med) Date Received: 6/16/95

% Moisture: decanted: (Y/N) N Date Extracted: 6/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/1/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

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

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1876.2

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

Project No.: FT. MONMOUTH NJ Bldg#: NJDEP MW#: FIELD BLANK

Matrix: (soil/water) WATER Lab Sample ID: 9526798

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8687.D

Level: (low/med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.90	
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	.80	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	7.3	
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

VOLATILE ORGANICS ANALYSIS DATA SHEET

1876.2

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

Project No.: FT. MONMOUTH NJ Bldg#: NJDEP MW#: FIELD BLANK

Matrix: (soil/water) WATER Lab Sample ID: 9526798

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8687.D

Level: (low/med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

Concentration Units:

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

1E

FMETL# 016

1876.2

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Project No. FT. MONMOUTH NJ Bldg#: NJDEPMW#: FIELD BLANK

Matrix: (soil/water) WATER Lab Sample ID: 9526798V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8687.D

Level: (low/med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 107-04-0	Ethane, 1-bromo-2-chloro-	13.88	3	J
2.				
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EMSL

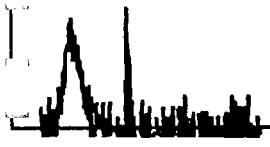
Date of Report: 07/18/95
Project Number: 95064014
Lab ID: 95-0026800
Date Collected: 06/16/95 05:45
Collected By: Client
Date Received: 06/16/95 18:10

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

Client Project: 94428194421

Client Designation: Bldg.117,MW1-2931772

	Conc.	Unit
IMITED		
Total Cyanide	<0.010	mg/l
METALS		
Ag-CLP	<0.050	mg/l
Aluminum-CLP	1.9	mg/l
Arsenic-CLP	<0.0050	mg/l
Barium-CLP	<0.020	mg/l
Beryllium-CLP	<0.0050	mg/l
Calcium-CLP	13	mg/l
Cadmium-CLP	<0.010	mg/l
Cobalt-CLP	<0.050	mg/l
Chromium-CLP	<0.050	mg/l
Copper-CLP	<0.050	mg/l
Iron-CLP	5.9	mg/l
Mercury, CLP	<0.0010	mg/l
Potassium-CLP	<3.0	mg/l
Magnesium-CLP	6.3	mg/l
Manganese-CLP	0.080	mg/l
Sodium-CLP	27	mg/l
Nickel-CLP	<0.050	mg/l
Lead-CLP	0.0026	mg/l
Antimony-CLP	<0.0050	mg/l
Selenium-CLP	<0.0050	mg/l
Thallium-CLP	<0.0050	mg/l
Vanadium-CLP	<0.050	mg/l
Zinc-CLP	0.076	mg/l
ORGANIC		
Pesticides		
Pesticides and PCBs by 608	see attached	ug/l
Semi-Volatiles		
TCL BNA's with Library Search	see attached	ug/l
Volatiles		
Volatiles by 524.2 w/ Library Search	see attached	ug/l



U.S. Army Ft. Monmouth NJ
Bldg #117 FMETL # 1878.1 NJDEP # 1-2931772

1D

EPA SAMPLE NO. 1 018

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: EMSL Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix: (soil/water) water Lab Sample ID: 95-26800

Sample wt/vol: 990 (g/mL) mL Lab File ID: E:JU20E45

% Moisture N/A decanted: (Y/N) N Date Received: 06/16/95

Extraction: (SepF/Cont/Sonc) SepF Date Extracted: 06/21/95

Concentrated Extract Volume: 10 (ml) Date Analyzed: 06/29/95

Injection Volume: 1 (uL) Dilution Factor 1

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.02	U
319-85-7	beta-BHC	0.04	U
319-86-8	delta-BHC	0.02	U
58-89-9	gamma-BHC (Lindane)	0.03	U
76-44-8	Heptachlor	0.02	U
309-00-2	Aldrin	0.04	U
1024-57-3	Heptachlor epoxide	0.04	U
959-98-8	Endosulfan I	0.02	U
60-57-1	Dieldrin	0.03	U
72-55-9	4,4'-DDE	0.04	U
72-20-8	Endrin	0.04	U
33213-65-9	Endosulfan II	0.04	U
72-54-8	4,4'-DDD	0.04	U
1031-07-8	Endosulfan sulfate	0.04	U
50-29-3	4,4'-DDT	0.04	U
7421-36-3	Endrin aldehyde	0.1	U
57-74-9	Chlordane	0.1	U
8001-35-2	Toxaphene	1	U
12674-11-2	Aroclor-1016	1	U
11104-28-2	Aroclor-1221	1	U
11141-16-5	Aroclor-1232	1	U
53469-21-9	Aroclor-1242	1	U
12672-29-6	Aroclor-1248	1	U
11097-69-1	Aroclor-1254	1	U
11096-82-5	Aroclor-1260	1	U

US Army Fort Monmouth, NJ. Bldg #117 FMETC # 1878-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

9526800B

MW1-2931772

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9526800B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8089.D

Level: (low/med) _____ Date Received: 6/16/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 6/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/1/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
108-95-2	Phenol	3	JB
111-44-4	bis(2-Chloroethyl)ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	bis(2-chloroisopropyl)ether	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

US Army Fort Monmouth, NJ
Bldg # 117
FMETC # 1878.1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 020

9526800B
MW1-293172

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9526800B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8089.D

Level: (low/med) _____ Date Received: 6/16/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 6/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/1/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
86-73-7	Fluorene	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	n-Nitrosodiphenylamine	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-08	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
56-55-3	Benzo[a]anthracene	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)phthalate	10	U
117-84-0	Di-n-octylphthalate	10	U
205-99-2	Benzo[b]fluoranthene	10	U
207-08-9	Benzo[k]fluoranthene	10	U
50-32-8	Benzo[a]pyrene	10	U
193-39-5	Indeno[1,2,3-cd]pyrene	10	U
53-70-3	Dibenz[a,h]anthracene	10	U
191-24-2	Benzo[g,h,i]perylene	10	U

US Army Fort Monmouth, NJ
Bldg 117
FMEC # 1878.1

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9526800B
MB1-283772

021

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9526800B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B8089.D

Level: (low/med) Date Received: 6/16/95

% Moisture: decanted: (Y/N) N Date Extracted: 6/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/1/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1. 143-07-7	Dodecanoic acid	19.39	5	J
2.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1878.1

022

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

Project No.: FT. MONMOUTH NJ Bldg#: 117 NJDEP MW#: 1-2931772

Matrix: (soil/water) WATER Lab Sample ID: 9526800

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8691.D

Level: (low/med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	1.1	
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	1.6	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	9.6	
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1878.1

023

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

Project No.: FT. MONMOUTH NJ Bldg#: 117 NJDEP MW#: 1-2931772

Matrix: (soil/water) WATER Lab Sample ID: 9526800

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8691.D

Level: (low/med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

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

1E

FMETL# 024

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

1878.1

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

Project No. FT. MONMOUTH NJ Bldg#: 117 NJDEPMW#: 1 - 2931772

Matrix: (soil/water) WATER Lab Sample ID: 9526800V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8691.D

Level: (low/med) LOW Date Received: 6/16/95

% Moisture: not dec. NA Date Analyzed: 6/27/95

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

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 107-04-0	Ethane, 1-bromo-2-chloro-	13.88	4	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

BLDG.#: 117 MW#: 1 NJDEPE WELL ID # 2931772 025

U.S. ARMY FORT MONMOUTH

MONITORING WELL SAMPLING DATASHEET

DATE: 6-16-95

IJO#95-0091

SAMPLING CONTRACTOR: EMSL Analytical Services Inc.

LABORATORY: EMSL Analytical Services, NJDEP CERT #: 04653

SAMPLERS NAMES: Susan Palilonis, Tom Baxter

WEATHER CONDITIONS: sunny, Hot

ELEVATION OF CASING SURVEY MARK: ____.____

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 17.55 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____ FT 0.10 to screen

LENGTH OF SCREENED SECTION: _____ FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 7.27 FT from screen

ELEVATION OF GW PRIOR TO PURGING: _____.___ FT

THICKNESS OF LNAPL PRIOR TO PURGING: ____.0 FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: 21 PPM 1047 none detected

D.O. 1.6 ppm

① pH: 5.63 TEMP: 21.0 °C, SPECIFIC CONDUCTIVITY: 570 µs/cm

DEPTH OF WELL: ____.___ FT

HEIGHT OF WATER: ____.____ FT

EVACUATED GAL. H2O: 11 GAL (5.28 X .65 X 3 = 10.296

PURGING START TIME: 1056 END TIME: 1102

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

PURGE RATE (<0.5 GPM): 2 GPM

TOTAL VOLUME PURGED: 12 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 7.27 FT

② DISSOLVED OXYGEN: 1.0 ppm pH: 5.39 TEMP: 20.5 °C

SPECIFIC CONDUCTIVITY: 591 µs/cm

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

START TIME OF SAMPLING: 1104 END TIME: 1119

③ DISSOLVED OXYGEN: 1.3 ppm pH: 5.60 TEMP: 22.6 °C

SPECIFIC CONDUCTIVITY: 499 µs/cm

Color clear ODOR none

COMMENTS: on site 1041 flush surface well. Ground flags mark on site.

EMSL

LABORATORY DELIVERABLES

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

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The proposed "Technical Requirements for Site Remediation" rules, which appeared in the May 4, 1992 New Jersey Register, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits be included in one section of the data package and in the main body of the report.

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

Paul Craig

Laboratory Manager or Environmental Consultant's Signature

07-18-95

Date

EMSL

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

A. Checklist which must be attached to the Summary

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

Page #		
1	1.	Name and address of the facility.
1	2.	Name of the laboratory performing the sample analysis.
1	3.	NJDEP certification number assigned to the laboratory pursuant to N.J.A.C. 7:18.
1	4.	Laboratory sample identification number.
1	5.	Customer sample identification number corresponding to the laboratory sample identification.
1	6.	Sample Location (also on the site diagram).
1	7.	Matrix of the sample analyzed (i.e., water or sediments; including soil, sediment, and sludges). All sediment results must be reported on a dry weight basis.
32-34	8.	The reference for the method used (e.g., EPA Method 625, 40 CFR Part 136).
1	9.	The signature of the person completing the report form.
1	10.	The dates the laboratory report form was prepared, as well as the dates the sample were collected, submitted and analyzed.
35	11.	A list of all parameters (constituents and conditions) for which the analyses were performed.
4-25	12.	Sample results and corresponding units for each parameter.

EMSL

CHAIN OF CUSTODY

FORT MONMOUTH

9506401A

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

Chain of Custody

Project #: 944281944421	Sampler: EMSL (Baxter)	Date / Time 6/16/95	Analysis Parameters: TCL +30 / TAL
Customer: Charles Appleby SELFM-RO-EV	Site Name: Bldg. #117 MW Sampling		Start:
Phone: 908-532-6224			Finish:

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	+30 Library VOA SemiVol + Tent	RCRA 15 metals	Pest/PCB	TAL				Preservation Method	Remarks
1876.1	6/16/95 0545	TRIP Blank	aq.	4	X								Samples Kept at 4 °C
↓ .2	↓ 1354	Field Blank	aq.	10	X	X	X	X					
1878.1	↓ 1119	Bldg. #117 MW1-2931772	aq.	10	X	X	X	X					

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
	6/16/95 1617		EMSL.
Relinquished By (signature)	Date / Time	Received For Lab by (signature):	Date / Time
	6/16/95 1810		

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

Enviornmental Laboratory

Certification Number 1246.1

609

EMSL ANALYTICAL, INC. (030

INTERNAL CHAIN OF CUSTODY

EMSL LAB ID NO. 95-26798 95-26800 PROJECT NO. 950644014

SAMPLE/CONTAINERS

PARAMETERS

BN Ext, Pest/PCB Ext, TCN, Metals Prep.

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
6/23/95		BN Extraction Prep.	Charles Bartolone	CB
6/21/95		Pest/PCB Ext. Prep.	Jim Kelley	Jk
6/27/95		T. Cyanide	PAVITTAR SINGH	PS
6/26/95		Metals Prep.	Dom Terenzz	
6/26/95		Mercury Prep.	John Lewis	

INTERNAL CUSTODY

031

Project #: 95064014

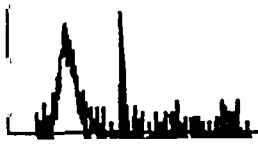
Lab ID #'s: 95-26800

Analyst 95-26798

	Name (please print)	Signature	Date
1. Base/Neutrals	Scott VanEtten		7/1/95
2. Acids			
3. Pesticides	Dave Roberts	David Roberts	6/29/95
4. Herbicides			
5. PCB's	Dave Roberts	David Roberts	6/29/95
6. Metals:			
Flame			
✓Furnace	Michael Boyle		6/29/95
✓ICP	Dom Terenzi		7/1/95
7. Volatiles:			
GC			
GC/MS	Scott Kessler		6/27/95
8. TOC			
9. TOX			
10. Phenols (Total)			
✓11. Cyanide (Total)	PANITTAR SINGH		6/27/95
12. TPH -IR			
✓13. Mercury	Dom Terenzi		6/26/95
14. Other			
15. Other			
16. Other			



METHODOLOGY SUMMARY



METHODOLOGY SUMMARY

EPA Method 524.2 - Aqueous

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

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

Method detection limits are as stated.

Semivolatiles by GC/MS - Aqueous

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

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

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

Method detection limits are as stated.

Pesticides/PCB's - Aqueous

EPA Method 608 - This method covers the determination of pesticides and polychlorinated biphenyls (PCB's) in samples by extraction/concentration with organic solvents and subsequent qualification/quantification by Gas Chromatography. The gas chromatograph utilizes an electron capture detector (ECD) which is applicable for the determination of the compounds listed for this method in the U.S.E.P.A. Manual entitled "Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater".

Metals - Aqueous (Total)

This is a procedure used to determine metals concentrations in aqueous matrices. It involves an acidic digestion under oxidizing conditions of approximately 100 milliliters of sample. Nitric and hydrochloric acids as well as hydrogen peroxide are employed in the digestion. The digested sample is filtered and diluted to 100 milliliters. The analysis is performed by ICP, furnace atomic absorption or flame atomic absorption. Reference methods are SW-846 3rd Edition, September 1986, Revised July 1992, EPA Methods for the Chemical Analysis of Water and Wastes, Revised, March 1983 and Methods for the Determination of Metals in Environmental Samples EPA/600/4-91/010 June 1991.

METHODOLOGY SUMMARY, cont.

Mercury, Solid/Aqueous

SW 846 Method 7471, a cold-vapor atomic absorption method, is based on the absorption of radiation at the 253.7-nm wavelength by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrophotometer. Absorbance (peak height) is measured as a function of mercury concentration.

Cyanide

An aliquot of sample is acidified under analysis conditions liberating cyanide as HCN. A distillation follows leaving behind interferences and scrubbing the distilled HCN in sodium hydroxide solution. An aliquot of the NaOH solution is analyzed colorimetrically for cyanide ion. Reference method is EPA Method 335.2.

EMSL

LABORATORY CHRONICLE

Lab ID: **95-26797, 95-26798, 95-26800** Client: **U.S. Army, Fort Monmouth**

	I DATE	II	Hold Time
Date Sampled	**6/16/95**		
Receipt/Refrigeration	**6/16/95**		
Extractions			
1. Semivolatile Organics	**6/23/95**		**7 days**
2. Pesticide/PCB Prep.	**6/21/95**		**7 days**
3. Metals Prep.	**6/26/95**		**6 months**
Analyses			
1. Volatile Organics	**6/27/95**		**14 days**
2. Semivolatile Organics	**7/1/95**		**40 days**
3. Pesticide/PCB	**6/29/95**		**40 days**
4. Metals	**6/29, 7/1/95**		**6 months**
5. Mercury	**6/26/95**		**28 days**
6. Cyanide, Total	**6/27/95**		**14 days**

QC Supervisor
Review & Approval

(Signature) Peter B. Panton
(Printed Name) Peter B. Panton
(Date) 07/18/95

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

EMSL

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)		X
2.	GC/MS Tune Specifications		
	a. BFB Meet Criteria		X
	b. DFTPP Meet Criteria		X
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.		X
4,	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of. sample analysis for 600 series and 12 hours for 8000 series.		X
5.	GC/MS Calibration - Initial Requirements		
	a. Calibration Check Compounds		X
	b. System Performance Check Compounds		X
6.	Blank Contamination - If yes, list compounds and concentrations in each blank:		X
	a. VOA Fraction **Methylene Chloride 2.0-2.1 ppb.**		
	b. B/N Fraction **29206 MS/MSD Di-n-butylphthalate 40 ppb.**		
	c. Acid Fraction		
7.	Surrogate Recoveries Meet Criteria		X
	If not met, list those compounds and their recoveries which fall outside the acceptable range:		
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
	If not met, were the calculations checked and the results qualified as "estimated"?		
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable range)	X	
	a. VOA Fraction **Methylene Chloride 76%, chloromethane 122%, 1,2-Dichloroethane 121%.**		
	b. B/N Fraction		
	c. Acid Fraction		
9.	Internal Standard Area/Retention Time Shift Meet Criteria		X

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

		No	Yes
10.	Extraction Holding Time Met		X

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

		No	Yes
11.	Analysis Holding Time Met		X

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

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

Additional Comments:

Laboratory Manager Paul Craig Date: 07-18-95

EMSL

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)		X
2.	Standards Summary Submitted		X
3.	Calibration-Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis. **Initial Calibration >30 days, Continuing Calibration within 24 hours.**	X	
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:	X	
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
	d. Pesticides/PCB's		
	e. Other		
5.	Surrogate Recoveries Meet Criteria (If Applicable)		X
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
	d. Pesticides/PCB's		
	e. Other		
	If not Met, were the calculations checked and the results qualified (if applicable)		
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (if applicable)		X
	(if not met, list those compounds and their recoveries which fall outside the acceptable range)		
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
	d. Pesticides/PCB's		
	e. Other		
7.	Retention Time Shift Meet Criteria (if applicable)		X

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

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

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

Additional Comments: _____

Laboratory Manager: Paul Lorain Date: 07-18-08

EMSL

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMA

		No	Yes
1.	Calibration Summary Meet Criteria		X
2.	ICP Interference Check Sample Results Summary Submitted (if applicable) Meet Criteria		X
3.	Serial Dilution Summary Submitted (if applicable) / Meet Criteria	NA	
4.	Laboratory Control Sample Summary Submitted (if applicable) / Meet Criteria		X
5.	Blank Contamination - If yes, list compounds and concentrations in each blank.	X	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (if not met, list those compounds and their recoveries which fall outside the acceptable range) **Calcium 1% R, Magnesium 72% R, however, sample concentration was >5x spike level.**	X	
7.	Extraction Holding Time Met		X
	If not met, list number of days exceeded for each sample:		
8.	Analysis Holding Time Met		X
	If not met, list number of days exceeded for each sample:		

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

Additional Comments: _____

Laboratory Manager: Paul Lorenz Date: 07-17-95

ATTACHMENT L

USTs 161 Report

Contents:

- Smith Environmental Technologies Corporation, 1996. *Underground Storage Tanks Closure and Site Investigation Report, Former Building 161, Main Post*

United States Army
Fort Monmouth, New Jersey

Underground Storage Tanks Closure and Site Investigation Report

Former Building 161
Main Post Area

NJDEP UST Registration Nos. 090010-14, 68
NJDEP Closure Approval No. C-91-2838

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

February 1996

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

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:

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

161.DOC

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

SMITH

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SMITH

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Appendix E	NJDEP Well Permit and Well Construction Log
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SMITH

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.

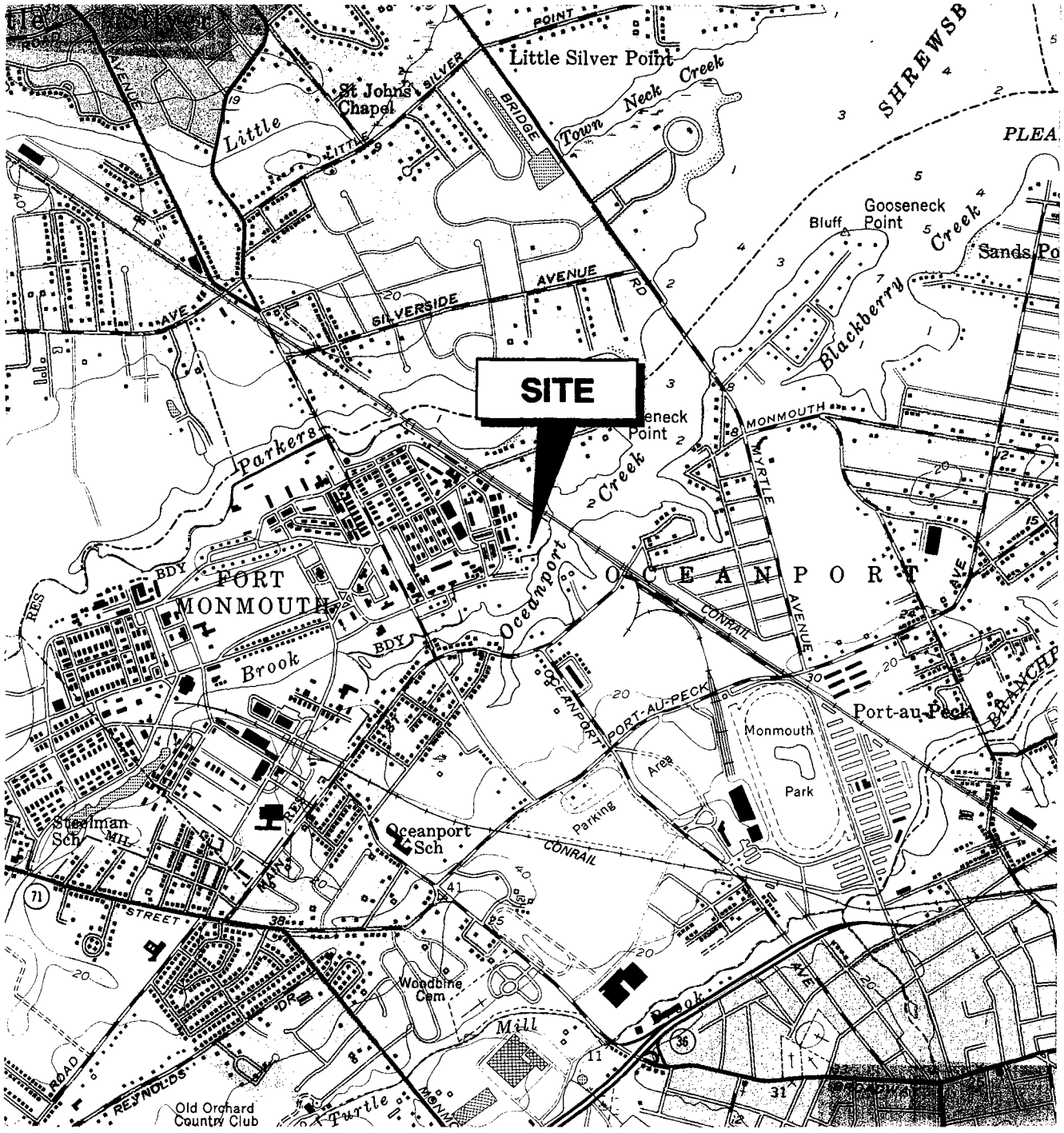
Decommissioning activities for UST No. 090010-68 and 090010-14 complied with all applicable Federal, State and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to: N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and 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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U.S. Army
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

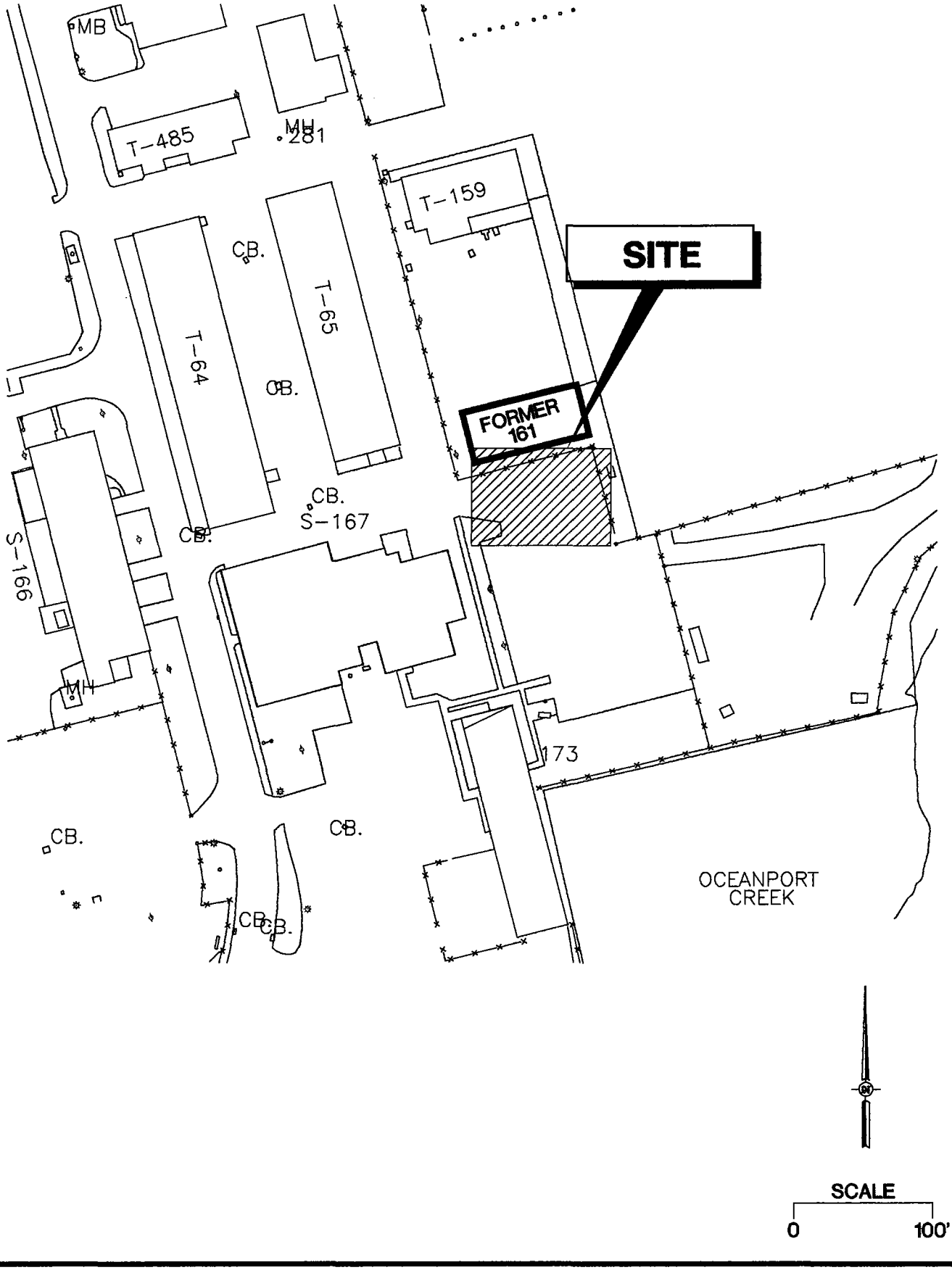
Monmouth County lies within the New Jersey Section of the Atlantic Coastal Plain physiographic province. The Main Post, Charles Wood, and the Evans areas are located in what may be referred to as the Outer Coastal Plain subprovince, or the Outer Lowlands.

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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Department of Public Works
Fort Monmouth, New Jersey



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.

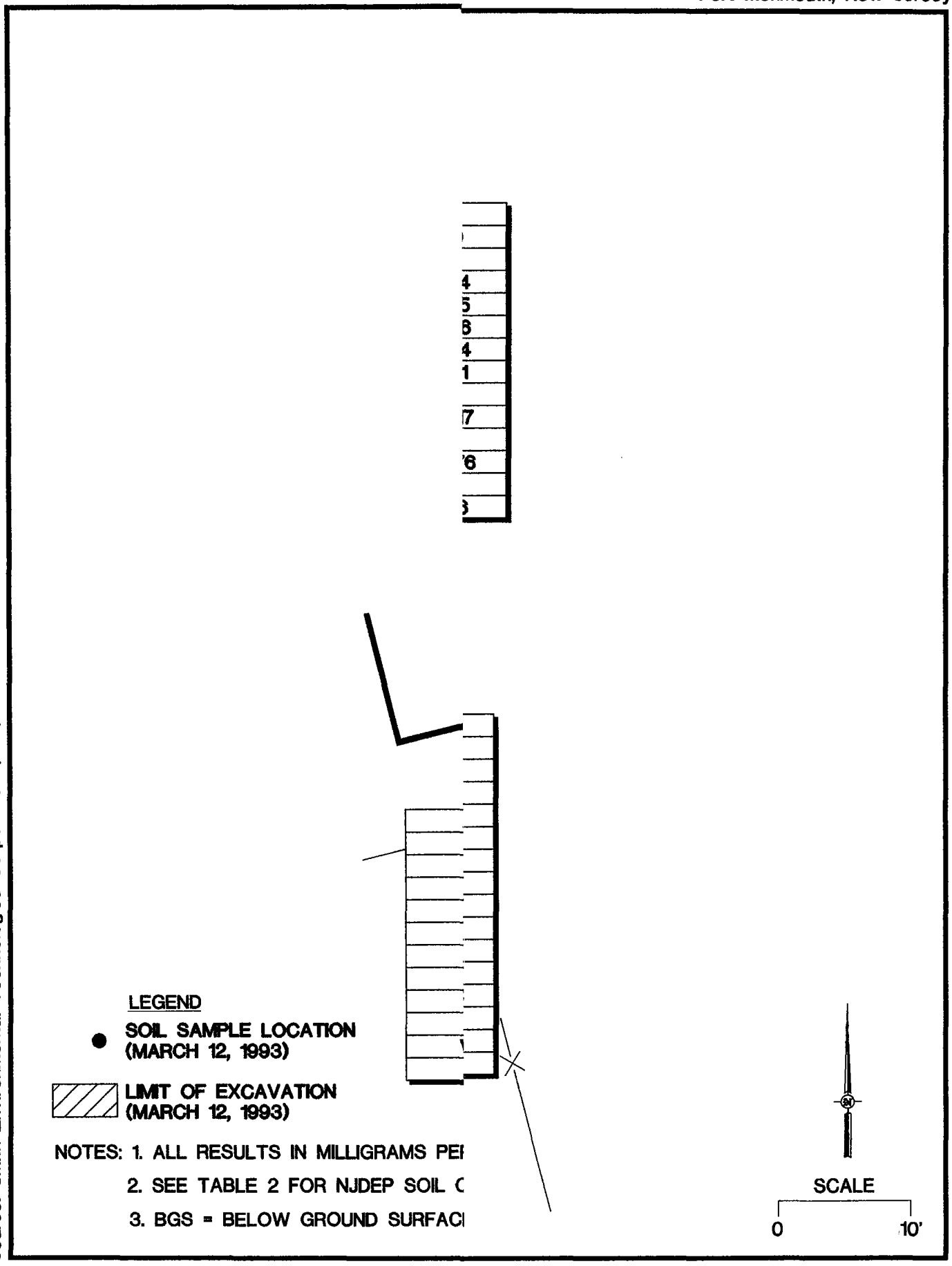
2.4 GROUNDWATER SAMPLING

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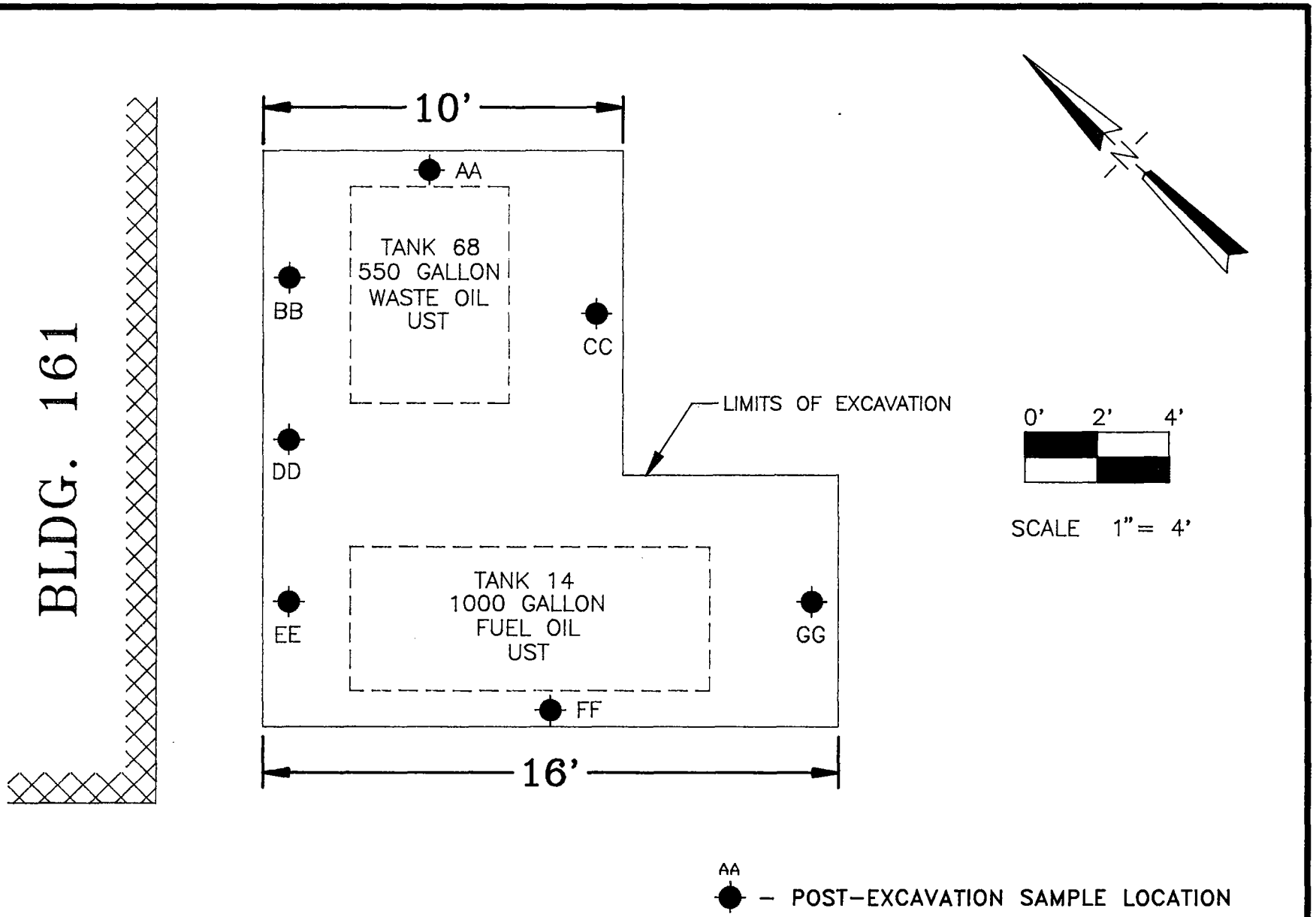
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: Smith Environmental Technologies Corporation (027)

Project No. 00-5004-01

Figure 3
Building 161
Soil Sampling Results



REVISION #:
FILE NAME: DEH-161.DWG DATE: 10-28-93 DRAWN BY: A MANSUT

This drawing has been added since the engineer Figure 3 from the Smith report cannot be located

WESTON MANAGERS DESIGNERS/CONSULTANTS

PROJECT NAME: UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT BUILING 161 – TANK 68,14 FORT MONMOUTH, NEW JERSEY

CLIENT NAME: U.S. ARMY–DEH FORT MONMOUTH

SAMPLE LOCATIONS POST–EXCAVATION

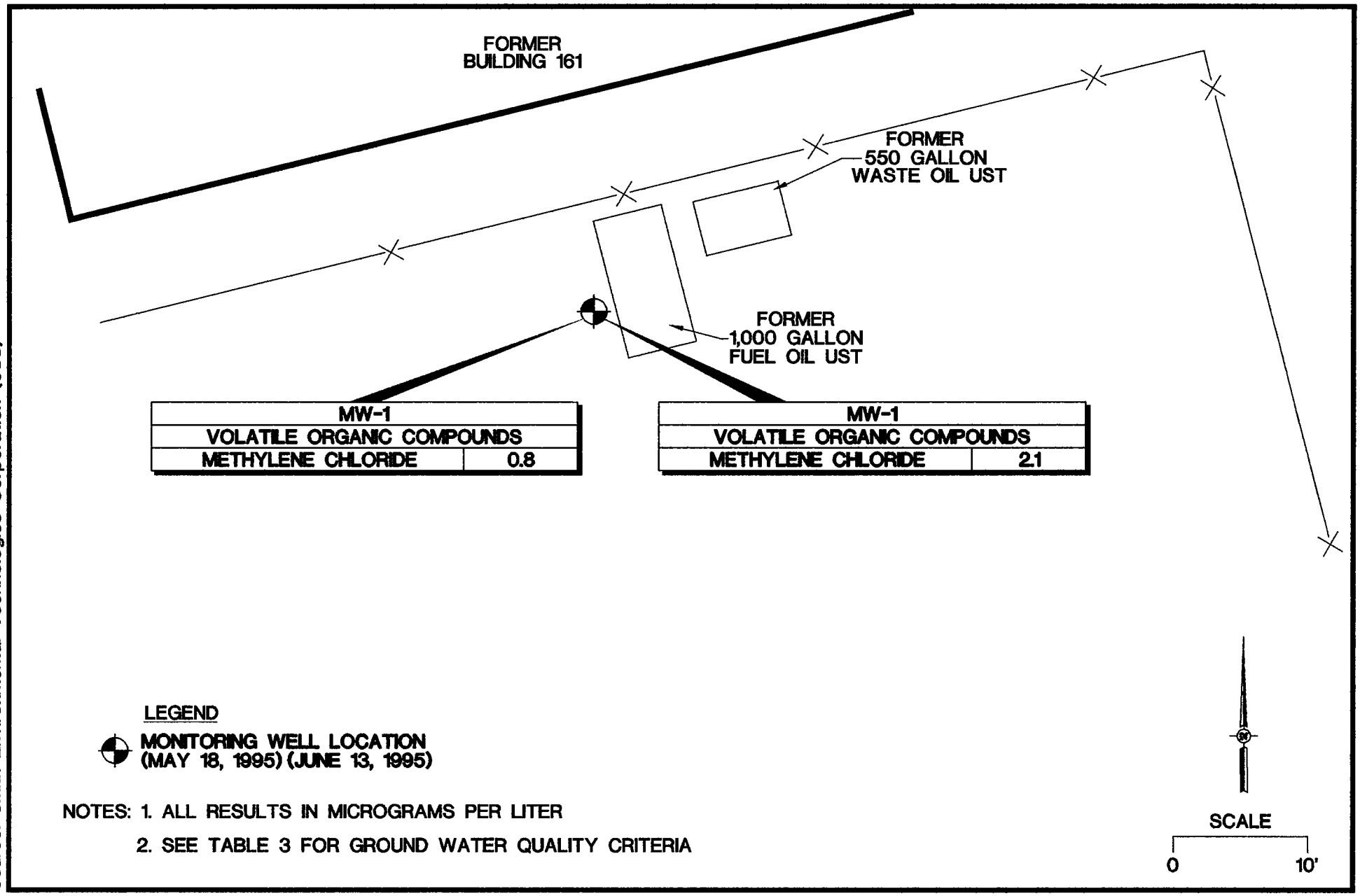
FACILITY REGISTRATION NO's 0090010–68 0090010–14

DATE: 10–07–93

FIGURE #: 2–1

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Fort Monmouth, New Jersey



Source: Smith Environmental Technologies Corporation (038)

Project No. 09-5004-01

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

UNDERGROUND STORAGE TANK SYSTEM
CLOSURE APPROVAL

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF UNDERGROUND STORAGE TANKS
CN-029, TRENTON, NJ 08625-0029

TMS#: C-91-28388 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 for 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-[illegible]

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 [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)1].

"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)2]:

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

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: U.S. ARMY FORT MONMOUTH

Authorized Signature: [signature]

Date: 4-8-93

SMITH

APPENDIX C

WASTE MANIFEST

HW-001 (REV. 9/88)

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. NJ3211002497 — Manifest Document No.
2. Page 1 of — Information in the shaded is not required by Fed law.

3. Generator's Name and Mailing Address: HQ AIR FORCE COMMUNICATIONS ELECTRONICS COMMAND, MAIN POST AREA, CP JAMES SHIRGHIO BLDG #23, ATTN: EM-DL-E M-MS, FORT MONMOUTH, NJ

A. State Manifest Document Number: [redacted]

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

B. State Generator's ID: SAME

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

C. State Trans. ID

7. Transporter 2 Company Name — 8. US EPA ID Number

D. Transporter's Phone

E. State Trans. ID

9. Designated Facility Name and Site Address: Casie Ecology Oil Salvage, 1209 N. Mill Rd, Vineland, NJ 08360 — 10. US EPA ID Number

F. Transporter's Phone ( )

G. State Facility's ID

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
a. Waste Combustible Liquid, N.O.S. (Benzene) Combustible Liquid, NA1993			0011	TY X 850	X
b. ~~Waste Combustible Liquid, N.O.S. (Benzene)~~ JV Combustible Liquid, NA1993					
c.					
d.					

J. Additional Descriptions for Materials Listed Above — K. Handling Codes for Wastes Listed Above

a. — b. — c. — d.

15. Special Handling Instructions and Additional Information

24 hour emergency response phone: 908-532-9911 JAMES SHIRGHIO BLDG 161

CERCLA# 0092F2 E.P.A. #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 determine economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the pres 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 an the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	D
X Trish M. Fillo	X Trish M. Fillo	10	3

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	D.
Tom VK ASH		10	3

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	D.

FACILITY

19. Discrepancy Indication Space

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

Printed/Typed Name	Signature	Month	D

GENERATOR

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 #: 5326147

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:	3/12/93	1620hrs	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

SCIENCE APPLICATIONS INTERNATIONAL CORP.
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	SOIL	COMP	NO. OF BOTTLES	ANALYSIS REQUESTED
1162.1	AA	3/11	1520		X		1	21.789 TPHC. 18.006 82%
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							

Select Ref

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
LABORATORY MANAGER

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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

20000

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 (+VOA)	VOA #'s	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	↓	1515	✓	1	HNO3 (pH<2)	7	✓		
Trip Blank	↓	N/A	N/A	✓		↓	2		✓	
(Save TBar Blg 750)										

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

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

OFFICIAL 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 G 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 Marci Lewis

Quality Control Supervisor
Review & Approval

Laboratory Director
Review & Approval Richard W Kynd

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	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

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 _X_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

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

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.

00914

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

00015

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	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

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			

FORM I VOA-TIC

1/87 Rev.

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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1/87 Rev.

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

00039

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
319-87-7	Beta-BHC	6.0	U
319-86-8	Delta-BHC	6.0	U
58-99-9	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

21ST CENTURY ENVIRONMENTAL

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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 I
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

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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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

21ST CENTURY ENVIRONMENTAL

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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

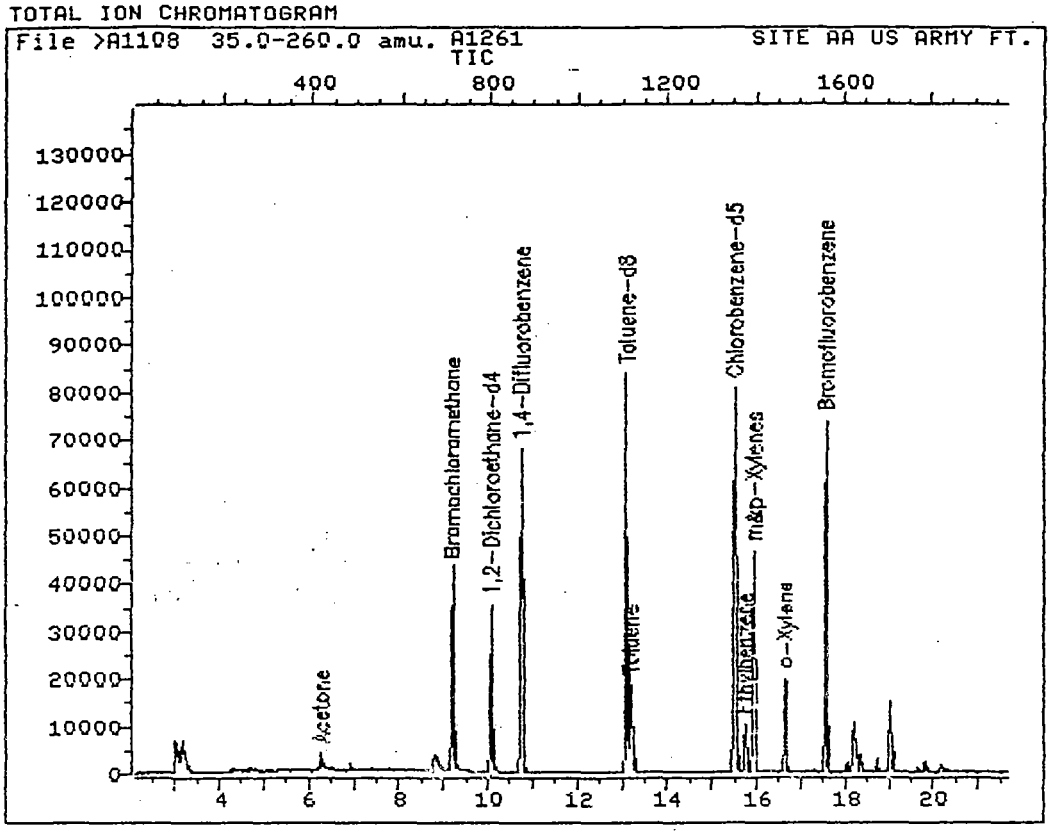
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utput File: ^A1108::QT Injected at: 930324 19:22
ata File: >A1108::D2 Dilution Factor: 1.00000
ame: A1261
isc: SITE AA US ARMY FT. MONMOUTH 5.0g/5mL

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
33)	*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

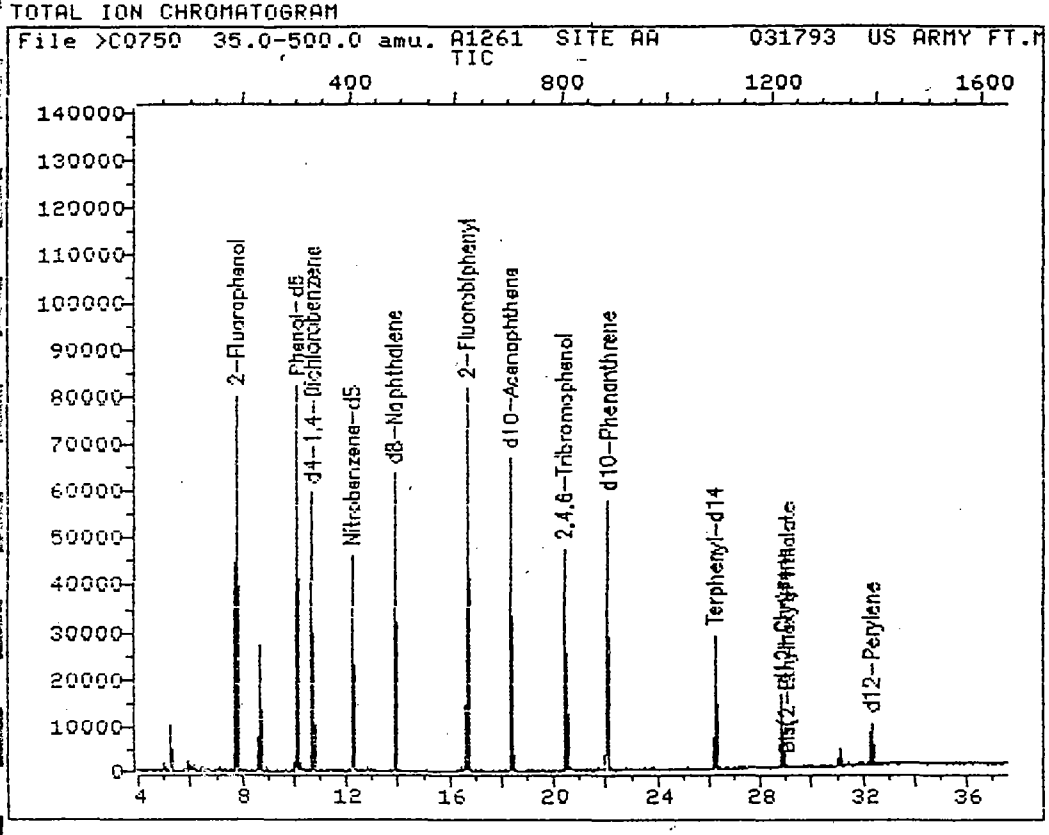
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me: A1261 SITE AA
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 2

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
53)	*d10-Phenanthrene	22.06	887	56624	40.00	UG/L	97
)	2,4,6-Tribromophenol	20.36	804	12051	77.07	UG/L	95
)	*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

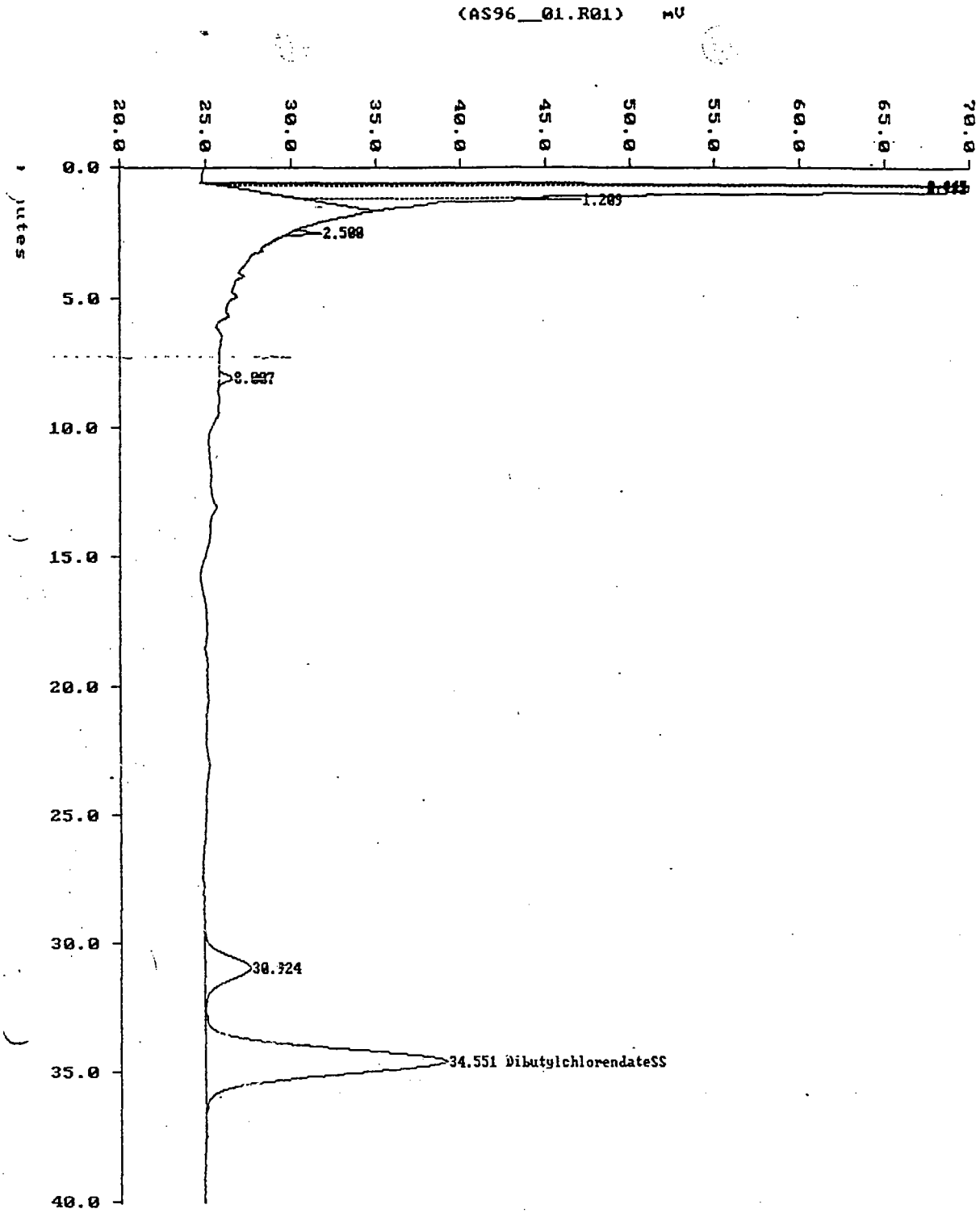
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Column: SP 2250/2401

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
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
minutes
1.209
2.508
8.997
30.724
34.551 DibutylchlorendateSS

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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

00959

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	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

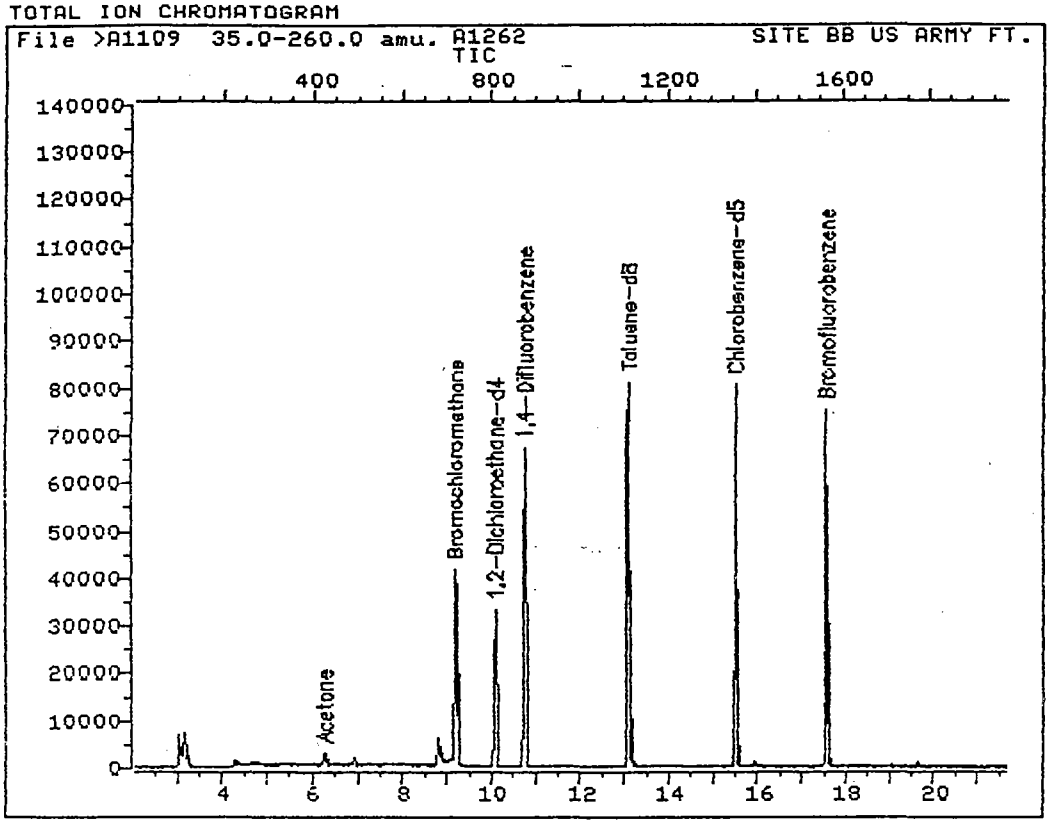
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Data File: >A1109::D2 Dilution Factor: 1.00000
ame: A1262
isc: SITE BB US ARMY FT. MONMOUTH 5.0g/5mL

) File: ID0127::M1
itle: 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
4)	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
1)	Toluene-d8	13.07	1113	105288	49.57	UG/L	100
3)	*Chlorobenzene-d5	15.48	1356	85685	50.00	UG/L	100
6)	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 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

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

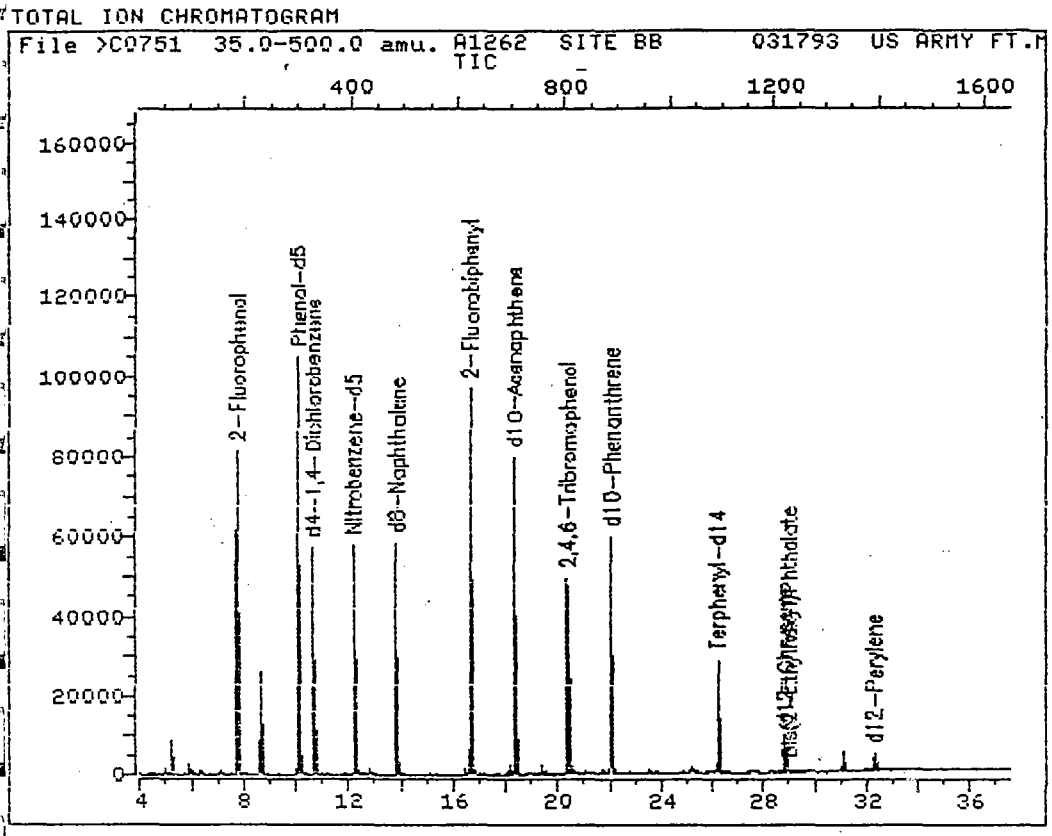
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Data File: >C0751::DA Dilution Factor: 1.00000
Name: A1262 SITE BB
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 3

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

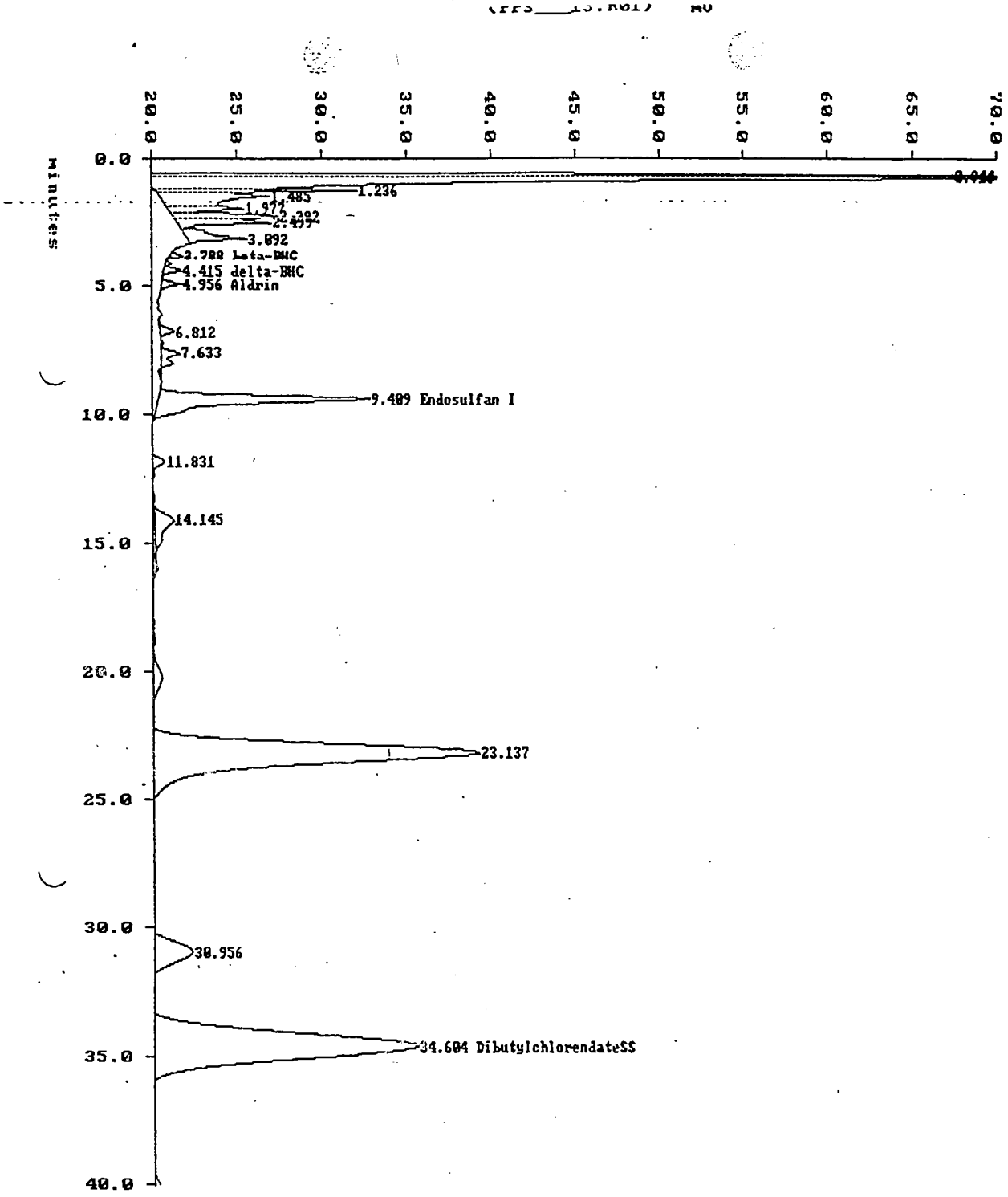
Instrument: PE-1
Column: SP 2250/2401

File : PP3___13.R01 A1262 10.02g 2ul Keegan
Run : 01 Type : Sample
Path : C:\PP3
Collection : 20:03:48 Mar 12 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


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
1.236
1.977
3.092
3.788 Leta-BHC
4.415 delta-BHC
4.956 Aldrin
6.812
7.633
9.489 Endosulfan I
11.831
14.145
23.137
30.956
34.604 DibutylchlorendateSS

21ST CENTURY ENVIRONMENTAL

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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

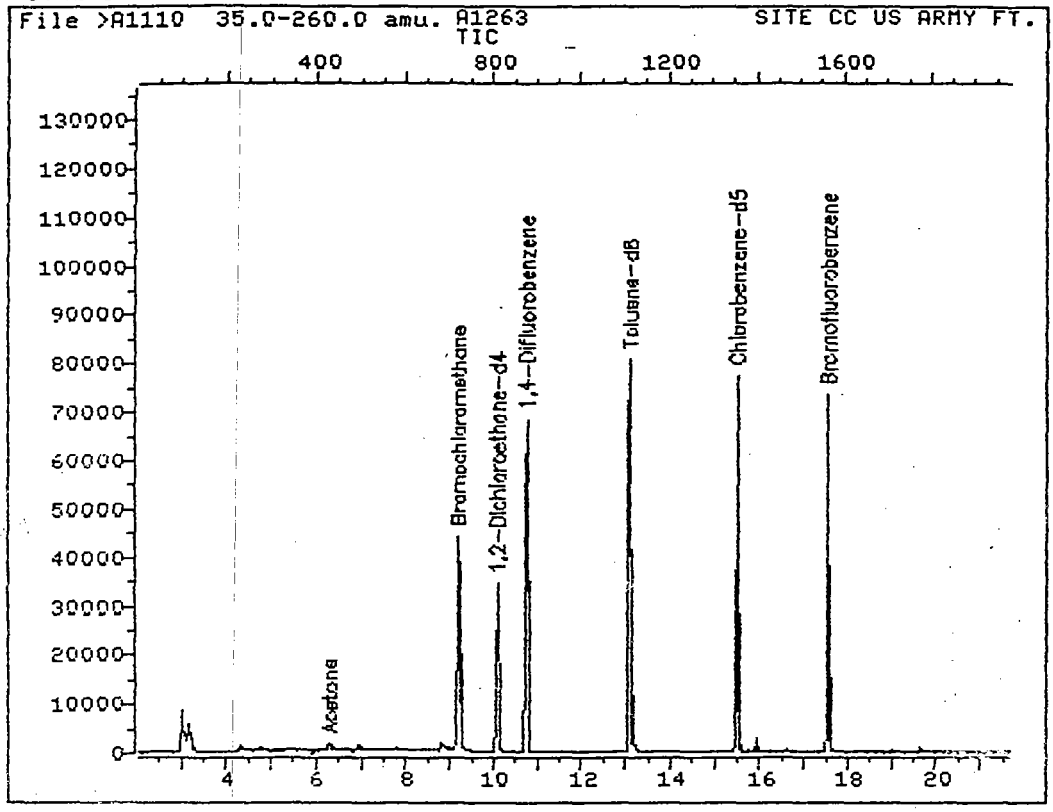
Operator ID: JEFF Quant Rev: 6 Quant Time: 930324 21:03
Output File: ^A1110::QT Injected at: 930324 20:32
Data File: >A1110::D2 Dilution Factor: 1.00000
Name: A1263
Misc: SITE CC US ARMY FT. MONMOUTH 5.0g/5mL

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
31)	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	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

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

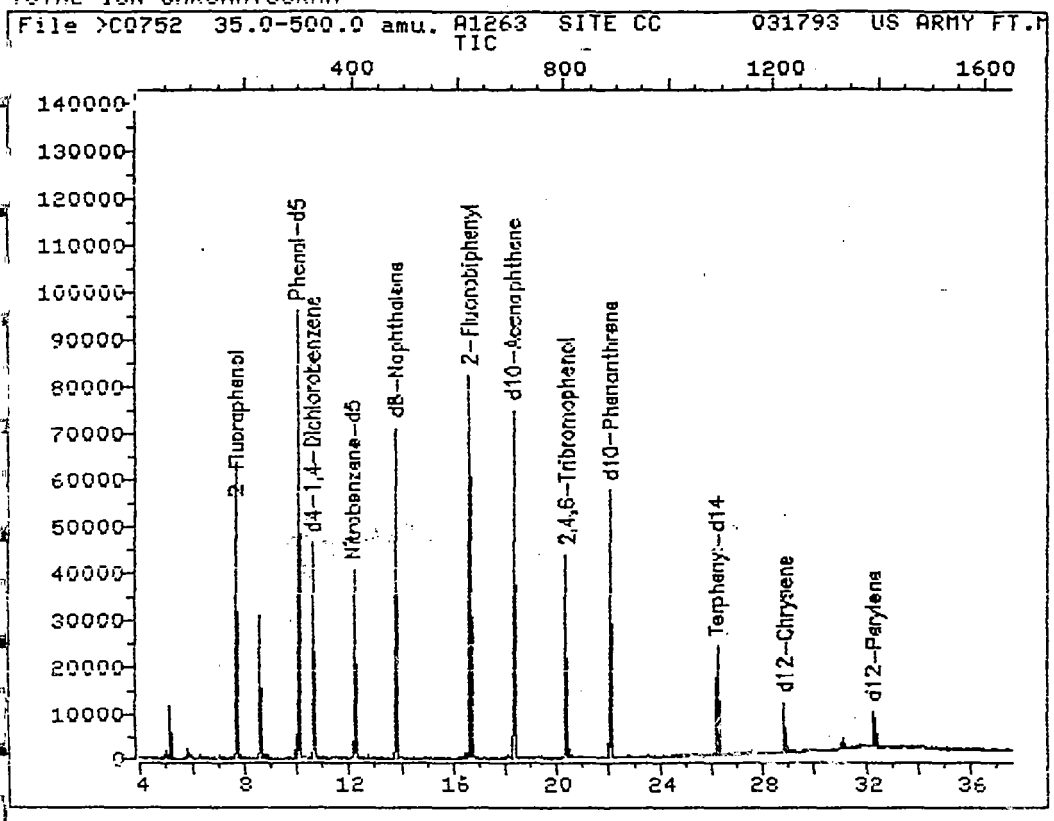
erator ID: JEFF Quant Rev: 6 Quant Time: 930317 19:38
Output File: ^C0752::QT Injected at: 930317 18:58
ta File: >C0752::DA Dilution Factor: 1.00000
me: A1263 SITE CC
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 4

File: 1D0317::D5
tle: 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
F3)	*d10-Phenanthrene	22.02	886	52868	40.00	UG/L	97
)	2,4,6-Tribromophenol	20.32	803	11778	80.68	UG/L	96
3)	*d12-Chrysene	28.81	1219	12702	40.00	UG/L	93
57)	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

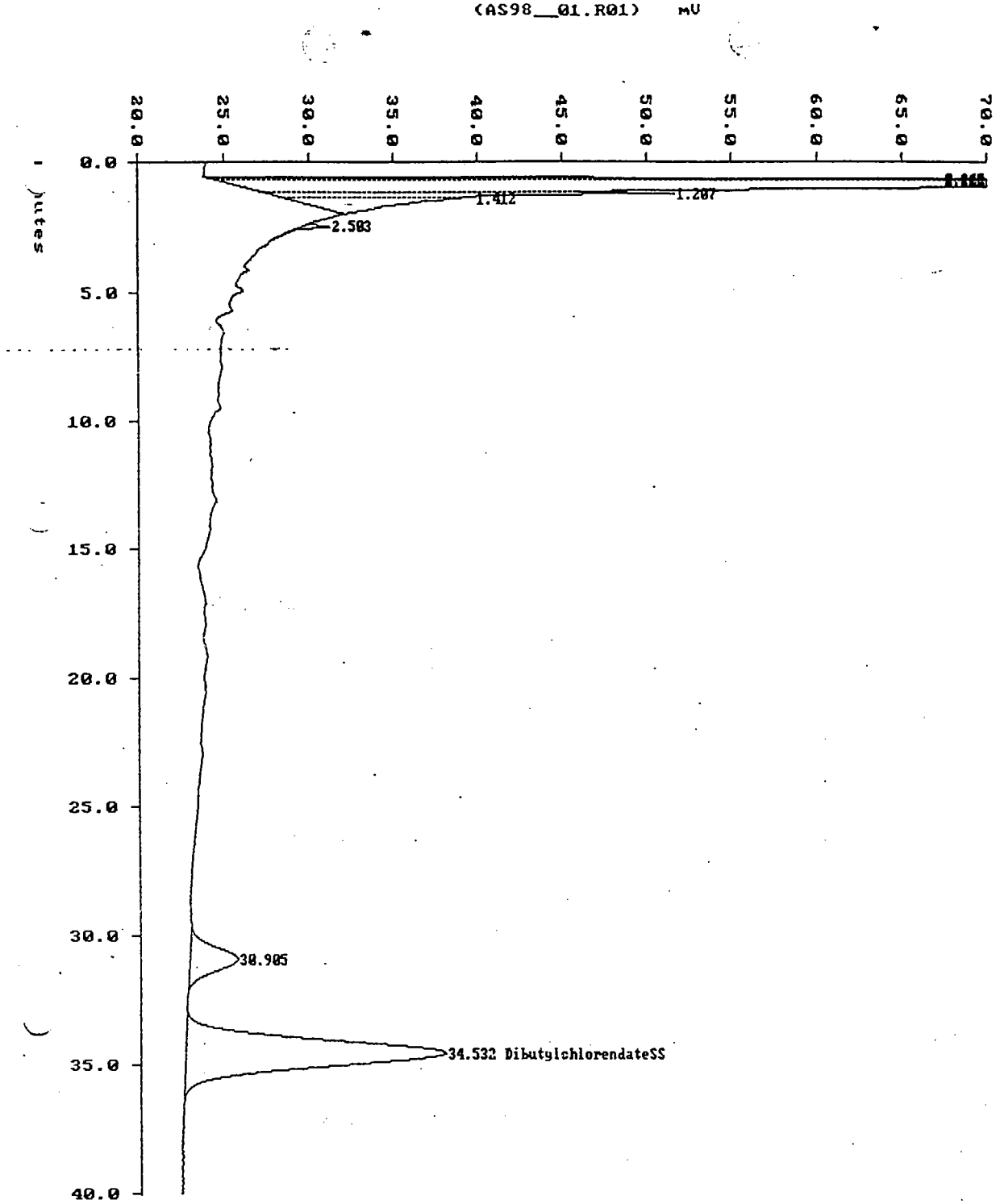
Instrument: PE-1
Column: SP 2250/2401

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 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

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

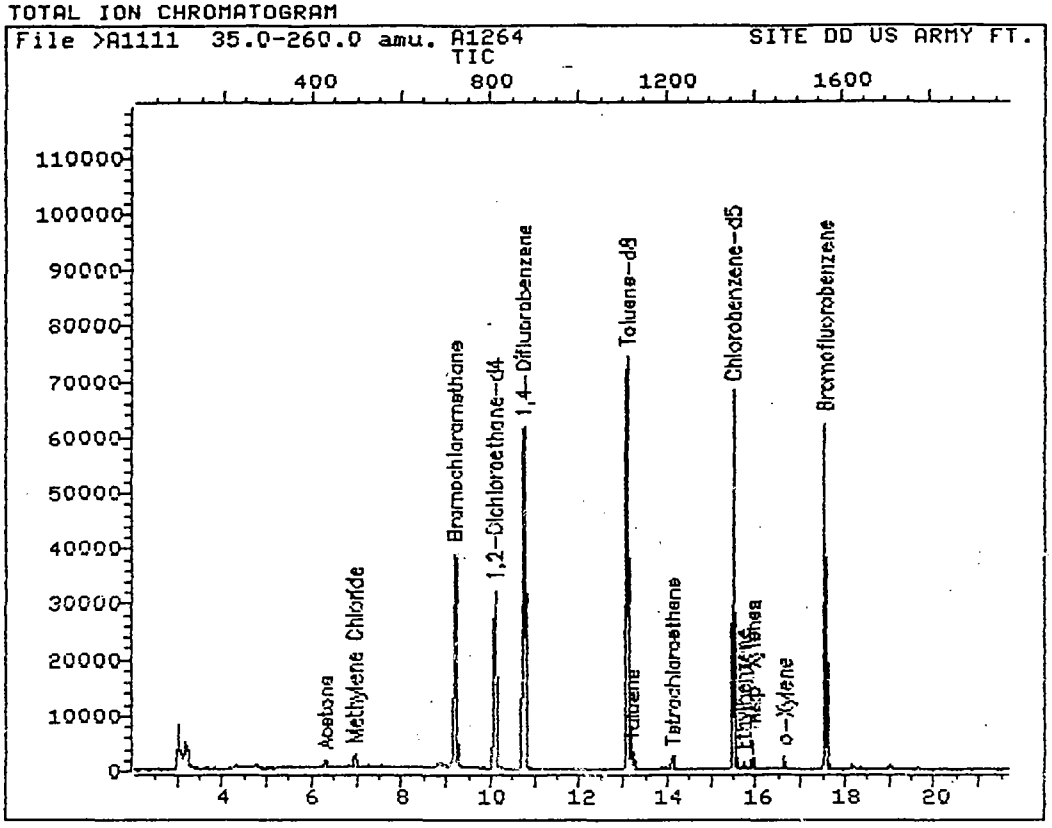
Operator ID: JEFF Quant Rev: 6 Quant Time: 930324 21:38
Output File: ^A1111::QT Injected at: 930324 21:07
Data File: >A1111::D2 Dilution Factor: 1.00000
Name: A1264
Misc: SITE DD US ARMY FT. MONMOUTH 5.0g/5mL

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

	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	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	42	J	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	73	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 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

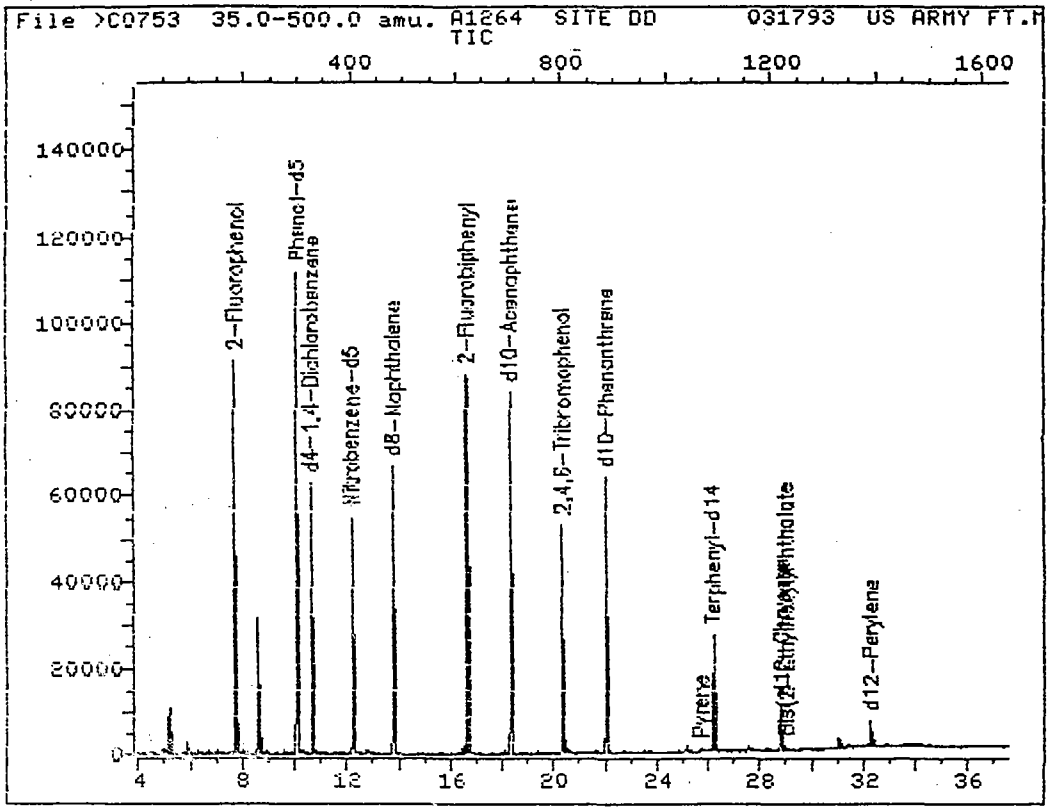
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Data File: >C0753::DA Dilution Factor: 1.00000
me: A1264 SITE DD
Misc: 031793 US ARMY FT.MONMOUTH 30G/1.0ML BTL# 5

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	10.62	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
53)	*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
75)	*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)
Date Extracted/Prepared: 03/15/93
Date Analyzed: 03/17/93 00:53
Conc/Dil Factor: 10.09g/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	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

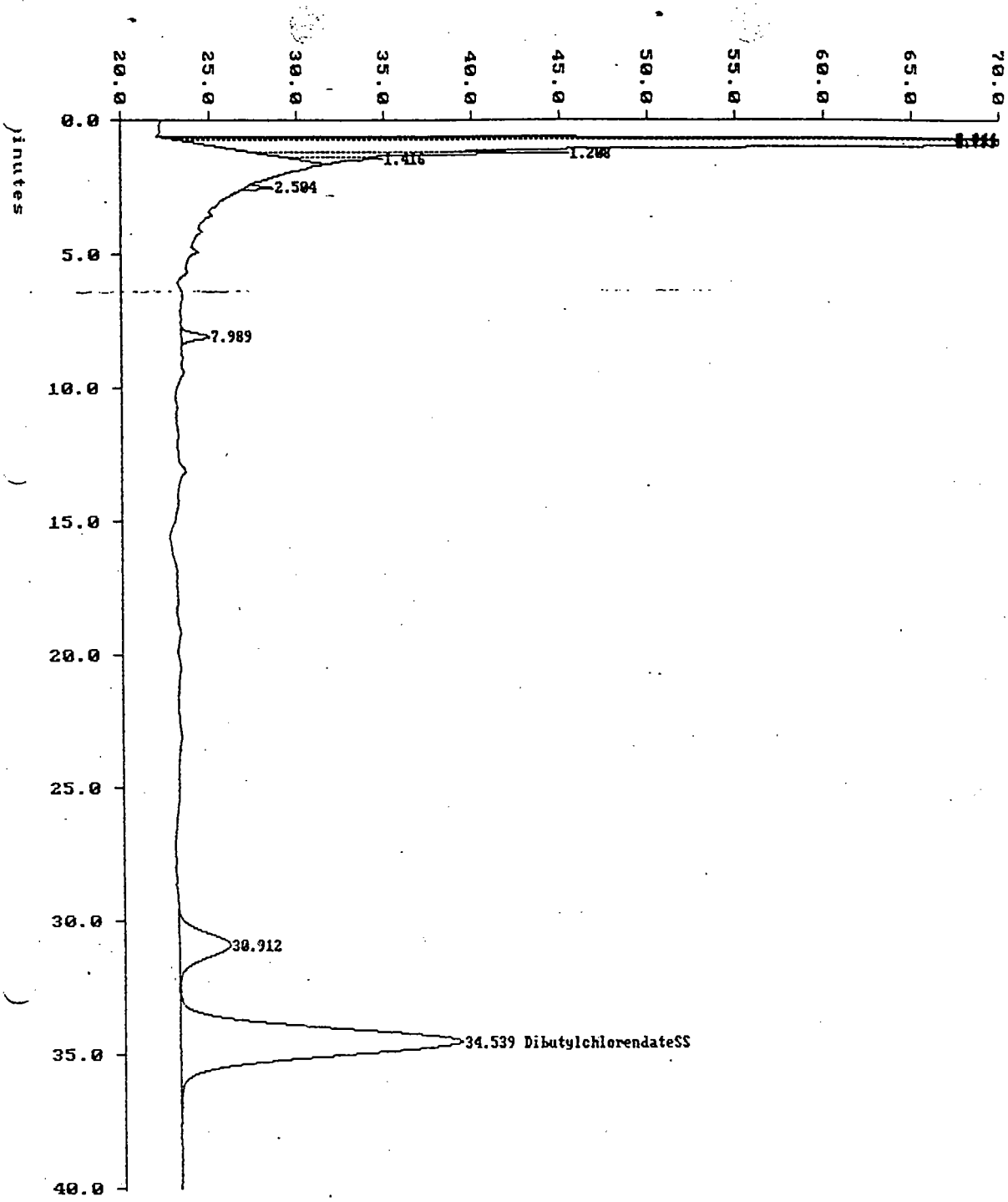
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Column: SP 2250/2401

File : AS99__01.R01 A1264 10.09g Keega
Run : 01 Queue : PEST Set Number : 1 Type : Sampl
Path : C:\PP2
Collection : 00:53:42 Mar 17 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.

QUANT REPORT

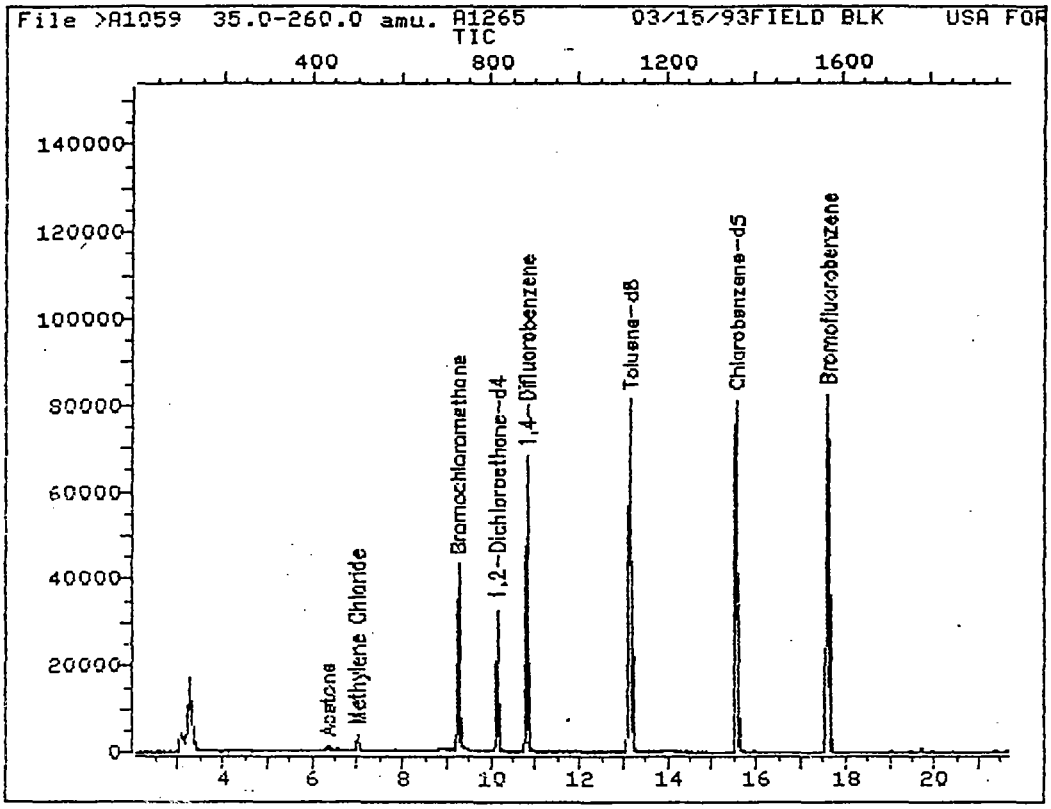
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ata File: >A1059::D2 Dilution Factor: 1.00000
ame: A1265 03/15/93
isc: FIELD BLK USA FORT MONMOUTH 5ml

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

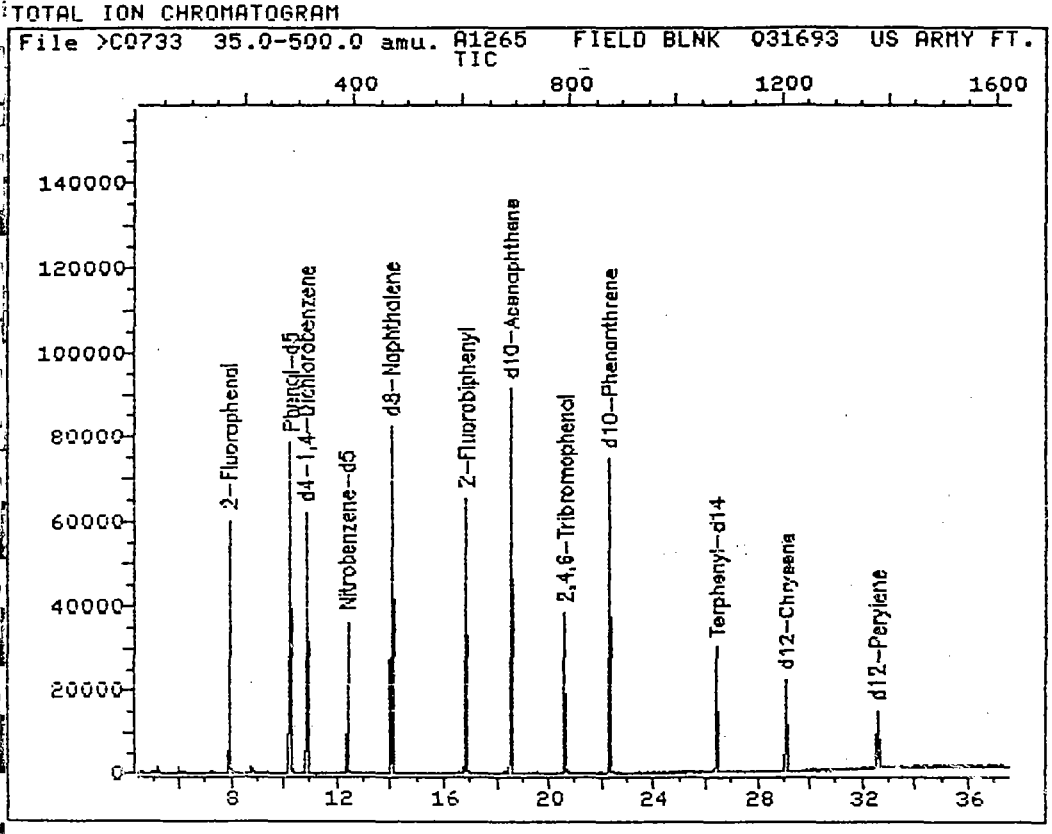
erator ID: JEFF Quant Rev: 6 Quant Time: 930316 20:12
Output File: ^C0733::QT Injected at: 930316 19:32
ta File: >C0733::D2 Dilution Factor: 1.00000
me: A1265 FIELD BLNK
sc: 031693 US ARMY FT. MONMOUTH 1000ML/1.0ML BTL# 2

File: ID0316::D5
tle: 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
5)	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
)	*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)
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

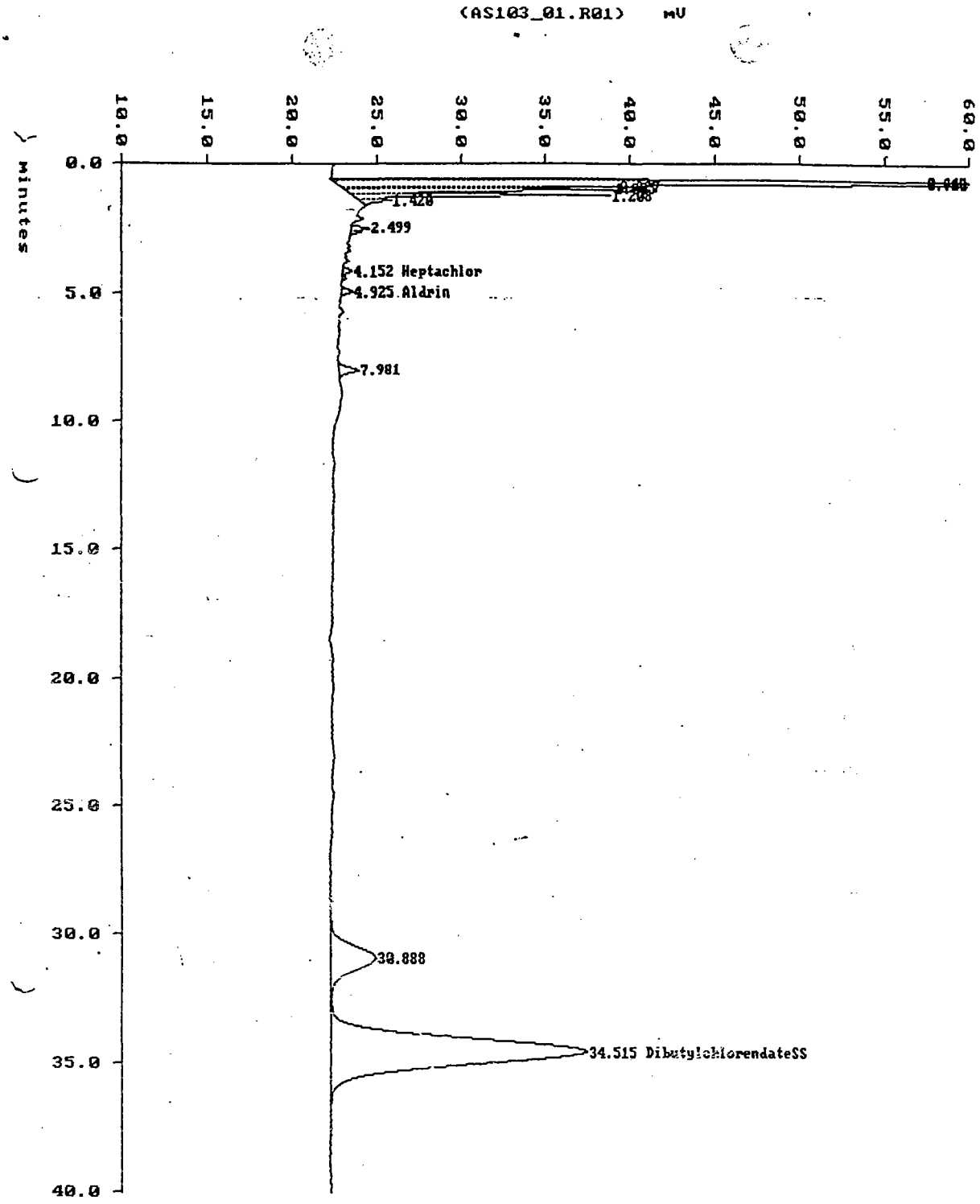
Instrument: PE-1
Column: SP 2250/2401

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 17 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
1.428
1.208
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

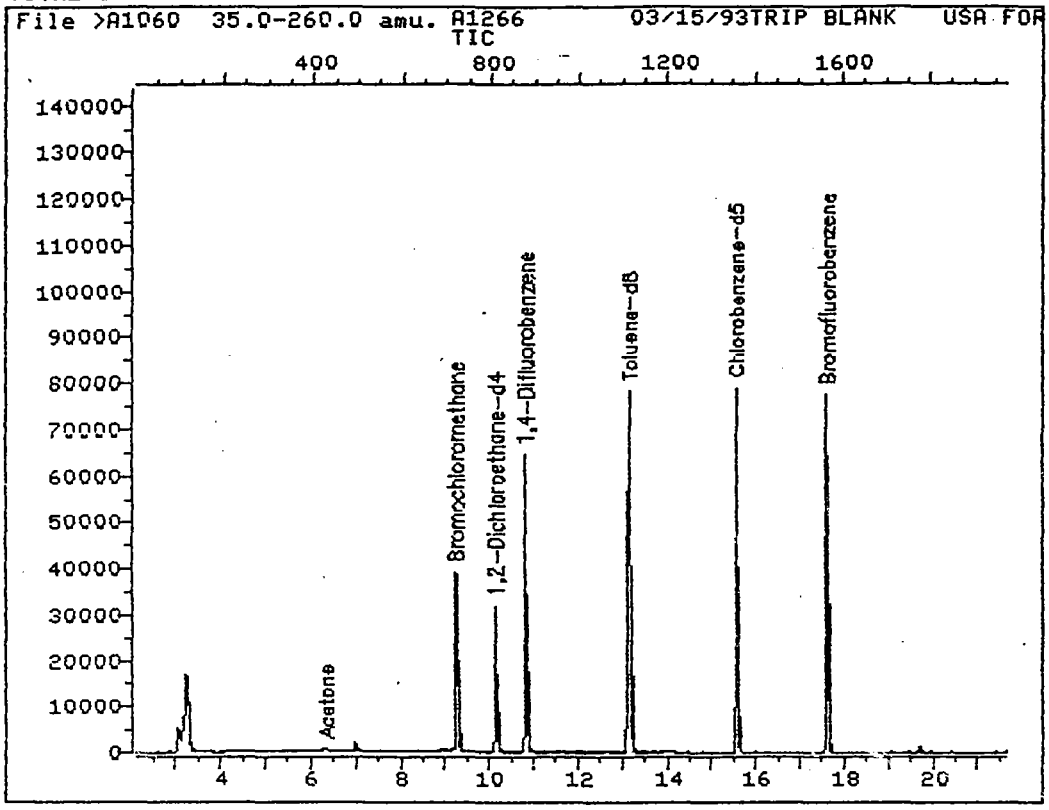
perator ID: JEFF Quant Rev: 6 Quant Time: 930316 19:27
utput File: ^A1060::QT Injected at: 930316 18:56
ata File: >A1060::D2 Dilution Factor: 1.00000
ame: A1266 03/15/93
isc: TRIP BLANK USA FORT MONMOUTH 5ml

D File: ID0127::M1
itle: USEPA 624 VOLATILES
Last 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

SMITH

APPENDIX E

UST DISPOSAL CERTIFICATE

MAZZA & SONS, INC.

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

NO. _____

DATE 12 MAR 93

Customer's Name Trinity Petroleum All Service Env.

Address Tinton Falls NJ

Make of Autos

Tires

Tank Bldg. 161

Price: Tank #6 14

19620 LB

18120 LB

1500

	Weight	Price
Cast Iron	1500	15
Steel		
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum Clean		
Lead		
Stainless		
Radiators		
Battery		
TOTAL AMOUNT:		

PAID MAR 12 1993

RECEIVED MAR 22 1993

Weigher _____ Customer _____

MONMOUTH COUNTY
RECLAMATION CENTER
TINTON FALLS, NJ

MAILING ADDRESS: 6000 ASBURY AVE. NEPTUNE, NJ 07753

FACILITY ID No. 1336F1SP01

RECEIPT DOCUMENT NUMBER

01293656

NONCHARGE
NONCHARGE / JOHN Q. PUBLIC
CASH AND CHECK CUSTOMERS
WEIGHING IN AND OUT
NJ

TARE WEIGHT 3.8000 (7600)

GROSS WEIGHT 4.2400 (8480)

DATE	OPER	ENTRY TIME	DEP. NO.	PLATE NO.			
04/28/93	MED	12:12	GR777	GR777	#2133 Check	1485	JEK Normal

QUANTITY	CLASS	DESCRIPTION/ORIGIN	UNITS	UNIT PRICE	AMOUNT
0.4400	13	Bulky Waste MONMOUTH COUNTY EATONTOWN BOROUGH	Tons	95.65	42.09

Fiberglass Tanks Shredded
& Iron Blades 450.161

RECEIVED APR 28 1993

*** Current Account Balance: 0.00 ***

TRANSPORTER'S SIGNATURE

DOCUMENT TOTAL 42.09

CUSTOMER COPY

SMITH

APPENDIX F

NJDEP WELL PERMITS AND WELL CONSTRUCTION LOGS

DWR-133M (10/93)

Mail to
NJDEPE
Bureau Water Allocation
CN426
Trenton, NJ 08625

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

MONITORING WELL PERMIT

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

Permit No. 2931775

38

COORD # 2913664

Owner US Army Fort Monmouth
Address SELFM-PW-EV
Fort Monmouth NJ 07703

Name of Facility Bldg 161
Address Main Post
Fort Monmouth NJ

Driller Tyree Organization
Address 1350 US Hwy 130
Burlington NJ 08016

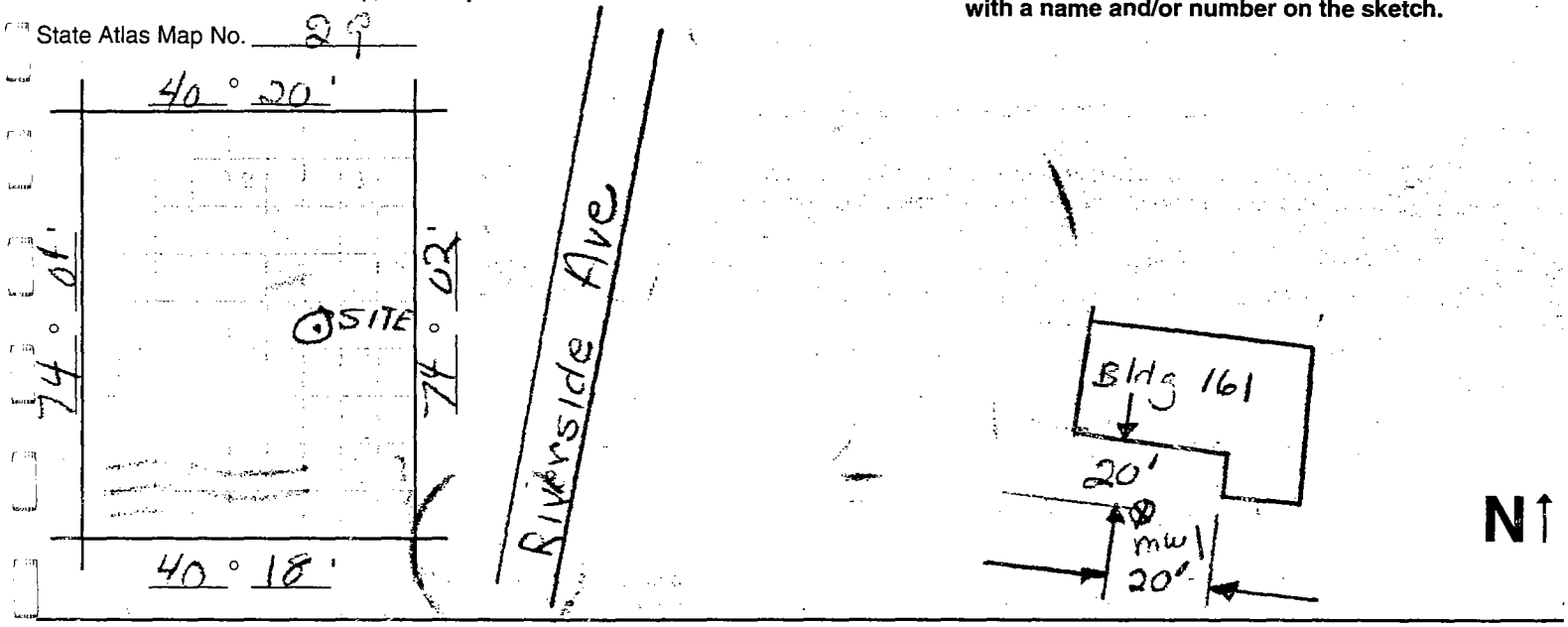
Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	15 Feet
# of Wells Applied for (max. 10)	1	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	Monitoring	If Yes, give pump capacity	N/A GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
		Fort Monmouth	Monmouth

State Atlas Map No. 29

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



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

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

CASE I.D. Number
93-3-12-2158-30
(Site Bldg. 161)

This Space for Approval Stamp

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

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

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

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

Date 7-25-94
Signature of Driller _____ License # 1421
Signature of Owner _____ SELFM-PW-EV

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

DWR-138 M
12/91

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

MONITORING WELL RECORD

Well Permit No. 29 - 31775
Atlas Sheet Coordinates 29 : 13 : 664

OWNER IDENTIFICATION - Owner US ARMY FORT MONMOUTH
Address SELFR PW BY
City FORT MONMOUTH State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Bldg. 161 MW-1
County MONMOUTH Municipality OCEANPORT BORO Lot No. — Block No.
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/22/94
Regulatory Program Requiring Well UST Case I.D. # 93-3-12-2158-3

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

WELL CONSTRUCTION

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

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

Static water level after drilling 7 ft.
Water level was measured using Tape
Well was developed for 1 hours at 10 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity gpm
Pump type:
Drilling Method Auger
Drilling Fluid U Type of Rig B80
Name of Driller Michael E. Beck
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 14281
Name of Drilling Company TYREE ENVIRONMENTAL TECHNOLOGY

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

0-6" Grassy area, top soil
6"-2' Dk brown, sand-silt mix fines
2-6' Olive grey, med. stiff clays + silts
6-7' Brown, fine sand + very soft clay
7'-12' Light brown, fine sand + very soft clay

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

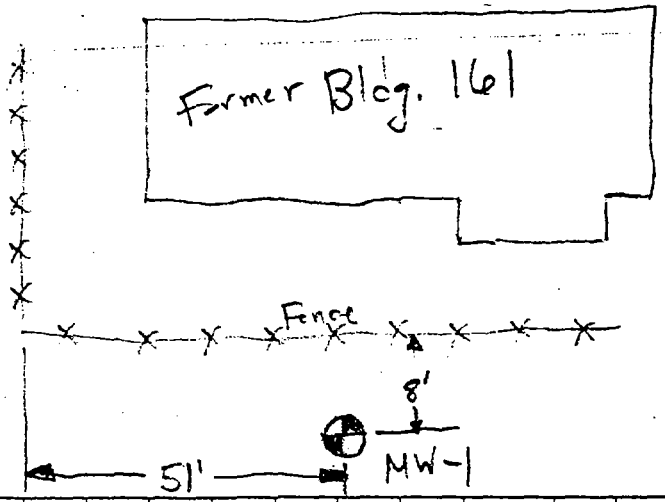
Driller's Signature Michael E Beck Date 10-10-94

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

FIELD LOG OF BORING

SHEET 1 OF 2

LOCATION OF BORING:



PROJECT: US Army Ft. Monmouth	BORING NO: MW-1
	TOTAL DEPTH: 12'
JOB NO:	LOGGED BY: E. Plye
PROJ. MGR.: Capritti	EDITED BY:
DRILLING CONTRACTOR: Tyree	
DRILL RIG TYPE: B 80	
DRILLERS NAME: M. Beck	
SAMPLING METHODS: SS	
HAMMER WT.: 120 lbs.	DROP:
STARTED, TIME: 8:30 AM	DATE:
COMPLETED, TIME: 9:30 AM	DATE:
BORING DEPTH (ft): 12	
CASING DEPTH (ft): 2	
WATER DEPTH (ft): 7'1"	
TIME:	
DATE: 9/30/94	
BACKFILLED, TIME: 9:35 AM	DATE: 9/22/94 BY: Tyree
SURFACE ELEV:	DATUM:
CONDITIONS:	

SAMPLE DEPTH	SAMPLER TYPE	BLOWS / 6 IN.	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	DRILLING RATE (min./ft.)	PID READING (ppm)	ODOR (Y / N ?)	GRAPHIC WELL CONST.	DEPTH IN FEET	GRAPHIC LOG	
									Casing w/ 3' stick up bentonite			Grassy area, top soil
										1	SM	Dark brown, sand-silt mixtures
										2		
2'-4'	SS	4	6	3½			<1	N			CL	Olive gray, medium stiff clays + silts with cobbles. Moist at approx 3'.
		3	6							3		
		4	6				<1	N		4		
										5		
									Screen w/ Monterey sand	6	SC	Brown, fine sand and very soft clay
										7		Light brown, fine sand and
										8	SC	very soft clay
										9		
										10		* No samples were collected.

TYREE ENVIRONMENTAL TECHNOLOGIES

161

FIELD LOG OF BORING (CONTINUED)

SHEET 2 OF 2

PROJECT:	NO:	BORING NO:

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

No Samples taken

TYREE ENVIRONMENTAL TECHNOLOGIES

United States Army

Fort Monmouth, New Jersey

Underground Storage Tanks Closure and Site Investigation Report

Former Building 161
Main Post Area

NJDEP UST Registration Nos. 090010-14, 68
NJDEP Closure Approval No. C-91-2838

Volume 2 of 2
Appendix G

February 1996

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

SMITH

APPENDIX G

GROUNDWATER ANALYTICAL DATA PACKAGE

EMSL ANALYTICAL, INC. Asbestos - Lead - Environmental - Materials

New Jersey

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

Cooper Street
Westmont, NJ 08108
(609) 858-4800

56 Stelton Road
Piscataway, NJ 08854
(908) 981-0550

New York

350 Fifth Avenue
Empire State Bldg.
Suite 1524
New York, NY 10118
(212) 290-0051

208 Stonehenge Lane
Carle Place, NY 11514
(516) 997-7251

California

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

Florida

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

Georgia

3600 Rosewell Street, SE
Suite One
Smyrna, GA 30080
(404) 333-6066

Michigan

2212 S. Wagner Road
Ann Arbor, MI 48103
(313) 668-6810

North Carolina

620-G Guilford College Rd.
Greensboro, NC 27409
(910) 297-1487

Texas

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

031

ANALYTICAL DATA REPORT
FOR

U.S. Army Fort Monmouth
SELFM-PW-EV
Building 173
Fort Monmouth, NJ 07703

PROJECT : #93312215830

EMSL Project: # 9508276

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection		Date Received
1831.1 Bldg. 161 MW 1-2931775	**95-23168**	**Aqueous**	**5/18/95**	**11:54**	**5/19/95**
1830.4 Trip Blank	**95-23164**	**Aqueous**	**5/18/95**	*	**5/19/95**
1830.5 Field Blank	**95-23165**	**Aqueous**	**5/18/95**	**14:30**	**5/19/95**

* Collection time was not noted on Chain of Custody

Laboratory Name: EMSL ANALYTICAL, INC.

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

Supervisor/Manager Signature: Paul Laraia

Printed Name: Paul V. Laraia

Date: 06-27-95

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SAMPLE DATA SUMMARY PACKAGE

Date of Report: 06/23/95
Project Number: 09508276
Lab ID: 95-0023168
Date Collected: 05/18/95 11:54
Collected By: Client
Date Received: 05/19/95 07:00

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

Client Project: 93312215830

Client Designation: Bldg.161,MW1-2931775 NJDEP MW# FMETL # 1831.1

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

US Army, Fort Monmouth, N.J. Bldg #161 1B FMETL #1831.1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.: 9523168B 005

Lab Name: EMSL ANALYTICAL Contract: NJDEP # MW1-2931775

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

Matrix: (soil/water) WATER Lab Sample ID: 9523168B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7781.D

Level: (low/med) _____ Date Received: 5/19/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/25/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/2/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CAS No.	Compound	Concentration Units: (ug/L or ug/Kg) ug/L	Q
62-75-9	N-nitrosodimethylamine	2	U
111-44-4	bis(2-Chloroethyl)ether	1	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	1	U
95-50-1	1,2-Dichlorobenzene	2	U
108-60-1	bis(2-chloroisopropyl)ether	5	U
621-64-7	N-Nitroso-Di-n-propylamine	2	U
67-72-1	Hexachloroethane	1	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	1	U
111-91-1	bis(2-Chloroethoxy)methane	3	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	2	U
87-68-3	Hexachlorobutadiene	2	U
77-47-4	Hexachlorocyclopentadiene	12	U
91-58-7	2-Chloronaphthalene	1	U
131-11-3	Dimethylphthalate	1	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	2	U
83-32-9	Acenaphthene	3	U
121-14-2	2,4-Dinitrotoluene	3	U
84-66-2	Diethylphthalate	1	U
86-73-7	Fluorene	3	U
7005-72-3	4-Chlorophenyl-phenylether	3	U
86-30-6	n-Nitrosodiphenylamine	6	U
122-66-7	1,2-Diphenylhydrazine(as azo)	6	U
101-55-3	4-Bromophenyl-phenylether	2	U
118-74-1	Hexachlorobenzene	2	U
85-01-08	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	80	
206-44-0	Fluoranthene	1	U
92-87-5	Benzidine	1	U

US Army Fort Monmouth NJ Bldg #161 FMETL #1831.1 1B

SAMPLE NO. 006

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

9523168B

Lab Name: EMSL ANALYTICAL Contract: NJDEP#: MW1-2931775

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

Matrix: (soil/water) WATER Lab Sample ID: 9523168B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7781.D

Level: (low/med) _____ Date Received: 5/19/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/25/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/2/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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

US Army Fort Monmouth, NJ Bldg #161 FMETZ #1831.1

1F

SAMPLE NO. 007

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

9523168B
MW1-2931775

NJDEP #:

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9523168B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B7781.D

Level: (low/med) Date Received: 5/19/95

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/2/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	Unknown	29.93	12	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

US Army, Fort Monmouth, NJ Bldg 161 FMETL # 1831-1 008

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

NJDEP #: MW1-2931775

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

Lab Sample ID: 9523168
Lab File ID: C8320.D
Date Received: 05/19/95
Date Analyzed: 06/01/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

U= Not Detected

US Army Fort Monmouth, NJ Bldg # 161 FMETL # 1831.1 009

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

NJDEP #: M01-2931775

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

Lab Sample ID: 9523168
Lab File ID: C8320.D
Date Received: 05/19/95
Date Analyzed: 06/01/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

COMMENT
U= Not Detected

010

EMSL

Date of Report: 06/23/95
Project Number: 09508273
Lab ID: 95-0023164
Date Collected: 05/18/95 06:15
Collected By: Client
Date Received: 05/19/95 07:00

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

Client Project: 931021191016

Client Designation: Trip Blank

Bldg. 161 FMETL # 1830.4

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

US Army, Fort Monmouth, NJ Bldg 161 FMETL # 1830.4

011

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

Lab Sample ID: 9523164 TRIP BLANK
Lab File ID: C8316.D
Date Received: NA
Date Analyzed: 06/01/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	5.1	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.50	U
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U= Not Detected

US Army Fort Monmouth, NJ Bldg. 161 FMETL #1834

012

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

Lab Sample ID: 9523164 TRIP BLANK
Lab File ID: C8316.D
Date Received: NA
Date Analyzed: 06/01/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

COMMENT
U= Not Detected

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

Date of Report: 06/23/95
Project Number: 09508273
Lab ID: 95-0023165
Date Collected: 05/18/95 14:30
Collected By: Client
Date received: 05/19/95 07:00

Client Project: 931021191016

lient Designation: Field Blank FMETL #1830.5
Bldg. 161

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

US Army Fort Monmouth, NJ Bldg 161 FMETL # 1830.5

1B

SAMPLE NO. 014

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

9523165B
Field Blank

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9523165B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7778.D

Level: (low/med) _____ Date Received: 5/19/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/25/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/2/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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

US Army Fort Monmouth, NJ 07703-5613 FMETL# 1830-5

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 015

9523165B
Field Blank

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9523165B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B7778.D

Level: (low/med) _____ Date Received: 5/19/95

% Moisture: _____ decanted: (Y/N): N Date Extracted: 5/25/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/2/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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

US Army Fort Monmouth, NJ Bldg 161 FMETL # 1830.5

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO. 016

9523165B
Field Blank

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9523165B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B7778.D

Level: (low/med) Date Received: 5/19/95

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/2/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	Unknown	29.92	14	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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US Army Fort Monmouth, NJ Bldg 161 FMETL # 183

017

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

Lab Sample ID: 9523165 Field Blank
Lab File ID: C8317.D
Date Received: NA
Date Analyzed: 06/01/95
Dilution Factor: 1
Soil Aliquot Volume: NA

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
74-83-9	Bromomethane	.50	U
75-01-4	Vinyl Chloride	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-09-2	Methylene Chloride	5.1	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
74-97-1	Bromochloromethane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
67-66-3	Chloroform	.50	U
563-58-6	1,1-Dichloropropene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
74-95-3	Dibromomethane	.50	U
56-23-1	Carbon Tetrachloride	.50	U
75-27-4	Bromodichloromethane	.50	U
78-87-1	1,2-Dichloropropane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
79-01-6	Trichloroethene	.50	U
124-48-1	Dibromochloromethane	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
71-43-2	Benzene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
75-25-2	Bromoform	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
79-34-1	1,1,2,2-Tetrachloroethane	.50	U
108-88-3	Toluene	.50	U
106-93-4	1,2-Dibromoethane	.50	U
108-90-7	Chlorobenzene	.50	U
100-41-4	Ethylbenzene	.50	U
1330-29-7	Xylene(total)	.50	U

U= Not Detected

US Army FORT Monmouth, NJ Bldg 161 FMETL# 183

018

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

Lab Sample ID: 9523165 Field Blank
Lab File ID: C8317.D
Date Received: NA
Date Analyzed: 06/01/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

COMMENT
U= Not Detected

FMETL# 1831.1 018a

BLDG.#: 161 MW#: 1 NJDEPE WELL ID # 29317475

U.S. ARMY FORT MONMOUTH, NJ

MONITORING WELL SAMPLING DATASHEET

DATE: 5-18-95

IJO#95-0091

SAMPLING CONTRACTOR: EMSL Analytical Services Inc.

LABORATORY: EMSL Analytical Services, NJDEP CERT #:

SAMPLERS NAMES: Tom Baxter Susan Pallonis

WEATHER CONDITIONS: overcast, breezy

ELEVATION OF CASING SURVEY MARK: ____.____

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 14.93 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____FT

LENGTH OF SCREENED SECTION: ____FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 6.65 FT

ELEVATION OF GW PRIOR TO PURGING: ____.___FT

THICKNESS OF LNAPL PRIOR TO PURGING : ____.___FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: 640 PPM 1045 D.O. 1.5 ppm

pH: 5.57 TEMP: 19.8 C, SPECIFIC CONDUCTIVITY: 354 us/cm

DEPTH OF WELL: 14.93 FT

HEIGHT OF WATER: 8.28 FT

EVACUATED GAL. H2O: 17 GAL (8.28 X .65 X 3 = 16.146)

PURGING START TIME: 1053 END TIME: 1120

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

PURGE RATE (<0.5 GPM): 2 GPM

TOTAL VOLUME PURGED: 17 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 13.68 FT

DISSOLVED OXYGEN: 1.3 ppm pH: 5.43 TEMP: 17.2 °C

SPECIFIC CONDUCTIVITY: 456 us/cm

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

START TIME OF SAMPLING: 1125 END TIME: 1134

DISSOLVED OXYGEN: 2.1 ppm pH: 5.33 TEMP: 17.5 °C

SPECIFIC CONDUCTIVITY: 414 us/cm

COMMENTS: on site 1045 am

No odor, gas, oil

019

EMSL

LABORATORY DELIVERABLES

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

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The proposed "Technical Requirements for Site Remediation" rules, which appeared in the May 4, 1992 New Jersey Register, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits be included in one section of the data package and in the main body of the report.

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

Peter B. Poeter for P.V.L jr.
Laboratory Manager or Environmental Consultant's Signature

06/24/05
Date

U.S. ARMY FORT MONMOUTH

95-07-16

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

Chain of Custody

Project #: 9331221523E

Customer: Charles Applebee SELFM-PW-EV

Phone: 908 532-6004

Sampler: EMSL (Printed)

Site Name: Bldg 161 MW Sampling

Date / Time: 5.18.95 | 1134

Analysis Parameters: X4/PWC VOA 1 2x1L 3 x 1L BN 1 1L 1 125mL

Start:

Finish:

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles								Preservation Method	Remarks
1531.1	5/1/95	1154	MW-1-231775	Aq	5	✓	✓			23168				Sample Kept <4°C
1830.4	5/1/95	N/A	TRIP	Aq	5	✓				23164				
1830.5	5/18/95	1430	FIELD	Aq	5	✓	✓			23165				

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
	5/19/95 | 1640		EMSC
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
	5.18.95 | 1845		5/19 | 0900

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

Enviornmental Laboratory

020

To be completed upon sample receipt

Instructions:

1. Place an X in box if okay.
2. Record actual pH if outside acceptable range
3. Record temperature of cool blank or note "NW" if samples are cooled.
4. Record corrective action in remarks.

				pH≤2								>9	≥12	deg.C	SAMPLES	
OD	NH3	TKN	TOX	VOA*	PHENOL	TOC	PHC	O&G	METALS	HARD	TPO4	NO2&3	SO2	TCN	TEMP	EMSL #	REMARKS
[illegible]	H2SO4	H2SO4	H2SO4	HCL	H2SO4	H2SO4	H2SO4	H2SO4	HNO3	HNO3	H2SO4	H2SO4	NaOH ZNAC	NaOH			
				Y											4	23168	

023

EMSL ANALYTICAL, INC.

. ! 024

INTERNAL CHAIN OF CUSTODY

EMSL LAB ID NO. 95-23168, 95-23165 PROJECT NO. 956276

SAMPLE/CONTAINERS

PARAMETERS

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
5/25/95		BN Extraction Prep	Charles Bartolone	Charles Bartolone

INTERNAL CUSTODY

025

Project #: 9508276

Lab ID #'s: 95-23168, 95-23164
95-23165

Analyst

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

METHODOLOGY SUMMARY

METHODOLOGY SUMMARY

EPA Method 524.2 - Aqueous

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

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

Method detection limits are as stated.

Semivolatiles by GC/MS - Aqueous

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

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

Method detection limits are as stated.

029

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORM

		No	Yes
1.	Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)		X
2.	GC/MS Tune Specifications		
	a. BFB Meet Criteria		X
	b. DFTPP Meet Criteria		X
3.	GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series.		X
4.	GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of. sample analysis for 600 series and 12 hours for 8000 series.		X
5.	GC/MS Calibration - Initial Requirements		
	a. Calibration Check Compounds		X
	b. System Performance Check Compounds		X
6.	Blank Contamination - If yes, list compounds and concentrations in each blank:		X
	a. VOA Fraction **Methylene Chloride 3.2 - 4.7 ppb**		
	b. B/N Fraction		
	c. Acid Fraction		
7.	Surrogate Recoveries Meet Criteria		X
	If not met, list those compounds and their recoveries which fall outside the acceptable range:		
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
	If not met, were the calculations checked and the results qualified as "estimated"?		
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries which fall outside the acceptable	X	
	a. VOA Fraction *		
	b. B/N Fraction		
	c. Acid Fraction		
9.	Internal Standard Area/Retention Time Shift Meet Criteria		X

*Methylene Chloride MS/MSD 69%/70%, Xylene (meta+para) MS 65% RPD32; Xylene (ortho) MS 70% RPD30; Styrene MS/MSD 21%/39% RPD 62; 1,1,2,2 - Tetrachloroethane MS/MSD 122%/124%.

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

		No	Yes
10.	Extraction Holding Time Met		X

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

		No	Yes
11.	Analysis Holding Time Met		X

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

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

Additional Comments:

Laboratory Manager Peter B Pontin for P.V.L jr. Date: 06/23/05

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

LABORATORY AUTHENTICATION STATEMENT

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

Peter B. Porter for P.W.L. Jr.
Laboratory Manager (as defined in N.J.A.C. 7:18)

EMSL ANALYTICAL, INC.

Asbestos - Lead - Environmental - Materials

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Houston, TX 77092
713) 686-3635

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

PROJECT : **#93312215830**

EMSL Project: # 95063934

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection	Date Received
1861.1, Trip Blank	**95-26426**	**Aqueous**	**6/13/95, @ 0605**	**6/13/95**
1861.2, Field Blank	**95-26427**	**Aqueous**	**6/13/95 @ 1535**	**6/13/95**
1862.1, MW1-2931775, Bldg. #161	**95-26429**	**Aqueous**	**6/13/95 @ 0930**	**6/13/95**

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

REPORT NARRATIVE

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

Dates Incorrect
9-11-95
CS

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

EMSL

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SAMPLE DATA SUMMARY PACKAGE

EMSL

Date of Report: 07/17/95
Project Number: 95063933
Lab ID: 95-3026426
Date Collected: 06/13/95 06:05
Collected By: Client
Date Received: 06/13/95 18:50

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

Client Project: 931021191016

Client Designation: Bldg #206,Trip Blank

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

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

005

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

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

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

U Not Detected

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

006

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135 98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
9-87-6	4-Isopropyltoluene	.50	U
5-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT
U= Not Detected

FMETLFF /861.1

FtMonMouth NJ
Army
RIP BLANK

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9526426V

007

Lab Name: EMSL ANALYTICAL Contract: _____

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

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

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

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

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

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

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

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

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

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

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

Client Project: 931021191016

Client Designation: Bldg #206,Field Blank

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

Ft. Monmouth NJ FMETL# 1864.2
U.S. Army
Field Blank

009

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

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

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

U) Not Detected

Ft. Monmouth NJ FMETL# 1861.2
U.S. Army
FIELD BLANK

010

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	COMMENT
100-42-1	Styrene	.50	U
98-82-8	Isopropylbenzene	.50	U
108-86-1	Bromobenzene	.50	U
96-18-4	1,2,3-Trichloropropane	.50	U
103-65-1	n-Propylbenzene	.50	U
95-49-8	2-Chlorotoluene	.50	U
106-43-4	4-Chlorotoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
135-98-8	sec-Butylbenzene	.50	U
541-73-1	1,3-Dichlorobenzene	.50	U
106-46-7	1,4-Dichlorobenzene	.50	U
9-87-6	4-Isopropyltoluene	.50	U
95-50-1	1,2-Dichlorobenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
96-12-8	1,2-Dibromo-3-chloropropane	.50	U
120-82-1	1,2,4-Trichlorobenzene	.50	U
87-68-3	Hexachlorobutadiene	.50	U
91-20-3	Naphthalene	.50	U
87-61-6	1,2,3-Trichlorobenzene	.50	U

COMMENT
U= Not Detected

.S. Army FIELD 1861.2
T. Monmouth NJ
FIELD BLANK

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9526427V 011

Lab Name: EMSL ANALYTICAL Contract: _____

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

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

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

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

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

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

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
2.				
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
FORT MONMOUTH, NJ

SAMPLE NO.
9526427B
012

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1861.2 Site: BLDG= 216 NJDEP#

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

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

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

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

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

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FORT MONMOUTH, NJ

SAMPLE NO.

9526427B

013

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1861.2 Site: BLDG# 216 NJDEP#

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

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

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

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

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

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

FORT MONMOUTH NJ 1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9526427B

014

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1861.2 Site: BLDG# 206 NJDEP#

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

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

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

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

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

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	NONE FOUND			
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Attention: Charles Appleby
U.S. Army - Fort Monmouth
SELFM-PW-EV
Building 173
Fort Monmouth, NJ 07703

Project #: 95063934
Date Received: 06/13/95 18:50

The following results are for BN by 625 with Library Search

Lab #	Conc.	Unit	Client Designation
95 0026429	;see attached	ug/l	Bldg.161,MW1-2931775

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

Lab #	Conc.	Unit	Client Designation
95 0026429	;see attached	ug/l	Bldg.161,MW1-2931775

Monmouth NJ FMETL # 1862.1
S. Army
Ida # 161
P mw-1
2931775

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

Lab Sample ID: 9526429
Lab File ID: C8626.D
Date Received: 06/13/95
Date Analyzed: 06/21/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

U= Not Detected

Ft. Monmouth NJ FMETL# 1862.1
U.S. Army
Bldg #161
NJDEP MW-1
2931775

1A
VOLATILE ORGANIC ANALYSIS DATA SHEET
EPA 524.2

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

Lab Sample ID: 9526429
Lab File ID: C8626.D
Date Received: 06/13/95
Date Analyzed: 06/21/95
Dilution Factor: 1
Soil Aliquot Volume: NA

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

COMMENT
U= Not Detected

1. Monmouth NJ FILE ID: 1862.1
U. Army
ldg# 161 NJDEP MW-1
2931775

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO. 9526429V

018

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9526429V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C8626.D

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

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

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

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

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	NONE FOUND			
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SAMPLE NO. 019

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FORT MONMOUTH, NJ

9526429B

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1862.1 Site: BLDG# 161 NJDEP# NJ1-2931775 #161

Matrix: (soil/water) WATER Lab Sample ID: 9526429B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8027.D

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

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

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

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

FORT MONMOUTH, NJ

SAMPLE NO. 9526429B 020

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1862.1 Site: BLDG# 161 NJDEP# NJ-2931775

Matrix: (soil/water) WATER Lab Sample ID: 9526429B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B8027.D

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

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

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

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

FORT MONMOUTH NJ 1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO. 9526429B 021

Lab Name: EMSL ANALYTICAL US ARMY

FMETL# 1862.1 Site: BLDG# 161 NJDEP# #401-2931775

Matrix: (soil/water) WATER Lab Sample ID: 9526429B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B8027.D

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

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

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

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1. 112-60-7	Ethanol, 2,2'-[oxybis(2,1-et	29.48	7	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

BLDG.#: 161 MW#: 1 NJDEPE WELL ID # 2931775

022

U.S. ARMY FORT MONMOUTH

MONITORING WELL SAMPLING DATASHEET

DATE: 6-13-95

IJO#95-0091

SAMPLING CONTRACTOR: EMSL Analytical Services Inc.

LABORATORY: EMSL Analytical Services, NJDEP CERT #: 04653

SAMPLERS NAMES: Susan Palilonis, Tom Baxter

WEATHER CONDITIONS: Cool, overcast → windy, Rain

ELEVATION OF CASING SURVEY MARK: ____.____

TOTAL DEPTH OF WELL FROM TOP OF SURVEYORS MARK: 14.86 FT

DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____ FT 0.7 n. to screen

LENGTH OF SCREENED SECTION: ____ FT.

DEPTH TO WATER PRIOR TO PURGING AND SAMPLING: 7.28 FT

ELEVATION OF GW PRIOR TO PURGING: ____.____ FT

THICKNESS OF LNAPL PRIOR TO PURGING : ____.00 FT

PID/Hnu READING IMMEDIATELY AFTER THE WELL CAP IS REMOVED: <1 PPM 830 am none detected D.O. 3.0 ppm

(1) pH: 5.81 TEMP: 16.5 °C, SPECIFIC CONDUCTIVITY: 375 µs/cm

DEPTH OF WELL: ____.____ FT

HEIGHT OF WATER: ____.____ FT

EVACUATED GAL. H2O: 15 GAL (7.58 X .65 X 3 = 14.781)

PURGING START TIME: 0842 END TIME: 0920

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

PURGE RATE (<0.5 GPM): 2 GPM

TOTAL VOLUME PURGED: 15 GAL.

DEPTH TO WATER AFTER PURGING AND BEFORE SAMPLING: 11.61 FT

(2) DISSOLVED OXYGEN: 5.4 ppm pH: 5.58 TEMP: 16.3 °C

SPECIFIC CONDUCTIVITY: 370 µs/cm

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

START TIME OF SAMPLING: 0924 END TIME: 0930

(3) DISSOLVED OXYGEN: 3.9 ppm pH: 5.51 TEMP: 16.0 °C

SPECIFIC CONDUCTIVITY: 527 µs/cm

Color pale yellow ODOR none

COMMENTS: on site 755 am

LABORATORY DELIVERABLES

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

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The proposed "Technical Requirements for Site Remediation" rules, which appeared in the May 4, 1992 New Jersey Register, provides further details. The document shall be bound and paginated. contain a table of contents, and all pages shall be legible. Incomplete packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits be included in one section of the data package and in the main body of the report.

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

Paul Farro

Laboratory Manager or Environmental Consultant's Signature

07-12-95

Date

EMSL

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

A. Checklist which must be attached to the Summary

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

Page #		
1	1.	Name and address of the facility.
1	2.	Name of the laboratory performing the sample analysis.
1	3.	NJDEP certification number assigned to the laboratory pursuant to N.J.A.C. 7:18.
1	4.	Laboratory sample identification number.
1	5.	Customer sample identification number corresponding to the laboratory sample identification.
1	6.	Sample Location (also on the site diagram).
1	7.	Matrix of the sample analyzed (i.e., water or sediments: including soil, sediment, and sludges). All sediment results must be reported on a dry weight basis.
30-31	8.	The reference for the method used (e.g., EPA Method 625, 40 CFR Part 136).
1	9.	The signature of the person completing the report form.
1	10.	The dates the laboratory report form was prepared, as well as the dates the sample were collected, submitted and analyzed.
32	11.	A list of all parameters (constituents and conditions) for which the analyses were performed.
3-22	12.	Sample results and corresponding units for each parameter.

CHAIN OF CUSTODY

EMSL ANALYTICAL, INC.

INTERNAL CHAIN OF CUSTODY

EMSL LAB ID NO. 95-26427, 95-26429 PROJECT NO. 9376.3934

SAMPLE/CONTAINERS

PARAMETERS

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
6/9/95		BN Extraction Prep.	Charles Bartalone	[signature]

INTERNAL CUSTODY

Project #: 95063934

Lab ID #'s: 95-26426, 95-26427
95-26429

Analyst

	Name (please print)	Signature	Date
1. Base/Neutrals	Scott Van Etten	SV	6/26/95
2. Acids			
3. Volatiles (GC)			
4. Volatiles (GC/MS)	Scott Kessler	SK	6/21/95
5. Base Neutrals/Acids			
Gasoline			

U.S. ARMY FORT MONMOUTH

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

Chain of Custody

Project #: 933122158.30

Customer: Charles Appleby SELFM-PW-EV

Phone: 908-532-6224

Sampler: EMSL (Baxter)

Date / Time: 6/13/95

Site Name: Bldg. #161 MW Sampling

Analysis Parameters: Library VOA 524.2 + Xylene; BN 625 - Methods 35

Start:

Finish:

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	VOA 524.2 + Xylene	BN 625 - Methods 35	Preservation Method	Remarks
1861.1	6/13	0915 Trip Blank	aq.	3	X		2&4&6	Samples Kept at 4 °C
1861.2		1535 Field Blank	aq.	6	X	X	2&4&7	
1862.1		1730 Bldg. #161 MW1-2931775	aq.	6	X	X	2&4&8	

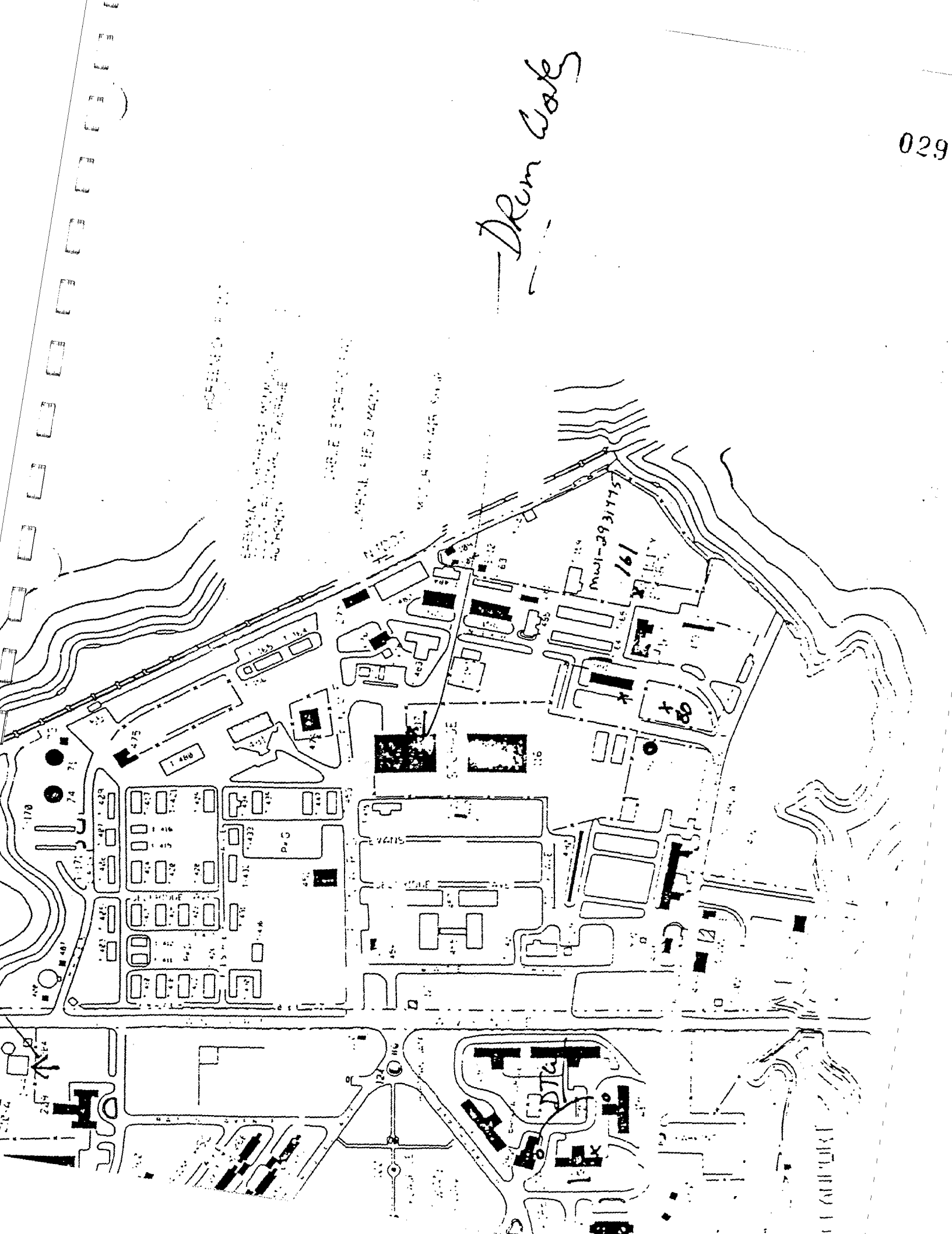
Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By: EMSL
X	6/13/95 1535	X	
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
	6-13-95 1850		

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

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

Enviornmental Laboratory

028


Drum Cafe
029
Mull-29 31775
161

METHODOLOGY SUMMARY

METHODOLOGY SUMMARY

EPA Method 524.2 - Aqueous

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

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

Method detection limits are as stated.

Semivolatiles by GC/MS - Aqueous

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

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

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

Method detection limits are as stated.

EMSL

LABORATORY CHRONICLE

Lab ID: **95-26426, 95-26427, 95-26429**

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

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

QC Supervisor
Review & Approval

(Signature) Peter B. Panton

(Printed Name) Peter B. Panton

(Date) 7/17/95

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

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

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

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

		No	Yes
10.	Extraction Holding Time Met		X

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

		No	Yes
11.	Analysis Holding Time Met		X

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

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

Additional Comments:

Laboratory Manager Paul Farag Date: 07-17-95

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

LABORATORY AUTHENTICATION STATEMENT

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

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

ATTACHMENT M

UST 167 Report

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 167
Main Post Area

NJDEP UST Registration No. 090010-18
NJDEP Closure Approval Letter Dated June 7, 1994

February 1996

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 167

MAIN POST AREA
NJDEP UST REGISTRATION NO. 090010-18
NJDEP CLOSURE APPROVAL LETTER DATED JUNE 7, 1994

FEBRUARY 1996

PROJECT NO.: 09-5004-07
CONTRACT NO.: DACA51-94-D-0014

PREPARED FOR:

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

PREPARED BY:

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

167.DOC

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

Engineering • Consulting • Remediation • Construction

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Appendix B	Certifications
Appendix C	Waste Manifest
Appendix D	UST Disposal Certificate
Appendix E	Soil Analytical Data Package

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EXECUTIVE SUMMARY

UST Closure

On June 20, 1994, a steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) Closure Approval Letter dated June 7, 1994 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 090010-18, was located immediately adjacent to Building 167 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 090010-18 was a 1,000-gallon No. 2 diesel oil UST. The UST fill port was located directly above the tank. The tank closure was performed by Cleaning Up The Environment Inc. (CUTE).

Site Assessment

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). Soils surrounding the tank were screened visually and with air monitoring instruments for evidence of contamination. Following removal, the UST was inspected for holes. No holes were noted in the UST and no potentially contaminated soils were observed surrounding the tank.

On June 20, 1994, following removal of the UST, post-excavation soil samples A, B, C, D, E, F, DUP B, and DUP D, were collected from a total of six (6) locations along the sidewalls of the excavation immediately above groundwater. Groundwater was present at approximately 8 feet below ground surface (BGS). The fuel lines, upon removal, were noted as being copper lines. Two samples (samples I and J) were collected from two locations along the length of the former copper piping, which ran approximately 30 feet. All samples were analyzed for total petroleum hydrocarbons (TPHC).

Findings

All post-excavation soil samples collected from the UST excavation and from below the former copper piping associated with the former UST at Building 167 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994). Samples A, C, D, E, F, DUP B, I, and J contained levels of TPHC ranging in concentration from 4.63 mg/kg to 501.0 mg/kg. All other samples contained non-detectable concentrations of TPHC.

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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.

Site Assessment Quality Assurance

The sampling and laboratory analysis conducted during the site assessment 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 concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg do not remain in the former location of the UST or associated piping.

No further action is proposed in regard to the closure and site assessment of UST No. 090010-18 at Building 167.

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1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 090010-18, was closed at Building 167 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 20, 1994. Refer to site location map on Figure 1. This report presents the results of the DPW's implementation of the UST Decommissioning/Closure Plan submitted to the NJDEP on May 31, 1994. The plan was approved on June 7, 1994. The UST was a steel, 1,000-gallon tank containing No. 2 diesel oil.

Decommissioning activities for UST No. 090010-18 complied with all applicable Federal, State and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to: N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. All permits including but not limited to the NJDEP-approved Decommissioning/Closure Plan were posted onsite for inspection. CUTE Inc., the contractor that conducted the decommissioning activities, is registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 090010-18 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks
(NJDEP-BUST). The NJDEP-BUST closure approval letter and signed certifications for UST No. 090010-18 are included in Appendices A and B, respectively.

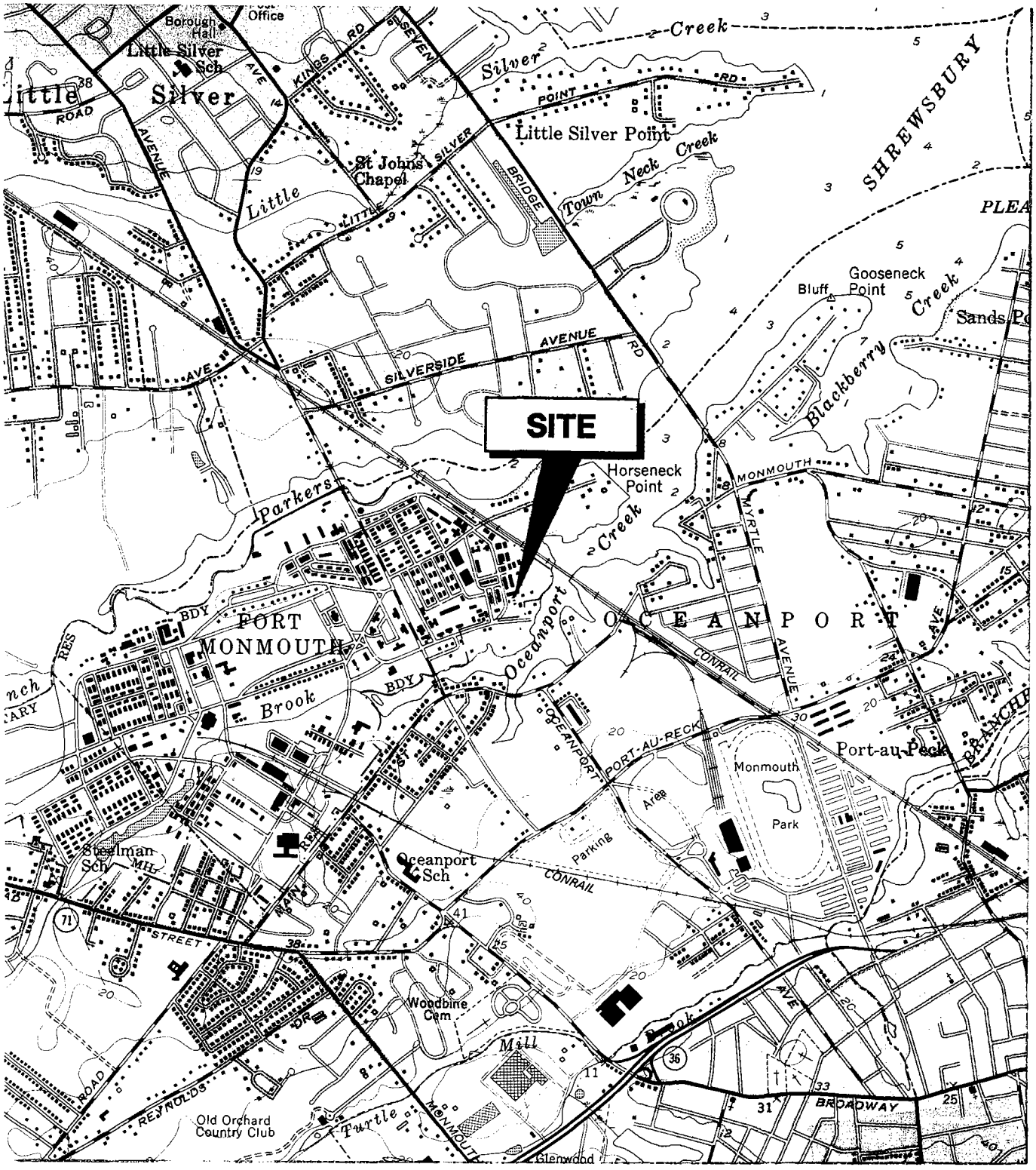
Based on an inspection of the UST, field screening of subsurface soils and analytical results of collected soil samples, the DPW has concluded that no significant historical discharges are associated with the UST or associated piping.

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

This report was prepared using information required at the time of closure. Section 1 of this UST Closure and Site Investigation Report provides a summary of the UST decommissioning activities. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling investigation, are presented in the final section of this report.

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



N

SCALE
0 2000 FT.

NEW JERSEY

QUADRANGLE LOCATION

Source: BCM/Smith Environmental Technologies Corporation (028)

Project No. 09-5004-07

Figure 1
Site Location Map

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1.2 SITE DESCRIPTION

Building 167 is located in the eastern portion of the Main Post area of Fort Monmouth as shown on Figure 1. UST No. 090010-18 was located south of Building 167 and appurtenant piping ran approximately 30 feet south from the building to the fill port area. A site map is provided on Figure 2. The fill port area was located directly above the UST.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 167. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

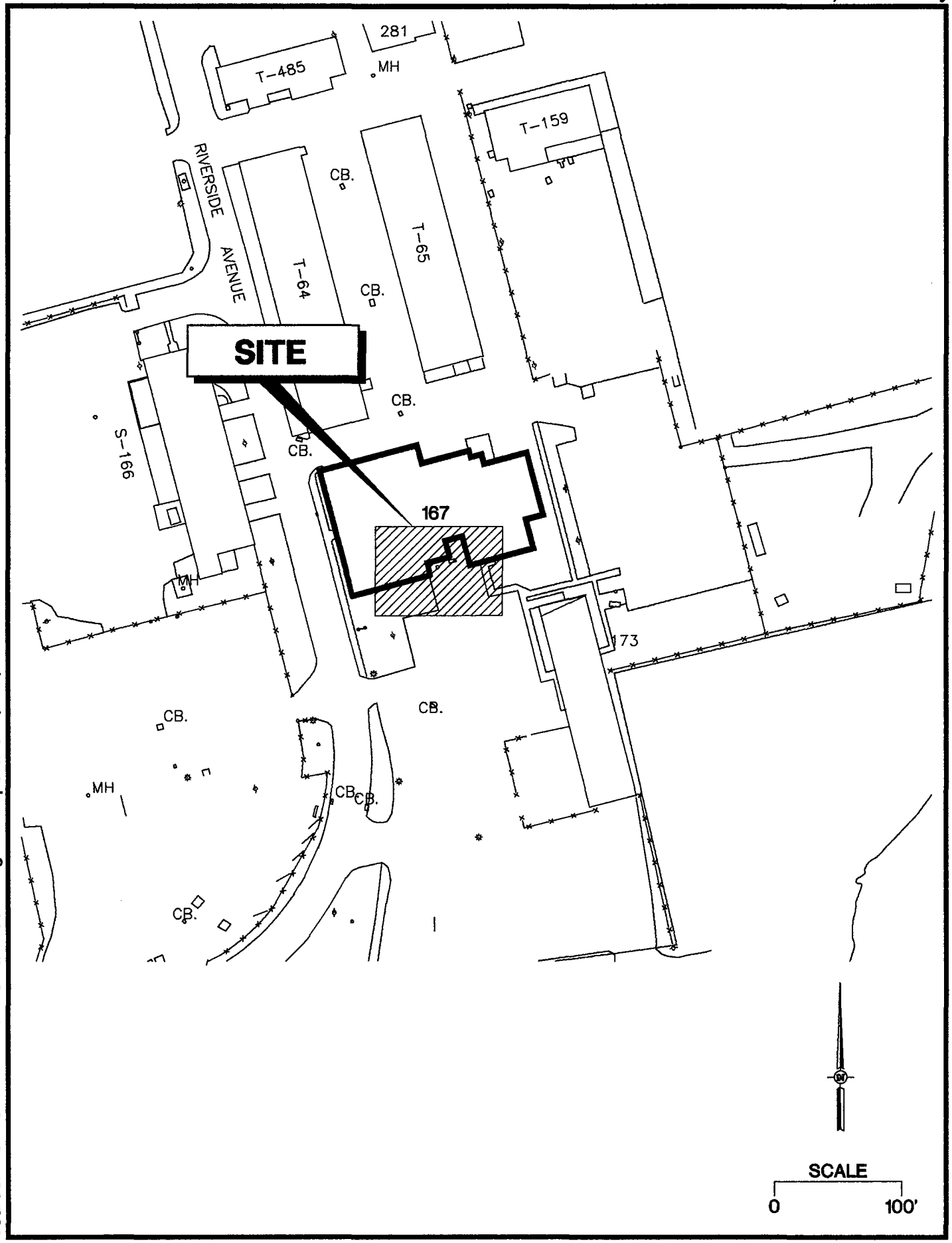
The formations record several major transgressive/regressive cycles and contain units which are generally thicker to the southeast and reflect a deeper water environment. Over 20 regional geologic units are present within the sediments of the Coastal Plain. Regressive, upward coarsening deposits are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

Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile. The upper member (Shrewsbury) of the Red Bank sand is a yellowish-gray to reddish brown clayey,

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



Source: BCM/Smith Environmental Technologies Corporation (043)

Project No. 09-5004-07

Figure 2
Building 167
Site Map

medium-to-coarse-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

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

Hydrogeology

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

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

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

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involve with, or were affected by, the decommissioning of the UST system were minimized. All areas which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

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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 removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. A total of 67 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal facility located in Old Bridge, New Jersey. Refer to Appendix C for waste manifest (No. NJA-1603184).

The UST was cleaned prior to removal from the excavation in accordance with NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. No corrosion holes or punctures were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. No evidence of contamination was noted.

Soil screening was also performed along the piping associated with the UST. No contamination was noted anywhere along the piping length.

SMITH

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

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

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

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

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, no soils exhibited signs of contamination. Therefore, the excavated soils were used as backfill following removal of the UST.

SMITH

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

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

The following Parties participated in Closure and Site Investigation Activities:

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

- Subsurface Evaluator: Dinkerrai M. Desai
  Employer: U.S. Army, Fort Monmouth
  Phone Number: (908) 532-1475
  NJDEP Certification No.: E0002266

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

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

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Soil excavated from around the tank and appurtenant piping, as well as the UST excavation sidewalls and bottom, were found to be free of potential contamination.

SMITH

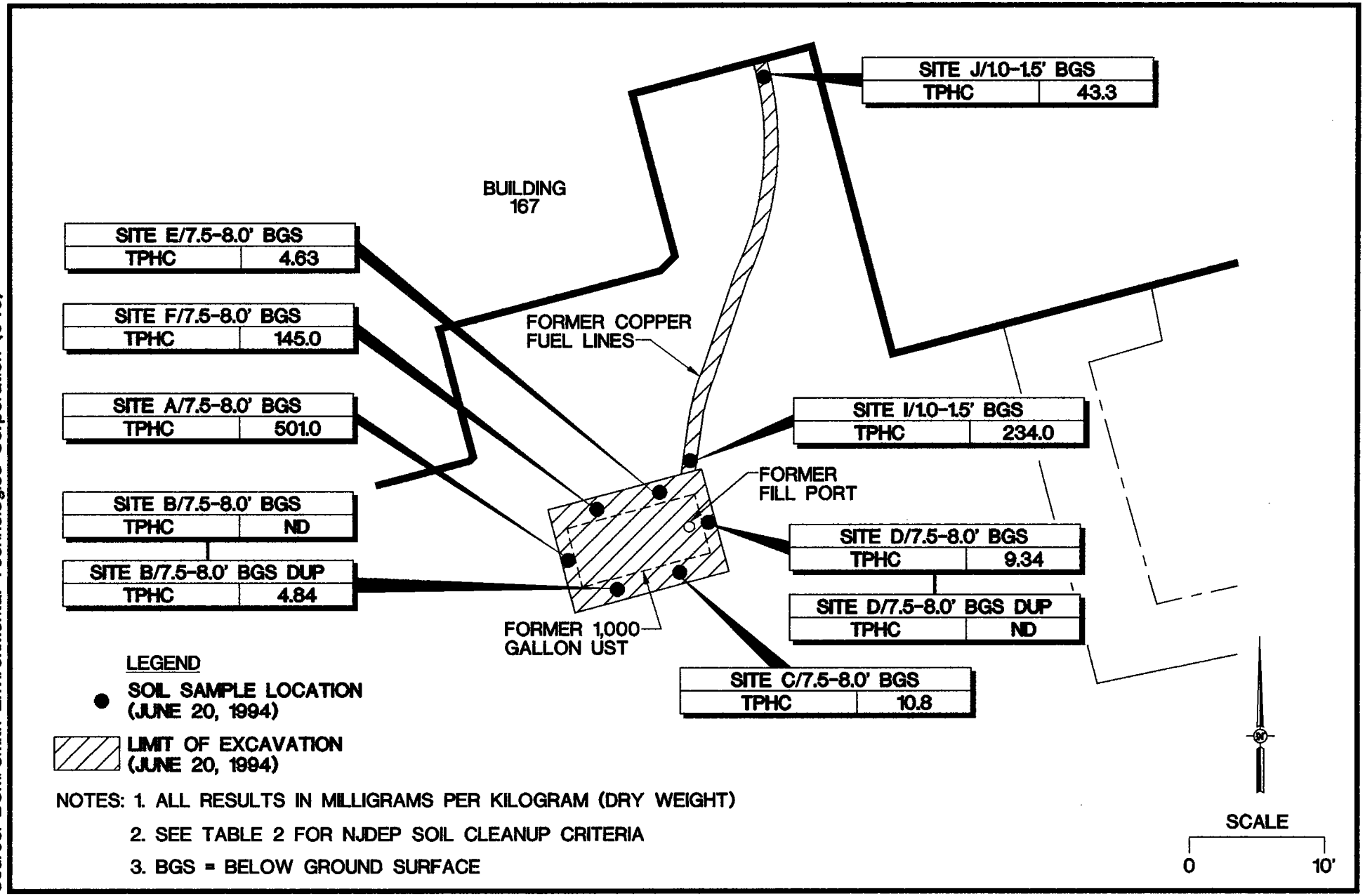
2.3 SOIL SAMPLING

On June 20, 1994, post-excavation soil samples A, B, C, D, E, F, DUP B, and DUP D were collected from a total of six (6) locations along the sidewalls of the UST excavation immediately above groundwater. Groundwater was present at approximately 8 feet BGS. Post-excavation soil samples I and J were collected from two (2) locations immediately below the former location of the copper piping associated with the UST. Refer to soil sampling location map on Figure 3. All samples were analyzed for total petroleum hydrocarbons (TPHC). Because none of the post-excavation soil samples exhibited a TPHC concentration exceeding 1,000 milligrams per kilogram (mg/kg), none were analyzed for volatile organic compounds with a forward library search for 10 tentatively identified compounds (VOCs).

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements* and the NJDEP *Field Sampling Procedures Manual*. A summary of sampling activities including parameters analyzed is provided in Table 1. The post-excavation soil samples were collected using polystyrene scoops. Actual soil TPHC values may be higher than reported, due to sample utensil absorbency. If absorbency resulted in reducing the actual soil TPHC concentration by 50 %, the highest soil contaminant would have been 1,002.0 mg/kg, still below the applicable NJDEP soil cleanup standard for total organic contaminants of 10,000 mg/kg. Following soil sampling activities, the samples were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis.

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



Source: BCM/Smith Environmental Technologies Corporation (046)

Project No. 09-5004-07

Figure 3
Building 167
Soil Sampling Results

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 167, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
DUP B	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
DUP D	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
I	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
J	06-20-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop

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

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3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected from a total of eight (8) locations on June 20, 1994. All samples were analyzed for TPHC. The post-excavation soil sample results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and the soil sampling results are shown on Figure 3. The analytical data package is provided in Appendix E.

All post-excavation soil samples collected on June 20, 1994, from the UST excavation and from below piping associated with the UST contained either non-detectable concentrations of TPHC or concentrations below the NJDEP soil cleanup criteria. Samples A, C, D, E, F, Dup B, I, and J, contained levels of TPHC ranging in concentration from 4.63 mg/kg to 501.0 mg/kg. All other samples contained a non-detectable concentration of TPHC.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 167 were below the NJDEP soil cleanup criteria for total organic contaminants.

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

No further action is proposed in regard to the closure and site assessment of UST No. 090010-18 at Building 167.

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 167
FT. MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
A/7.5-8.0'	1532.1	06-20-94	06-20-94	Total Solid	--	--	84 %	--	--
				TPHC	6.6	yes	501.0	10,000	--
B/7.5-8.0'	1532.2	06-20-94	06-20-94	Total Solid	--	--	87 %	--	--
				TPHC	3.3	yes	ND	10,000	--
C/7.5-8.0'	1532.3	06-20-94	06-20-94	Total Solid	--	--	86 %	--	--
				TPHC	3.3	yes	10.8	10,000	--
D/7.5-8.0'	1532.4	06-20-94	06-20-94	Total Solid	--	--	86 %	--	--
				TPHC	3.3	yes	9.34	10,000	--
E/7.5-8.0'	1532.5	06-20-94	06-20-94	Total Solid	--	--	90 %	--	--
				TPHC	3.3	yes	4.63	10,000	--
F/7.5-8.0'	1532.6	06-20-94	06-20-94	Total Solid	--	--	88 %	--	--
				TPHC	3.3	yes	145.0	10,000	--
DUP B/7.5-8.0'	1532.7	06-20-94	06-20-94	Total Solid	--	--	86 %	--	--
				TPHC	3.3	yes	4.84	10,000	--
DUP D/7.5-8.0'	1532.8	06-20-94	06-20-94	Total Solid	--	--	83 %	--	--
				TPHC	3.3	yes	ND	10,000	--
I/1.0-1.5'	1532.9	06-20-94	06-20-94	Total Solid	--	--	92 %	--	--
				TPHC	3.3	yes	234.0	10,000	--
J/1.0-1.5'	1532.10	06-20-94	06-20-94	Total Solid	--	--	90 %	--	--
				TPHC	3.3	yes	43.3	10,000	--

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

Smith Environmental Tehnologies Corporation (Project No. 09-5004-07)

soil167.doc

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APPENDIX A

NJDEP BUST CLOSURE APPROVAL

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL
PROTECTION AND ENERGY

CHRISTINE TODD WHITMAN
Governor

ROBERT C. SHINN, JR
Commissioner

Mr. Joseph Fallon
SELFM-EH-EV
Department of the Army
Headquarters CECOM Fort Monmouth
Fort Monmouth, NJ 077703-5000

JUN 7 1994

Dear Mr. Fallon:

Re: UST Closures - Fort Monmouth
Fort Monmouth Army Base
Tinton Falls, Monmouth County

The NJDEPE has reviewed the four underground storage tank closure plans for UST number 0081533 tanks 1 and 171 and for UST number 0090010 tanks 17 and 18 submitted on May 31, 1994 for NJDEPE review and approval. The NJDEPE has determined that the closure plans for these tanks are consistent with the Technical Requirements for Site Remediation.

The remedial efforts associated with the closures of these tanks may commence as scheduled in each of the associated closure plans. This letter must be made available to any authorized personnel responsible for review and oversight of UST removals. This approval does not relinquish Fort Monmouth from fulfilling any Federal, County or Municipal requirement associated with the removal of underground storage tanks.

If you should have any questions or require additional information, please do not hesitate to contact me at (609) 633-1455.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Federal Case Management

RPCE\BFCM\FTMMTH12.IRC

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. 167

090010-18
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

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

OWNER'S NAME AND ADDRESS, if different from above

_____

_____

_____

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? ___ Yes __X__ No If Yes, Case No._____
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) N/A

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

III. DECOMMISSIONING OF TANK SYSTEMS

Closure Approval No. June 7, 1994 letter

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 0

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? ___ Yes X 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. N/A ppb total BTEX, N/A ppb total non-targeted VOC
2. N/A ppb total B/N, N/A ppb total non-targeted B/N
3. 501.0 ppm TPHC
4. N/A ppb _____ (for non-petroleum substance)

C. Remediation of free product contaminated soils

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

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

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

VI. GROUND WATER CONTAMINATION N/A

A. Was ground water contamination found? ___ Yes ___ 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:

1. _____ ppb total BTEX, _____ ppb total non-targeted VOC
2. _____ ppb total B/N, _____ ppb total non-targeted B/N
3. _____ ppb total MTBE, _____ ppb total TBA
4. _____ ppb _____ (for non-petroleum substance)
5. greatest thickness of separate phase product found _____
6. separate phase product has been delineated ___ Yes ___ No ___ 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 ___ N/A

2. The number of these wells identified is _____ .

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 _____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 _____ feet from the source and its screening begins at a depth of _____ 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 _____feet below grade. This well is located _____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 _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____feet.

E. A plan for separate phase product recovery has been included. ___Yes ___No ___N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well. ___Yes ___No ___N/A

G. Delineation of contamination

1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. ___Yes ___No

2. The plume is suspected to continue off the property at concentrations greater than MCLs. ___Yes ___No

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

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

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

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

NAME (Print or Type) Dinkerrai M. Desai SIGNATURE _____

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

CERTIFYING ORGANIZATION NJDEP CERTIFICATION NUMBER E0002266

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____
(Performer of Tank Decommissioning)

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

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

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

NAME (Print or Type) James Ott SIGNATURE James Ott

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

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

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

UNDERGROUND STORAGE TANK (UST) CLOSURE CERTIFICATION

BUILDING NO. 167

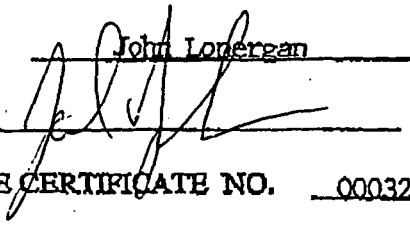
NJDEP UST REGISTRATION NO. 90010-18

DATE TANK REMOVED 6/20/94

IJO / CONTRACT NUMBER 91-0148

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

NAME (Print or Type) John Lonergan

SIGNATURE 

NJDEP UST CLOSURE CERTIFICATE NO. 0003248

COMPANY PERFORMING TANK DECOMMISSIONING CUTE Inc

NJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128

DATE OF SUBMITTAL 7/19/94

SMITH

APPENDIX C

WASTE MANIFEST

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

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

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
	NJ 3 2 1 0 0 2 0 5 9 7	053184		

3. Generator's Name and Mailing Address: US Army Communications Electronic Command
Main Post, c/o James Shirghio, Bldg 2504
ATTN: SELFM-DL-EM-MS, Fort Monmouth, NJ 07703
Generator's Phone: 908 532-6224

4. Generator's Site Address (if different than mailing address)
Main Post
Ft. Monmouth
NJDEP5 2265
908 462-1001

5. Transporter 1 Company Name: Freehold Cartage Inc.
6. US EPA ID Number: NJ D 0 1 5 4 1 2 6 1 6 4
7. Transporter's Phone: 908 462-1001

8. Transporter 2 Company Name:
9. US EPA ID Number:
10. Transporter's Phone:

11. Designated Facility Name and Site Address
Lionetti Oil Recovery CO. INC.
Runyon & Cheesequake Rds.
Old Bridge, NJ 08857
12. US EPA ID Number: NJ D 0 8 4 0 4 4 0 6 4
13. Facility's Phone: 908 721-0900

U.S. EPA NJA 1603184

14. Waste Characteristics

X Petroleum Oil N.O.S. Class 3 (Petroleum Oil)
Combustible Liquid uN 1270 PG III
001 T T 00067 G X 7 2 2 ✓

X Petroleum oil NOS class 3 (Petroleum oil)
Combustible Liquid UN1270 PG III 001 T T 00257 G X 7 2 2

X Petroleum oil NOS class 3 (Petroleum oil)
combustible liquid UN1270 PG III 001 T T 00589 G X 7 2 2 ✓

X Petroleum oil NOS class 3 (Petroleum oil)
combustible liquid UN1270 PG III 001 T T 00259 G X 7 2 2 ✓

15. Additional Descriptions for Materials Listed Above
T,L Petroleum Oil 80 %
Water 20 %
T,L Petroleum oil % 80
water % 20
T,L Petroleum oil % 80
water % 20
T04 Filtration
T04 Filtration T04 Filtration

16. Handling Codes for Wastes Listed Above

17. Special Handling Instructions and Additional Information
NOT REGULATED BY EPA. REGULATED AS HAZARDOUS WASTE IN NJ
24 HOUR EMERGENCY PHONE: 201-427-2881
NJ DECAL# 55182
ERG# 27
a) B125167 0090010-18
b. B125122 0081533-1
c) B125197-0090010-20
d) B125114 0081533-1

18. 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	Signature	Month Day Year
X DINESH M. DESAI		06 20 94

19. Transporter 1 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
X David S. Smith		06 20 94

20. Transporter 2 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

21. Discrepancy Indication Space

22. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 21.

Printed/Typed Name	Signature	Month Day Year

NJA 1603184

CALCULATION SHEET

Building No. 167 NJDEPE Reg. No. 0090010-18

Tank Size 1000 gal Tank Void 7.5 tons

CLEAN FILL

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
02222-1.1	Clean fill	7.5	18766

TOTAL

STONE

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #

TOTAL

ID#27 soil to stockpile (7.5 + 0) -7.5 = 0 tons

Chargeable clean fill 0

Chargeable stone 0



Joseph Scarano Sand & Gravel Co.

1453 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3333

18766

Order Date ___/___/___

Deliver Date ___/___/___

Name C. A Trucking

Address Old Mill

Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☑

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	T 68250		
	T 25550	21.35	
	T 42789	- 7.5 tons 167	
		13.85 tons	
		Sub Total	
		Delivery	
		N.J. Tax	
		Total	

KRISTEN HAUGE PUBLIC No. 2581C WEIGHER NJ

Driver

Received Dan Ellis

*Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel!
since 1925

SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

Bldg 767 - UST 009001O-18
" 80 - UST 009001O-06
" 277 - UST 008N33-05
BLDG 117 TRENCH PIPE

MAZZA & SONS, INC.

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

NO. _____

DATE 28 Jan 94

Customer's Name Cute INC

Address _____

Make of Autos

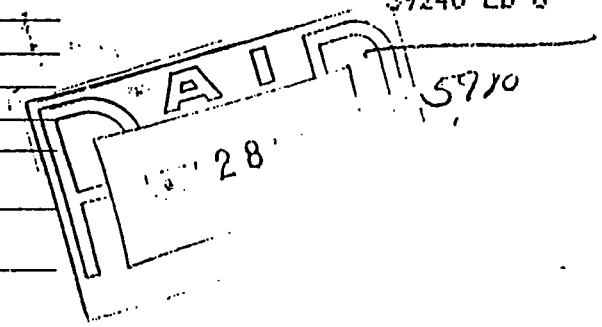
Tires

Tank

Price:

45220 LB G

39240 LB G



	Weight	Price
Cast Iron		
Steel	119.60	
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum Clean		
Lead		
Stainless		
Radiators		
Battery		
TOTAL AMOUNT:		

BLDG 117 TRENCH

Weigher _____ Customer Dan Fabri

Tank 167-0090010-18 10 tons
Tank 1122-0081533-171

MAZZA & SONS, INC.

5.99 TONS

Recycling Division

78950

3230 Shafto Road • Tinton Falls, NJ 07753

(908) 922-9292

Recycling Material Receipt Form

Customer: Cute Inc

Address: Middlet Rck

Job Location: Eastman Fort Monmouth

Date: 28 June 04

58360 LB G

Truck/Container No 3

License Plate/D.E.P.# XT 44 PJ

- ☐ 10 yd
- ☐ 20 yd
- ☑ 30 yd
- ☐ 40 yd
- ☐ 50 yd

26330 LB G

3,980

15.99 tons

Concrete		
Asphalt		
Stumps		
Brush		
Wood		
Pallets		
Glass		
Tires		
Painted Wood		
Shingles		
TOTAL:	COD	BILL

Weighmaster:

Customer:

SMITH

APPENDIX E

SOIL ANALYTICAL DATA PACKAGE

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

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

Lab. ID #: 1532.1-.10
Sample Rec'd: 06/20/94
Analysis Start: 06/20/94
Analysis Comp: 06/20/94

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: B. McKee
Ext. Meth: Sonc.

NJDEPE UST Reg.#: **0090010-18**
Closure #: **07-June-94 Letter**
DICAR #:
Location #: **Bldg. 167**

Lab ID.	Description		%Solid	Result (mg/Kg)	MDL
1532.1	Site A, West	OVA= NA	84	501.	6.6
1532.2	Site B, South West	OVA= NA	87	ND	3.3
1532.3	Site C, South East	OVA= NA	86	10.8	3.3
1532.4	Site D, East	OVA= NA	86	9.34	3.3
1532.5	Site E, North East	OVA= NA	90	4.63	3.3
1532.6	Site F, North West	OVA= NA	88	145.	3.3
1532.7	Site G, South West D	OVA= NA	86	4.84	3.3
1532.8	Site H, East D	OVA= NA	83	ND	3.3
1532.9	Site I, Pipe South	OVA= NA	92	234.	3.3
1532.10	Site J, Pipe North	OVA= NA	90	43.3	3.3
M. Bl.	Method Blank		100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1532.5 dup= 162% 1532.5 s= 76% 1532.5 sd= 79% RPD= 3.0%

Brian K. McKee
Laboratory Director

U.S. ARMY FORT MONMOUTH

P.O. #: PWS-007

Chain of Custody

Project #:	Sampler: CUTE INC	Date / Time 6-20-94	Analysis Parameters	Start:
Customer: D. DESAI SELFM-PW-EV	Site Name: BLDG 167 TANK 0090010-18 CLOSURE - 7 JUN 94 - C= None LTR			Finish:
Phone: X-2147				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% SOLIDS	MUNSEL	OVA	Remarks
1532.1	6-20-94 1050	SITE A - WEST	SOIL	1	X	X	X		NET TALEN
.2	1042	SITE B - SOUTH WEST							
.3	1053	SITE C - SOUTH EAST							
.4	1048	SITE D - EAST							
.5	1040	SITE E - NORTH EAST							
.6	1055	SITE F - NORTH WEST							
.7	1042	SITE G - SOUTH WEST DUP							
.8	1048	SITE H - EAST DUP							
.9	1057	SITE I - PIPE SOUTH							
.10	1100	SITE J - PIPE NORTH							

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
	6 | 20		
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		B. MK	6/20/94 11:00

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

Enviornmental Laboratory

Certification Number 13461

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

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

Lab. ID #: 1532.1-.10
Sample Rec'd: 06/20/94
Analysis Start: 06/20/94
Analysis Comp: 06/20/94

Analysis: Munsel

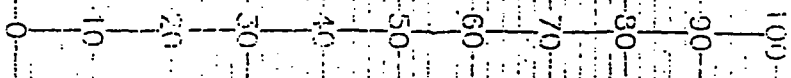
Lab ID#	Soil Color
1532.1	5Y 5/2 Olive Gray
1532.2	5Y 4/2 Olive Gray
1532.3	5Y 4/2 Olive Gray
1532.4	5Y 4/2 Olive Gray
1532.5	5Y 5/3 Olive
1532.6	5Y 3/2 Dark Olive Gray
1532.7	5Y 4/1 Dark Gray
1532.8	5Y 4/2 Olive Gray
1532.9	10YR 4/3 Brown
1532.10	10YR 4/2 Dark Grayish Brown

Brian K. McKee
Laboratory Director

6- 2-94

B. MK

2CM/M 500 MV=CAL-0

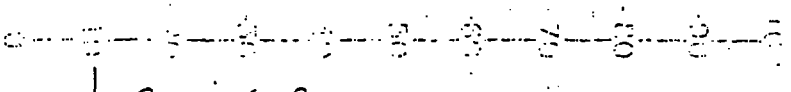


Blank

40.75 108 mV

81.5 217 mV

163 421 mV



Blank Rinse

1532.1 (2x) 166 mV

1532.2 2 mV

1532.3 10 mV

1532.4 9 mV

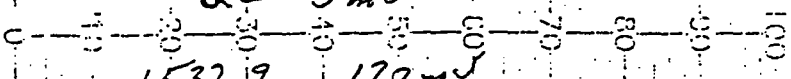
Rinse Check

1532.5 6 mV

1532.6 102 mV

1532.7 6 mV

1532.8 3 mV



1532.9 170 mV

1532.10 33 mV

1532.5 Dup = 8 mV

1532.5 sp 200 mV

1532.5 sp Dup 206 mV

PRINTED IN U.S.A.

195-0720-00

PHC Conformance/Non-conformance Summary Report

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

Comments: _____

Laboratory Authentication Statement

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

Project #1532

Brian K. McKee
Laboratory Manager

ATTACHMENT N

UST 273 File Review, Report and Analyses

Contents:

- Bldg. 273 Underground Storage Tank File Review
- Enclosure 1 – Tecom-Vinnell Services (TVS) Report: *Underground Storage Tank Report, Main Post East – Bldg. 273*. May 2009.
- Enclosure 2 – Closure certification documents
- Enclosure 3 – Analytical Data Report

UNDERGROUND STORAGE TANK FILE REVIEW
FORT MONMOUTH BRAC 05 FACILITY
OCEANPORT, NEW JERSEY

Date: *July 21, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 273*** Registration ID: 90010-65 to -67

Recommended Status of Site: ***NFA from NJDEP***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***None***

Based on the file review, were there indications of a contaminant release? [ ] Yes [X] No

NJDEP Release No. or DICAR (If applicable): _____

Did NJDEP approve No Further Action (NFA) for this site? [ ] Yes [X] No [ ] Not Applicable

Tank Description: [ ] Steel [X] Fiberglass Size: 6,000 and 10,000 gals. Contents: Gasoline, diesel

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 6/2/2008 to 6/4/2008

Were closure soil samples taken? [X] Yes [ ] No Analyses: VOCs, TPH

Comparison criteria: RDCSCC

Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

Building 273 is a former government vehicle fueling station. Three USTs were removed in 2008, as summarized below:

- One 6,000-gallon double-walled fiberglass diesel UST (90010-65) was removed on 6/4/2008.
- Two 10,000-gallon double-walled fiberglass gasoline USTs (90010-66 and -67) were removed on 6/2/2008 to 6/3/2008.

These USTs were removed and replaced with an above-ground storage tank (AST) fuel storage system, which utilizes the same dispensers and was used until closure in 2011. The USTs were located adjacent to one another, and no holes were noted during removal. Groundwater was noted in the excavation but no sheen was observed on the groundwater.

Following tank removal n 2008, soil samples were collected from the 117C tank excavation and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs). The soil sample results were non-detected (ND) for TPH. VOC results were ND for 12 of the 13 closure soil samples; benzene and toluene were detected in one soil sample at concentrations well below the Residential Soil Cleanup Soil Remediation Criteria (RDCSRS). A UST closure report for the Building 273 USTs was prepared in 2009 by Tecom-Vinnell Services (TVS) (*Underground Storage Tank Report, Main Post East – Bldg. 273*)(Enclosure 1) but was not previously submitted to NJDEP. Closure certification documents are provided in Enclosure 2, and laboratory analyses are provided in Enclosure 3.

In summary, NFA is warranted for this site.

Recommendations (if any): Request NFA from NJDEP.

Signed: _____

Kent A. Friesen, Parsons

ATTACHMENT N, Enclosure 1

Tecom-Vinnell Services (TVS) Report: *Underground Storage Tank Report, Main Post East – Bldg. 273*. May 2009.

U.S. Army Garrison
Fort Monmouth, New Jersey

Underground Storage Tank Report

Main Post East –Bldg.273

NJDEP UST Registration No. 0009001-65, 66, 67

May 2009

UNDERGROUND STORAGE TANK CLOSURE AND REMEDIAL INVESTIGATION REPORT

MAIN POST EAST – BLDG. 273
NJDEP UST REGISTRATION NO.: 009001-65, 66, 67

MAY 2009

PROJECT NO.: TMS NO8-6337

PREPARED FOR:

U.S. ARMY GARRISON, FORT MONMOUTH, NJ
DIRECTORATE OF PUBLIC WORKS
BUILDING 173
FORT MONMOUTH, NJ 07703

PREPARED BY:

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

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APPENDICES

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Appendix E **Soil Analytical Data Package**

EXECUTIVE SUMMARY

UST Closure

On June 2, 3 and 4, 2008, three underground storage tanks (USTs) were closed by removal in accordance with the Directorate of Public Works (DPW) UST Management Plan for the U.S. Army Garrison, Fort Monmouth, New Jersey. The USTs was located near Building 273 in the East Main Post area of Fort Monmouth. UST No. 009001-65 was a 6,000-gallon double walled fiberglass No. 2 heating oil tank. UST No. 009001-66 and 67 both were 10,000 gallon double walled fiberglass tanks containing gasoline.

Site Assessment

The site assessment was performed by TVS personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. 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 or evidence of impacted soils were observed after the removal of the tanks from the ground.

All sampling was performed by a NJDEP Certified Subsurface Evaluator according to the methods described in the NJDEP Field Sampling Procedures Manual (August 2005 Edition-Updated 15 February 2008). Sampling frequency and parameters analyzed complied with the NJDEP document Technical Requirements for Site Remediation, 7:26E-3.9 (December 17, 2007 and revisions dated June 2, 2008) which was the applicable regulation at the date of the closure.

Findings

The post-excavation soil samples collected from the UST excavation associated with former UST No. 009001-65, 66 and 67 contained TPH concentrations below the NJDEP health based criterion of 10,000 milligrams per kilogram (mg/kg) for total organic contaminants (N.J.A.C. 7:26E and revisions dated February 3, 1994). None of the samples collected for post remedial confirmation were in excess of the additional analytical threshold of 1,000 ppm. The analytical data confirmed that no release had occurred from any of the three excavated USTs.

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 crushed stone. The excavation site was then restored to its original condition with four inches of asphalt.

Conclusions and Recommendations

Based on the post-excavation soil sampling results, soils present are within the NJDEP health based criteria for total organic compounds and there are no detected volatile organic compounds (VOCs) that exceed the NJDEP Residential Direct Contact Soil Cleanup Criteria.

No further action is proposed in regard to the closure and site assessment of USTs No. 009001-65,66, 67 at Building 273.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

Three underground storage tanks (USTs), New Jersey Department of Environmental Protection (NJDEP) Registration No. 009001-65, 66 and 67 respectively , were closed in the area of Bldg. 273 located at the East Main Post at U.S. Army Garrison, Fort Monmouth, New Jersey on June 2, 3 and 4, 2008. Refer to site location map on Figure 1. This report presents the results of the implementation of the DPW's UST Management Plan, March, 1996. UST No. 009001-65 was a 6,000-gallon double walled fiberglass tank containing No. 2 heating oil tank. UST No. 009001-66 and 67 both were 10,000 gallon double walled fiberglass tanks containing gasoline.

Decommissioning activities for the USTs complied with all applicable federal, state and local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to: N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. The closure and subsurface evaluation of the UST was conducted by a NJDEP licensed US ARMY employee.

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

This report was prepared using information required by the Technical Requirements for Site Remediation (N.J.A.C. 7:26E) (Technical Requirements). Section 1 of this UST Closure and Remedial 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 Section 3 of this report.

1.2 SITE DESCRIPTION

Building 273 is located in the eastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. The USTs were located to the North of Building 273. The fill port and appurtenant piping was not encountered in the excavation during the tank removal phase. The piping was removed prior to the excavation of the tanks. Post excavation samples were collected at the time of the removal of the piping. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the Bldg. 273. 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.

Fort Monmouth lies within the Outer Coastal Plain subprovince of the New Jersey section of the Atlantic Coastal Plain physiographic province, which generally consists of a seaward-dipping wedge of unconsolidated sediments including interbedded clay, silt, sand, and gravel. To the northwest is the boundary between the Outer and Inner Coastal Plains, marked by a line of hills extending southwest, from the Atlantic Highlands overlooking Sandy Hook Bay, to a point southeast of Freehold, New Jersey, and then across the state to the Delaware Bay. These formations of clay, silt, sand, and gravel formations were deposited on Precambrian and lower Paleozoic rocks and typically strike northeast-southwest, with a dip that ranges from 10 – 60 feet per mile. Coastal Plain sediments date from the Cretaceous through the Quaternary Periods and are predominantly derived from deltaic, shallow marine, and continental shelf environments.

The Property is located within the outer fringe of the Atlantic Coastal Plain Physiographic Province, of New Jersey, approximately 20 miles south of Raritan Bay. This province is characterized by a wedge-shaped mass of unconsolidated to semi-consolidated marine, marginal marine and non-marine deposits of clay, silt, sand, and gravel. These sediments range in age from Cretaceous to Holocene and lie unconformably on pre-Cretaceous bedrock consisting of metamorphic schists and gneiss, with local occurrences of basalts, sandstone and shale (Zapecza, 1984). These sediments trend northeast-southwest and dip southeast toward the Atlantic Ocean. These sediments thicken southeastward from the Piedmont-Coastal Plain Province boundary to approximately 4,500 feet near Atlantic City, New Jersey. During the Cretaceous and Tertiary time period, sediments were deposited alternately in flood plains and in marine environments during sea transgression and sea regression periods. The formations record several major transgressive/regressive cycles and contain units that 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).

Regressive upward coarsening deposits, such as Englishtown and Kirkwood Formations and the Cohansey Sand are usually aquifers, while transgressive deposits, such as the Merchantville, Marshalltown, and Navesink Formations, act as confining units. The thicknesses of these units vary greatly, ranging from several feet to several hundred feet, and thicken to the southeast.

The eastern half of the Main Post is underlain by the Red Bank Formation, ranging in thickness from 20-30 feet, while the western half is underlain by the Homerstown Formation, ranging in thickness from 20-30 feet. The predominant formation underlying the Charles Wood Area is also the Homerstown, with small areas of Vincentown Formation intruding in the southwest corner. Sand and gravel deposited in recent geologic times lie above these formations. Interbedded sequences of clay serve as semi-confining units for groundwater. The mineralogy ranges from quartz to glauconite.

Udorthents-Urban land is the primary classification of soils on Fort Monmouth, which have been modified by excavating or filling. Soils at the Main Post include Freehold sandy loam, Downer sandy loam, and Kresson loam. Freehold and Downer are somewhat well drained, while Kresson is a poorly drained soil. The Charles Wood Area has sandy loams of the Freehold, Shrewsbury, and Holmdel types. Shrewsbury is a hydric soil; Kresson and Holmdel are hydric due to inclusions of Shrewsbury. Downer is not generally hydric, but can be (Ref. 025, Ref. 068).

Local Geology

Fort Monmouth lies in the Atlantic and Eastern Gulf Coastal Plain groundwater region and is underlain by underformed, unconsolidated to semi-consolidated sedimentary deposits. The chemistry of the water near the surface is variable with generally low dissolved solids and high iron concentrations. In areas underlain by glauconitic sediments, the water chemistry is dominated by calcium, magnesium, and iron (*e.g.* Red Bank and Tinton sands). The sediments in the vicinity of Fort Monmouth were deposited in fluvial-deltaic to nearshore environments. The water table is generally shallow at the Installation, and in certain areas fluctuates with the tidal action in Parkers and Oceanport creeks at the Main Post.

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile.

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

The Tinton sand conformably overlies the Red Bank Sand and ranges from a clayey medium to very coarse-grained feldspathic quartz and glauconite sand to a glauconitic coarse sand. The color varies from dark yellowish orange or light brown to moderate brown and from light olive to grayish olive.

Glauconite may constitute 60 to 80 percent of the sand fraction in the upper part of the unit (Minard, 1969). The upper part of the Tinton is often highly oxidized and iron oxide encrusted (Minard).

Hydrogeology

The water table aquifer in the Main Post area is identified as part of the "composite confining units", or minor aquifers. The minor aquifers include the Navesink formation, Red Bank Sand, Tinton Sand, Hornerstown Sand, Vincentown Formation, Manasquan Formation, Shark River Formation, Piney Point Formation, and the basal clay of the Kirkwood Formation. The Hornerstown Formation acts as an upper boundary of the Red Bank aquifer, but it might yield enough water within its outcrop to supply individual household needs. The Red Bank outcrops along the northern edges of the Installation, and contains two members, an upper sand member and a lower clayey sand member. The upper sand member functions as the aquifer and is probably present on some of the surface of the Main Post and at a shallow depth below the Charles Wood Area. The Hornerstown and Red Bank formations overlay the larger Wenonah-Mount Laurel aquifer.

Based on records of wells drilled in the Main Post area, water is typically encountered at depths ranging from 2 to 9 feet below ground surface (bgs). According to Jablonski, wells drilled in the Red Bank and Tinton Sands may yield 2 to 25 gallons per minute (gpm). Some local well owners have reported acidic water that requires treatment to remove iron. Acid sulfate soils are naturally occurring soils, sediments or organic substrates (e.g. peat) that are formed under waterlogged conditions. Soil and sediment materials rich in iron sulfide (black ooze) tend to be very dark and soft. Iron sulfides can react rapidly when they are disturbed (i.e. exposed to oxygen). Pyrite will tend to occur as more discrete crystals in soil and organic matter matrices and will react more slowly when disturbed. The oxidation of iron sulfide in potential acid sulfate soil material (sulfidic material) results in the formation of actual acid sulfate soil material or sulfuric material. These soils contain iron sulfide minerals (predominantly as the mineral pyrite) or their oxidation products. Soil horizons that contain sulfides are called ‘sulfidic materials’ (Isbell 1996; Soil Survey Staff 2003) and can be environmentally damaging if exposed to air by disturbance. Exposure results in the oxidation of pyrite.

This process transforms sulfidic material to sulfuric material when, on oxidation, the material develops a pH 4 or less (Isbell 1996; Soil Survey Staff 2003). Acid sulfate soil materials include *potential acid sulfate soil material* (sulfidic material) and/or *actual acid sulfate soil materia*l (sulfuric material), both of which can occur in the same soil profile. In an undisturbed state below the water table, acid sulfate soils are benign. However if the soils are drained, excavated or exposed to air by a lowering of the water table, the sulfides will react with oxygen to form sulfuric acid.

Release of this sulfuric acid from the soil can in turn release iron, aluminum, and other heavy metals (particularly arsenic) within the soil. Once mobilized in this way, the acid and metals can create a variety of adverse impacts: killing vegetation, seeping into and acidifying groundwater and water bodies, killing fish and other aquatic organisms, and degrading concrete and steel structures to the point

The soils and sediments that are most prone to becoming acid sulfate soils are those, which formed within the last 10,000 years, (Holocene geological age) after the last major sea level rise. When the sea level rose and inundated the land, sulfate in the seawater mixed with land sediments containing iron oxides and organic matter. Under these anaerobic conditions, lithotrophic bacteria such as *Thiobacillus ferrooxidans* form iron sulfides (pyrite). Up to a point, warmer temperatures are more favourable conditions for these bacteria, creating a greater potential for formation of iron sulfides. Tropical waterlogged environments, such as mangrove swamps or estuaries, may contain higher levels of pyrite than those formed in more temperate climates

The pyrite is stable until it is exposed to air, at which point the pyrite oxidizes and produces sulfuric acid. The impacts of acid sulfate soil leachate may persist over a long time, and/or peak seasonally (after dry periods with the first rains).

Chemical reaction

When drained, pyrite (FeS_2) containing soils (also called cat-clays) may become extremely acidic (pH < 4) due to the oxidation of pyrite into sulfuric acid (H_2SO_4). In its simplest form, this chemical reaction is as follows:

$$\mathbf{2\ FeS_2 + 9\ O_2 + 4\ H_2O \rightarrow 8\ H^+ + 4\ SO_4^{=} + 2\ Fe\ (OH)_3\ (solid)}$$

The product $Fe(OH)_3$, iron (III) hydroxide (orange), precipitates as a solid, insoluble mineral by which the alkali component is immobilized, while the acidity remains active in the sulfuric acid. The process of acidification is accompanied by the formation of high amounts of aluminum (Al^{+++}, released from clay minerals under influence of the acidity), which are harmful to vegetation.

Other products of the chemical reaction are:

- Hydrogen sulfide (H_2S), a smelly gas
- Sulfur (S), a yellow solid
- Iron(II) sulfide (FeS), a black/gray/blue solid
- Haematite (Fe_2O_3), a red solid
- Goethite (FeO.OH), a brown mineral
- Iron compounds (e.g. jarosite)
- H-Clay (hydrogen clay, with a large fraction of adsorbed H^+ ions, a stable mineral, but poor in nutrients)

The iron can be present in bivalent and trivalent forms (Fe^{++}, the ferrous ion, and Fe^{+++}, the ferric ion respectively). The ferrous form is soluble, whereas the ferric form is not. The more oxidized the soil becomes, the more the ferric forms will dominate. Acid sulfate soils exhibit an array of colors ranging from black, brown, blue-gray, red, orange and yellow.

Due to the proximity of various tidal water bodies to Fort Monmouth, some shallow groundwater may be tidally influenced and may flow toward creeks and brooks as the tide goes out, and away from creeks and brooks as the tide comes in.

Groundwater level fluctuations due to tidal influences occur in three general hydrogeologic settings. They are: (1) an unconfined aquifer with a subaqueous outcrop, (2) a confined aquifer with a subaqueous outcrop and (3) a confined aquifer that underlies but does not outcrop in the tidally fluctuating surface water body.

During a tidal cycle, there is generally an exchange of waters between the surface water body and the aquifer. The magnitude and the direction of this exchange depend on whether the surface water body has a net gain or loss during the cycle. Under natural (nonpumping) conditions, the surface water body typically gains more than it loses during the tidal cycle. The penetration of the surface water into the aquifer creates a zone where surface water and ground water mix. The inland extent of this zone depends on the permeability of the aquifer, the net hydraulic gradient prevailing at the seepage face during the losing part of the tidal cycle and the configuration of the shore.

If the shore is a cliff, the mixing zone extends inland as far as it can penetrated during a tidal cycle. If it gently slopes toward the surface water body, the mixing zone is limited to a short distance inland from the high tide line.

Inland from the mixing zone the groundwater level fluctuates in response to a progressive pressure wave created by the cyclically changing groundwater storage in this zone. The volume of unconfined aquifer affected is directly proportional to the short-term changes in storage. The change in storage during a tidal cycle is small compared to the total volume of the aquifer; the aquifer adjusts to this change within a few hundred feet of the seepage face.

The area of Bldg. 273 is located approximately 500 feet Northwest of Oceanport Creek. Based on the Main Post topography, the groundwater flow in the area of Bldg. 273 is anticipated to be to the southeast. The wells in this area are not under normal conditions considered to be tidally influenced.

1.3 HEALTH AND SAFETY

Work site health and safety hazards were minimized during all decommissioning activities. All areas that posed a vapor hazard were monitored by a qualified individual utilizing a calibrated photo-ionizer detector: Thermo Instruments Organic Vapor Monitor (OVM) – Model #580-B. The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA. All work areas were properly vented to insure that there were no contaminants present in the breathing zone above permissible exposure limits (PELs).

1.4 REMOVAL OF UNDERGROUND STORAGE TANKS

1.4.1 General Procedures

- All underground utilities were marked out by the respective shops and/or utility contractor prior to excavation activities.

- All activities were carried out with great regard to safety and health and the safeguarding of the environment.

- All excavated soils were visually examined and screened with an OVM for evidence of contamination. No impacted soils were encountered during the tank excavations. These soils were used to backfill the excavation upon clearance.

- 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 certified Subsurface Evaluator was present during all closure activities.

1.4.2 Underground Storage Tank Excavations

During decommissioning activities, surficial soil was removed to expose the USTs. The tanks were completely emptied of all liquids prior to removal from the ground.

Approximately 900 gallons of liquid was pumped out of the UST by Lorco Petroleum Services, Inc. into a vacuum tank truck and transported to their NJDEP-approved petroleum recycling and disposal facility located in Elizabeth, New Jersey. Refer to Appendix C for non-hazardous waste manifest (No. NJZ-49683).

After the USTs were removed from the excavation, they were staged on polyethylene sheeting, labeled and examined for holes. No holes in the tank were observed during the inspection by the Subsurface Evaluator. Soils surrounding the USTs were screened visually and with an Organic Vapor Monitor (OVM) for evidence of contamination. No soil staining and an odor of fuel were observed. After removal, they were transported for storage at the Bldg. 108 pad for subsequent cutting and disposal.

1.5 UNDERGROUND STORAGE TANK DECOMMISSIONING AND DISPOSAL

Subsequent to disposal, the USTs were purged with air to remove vapors prior to cutting. A 4 feet by 3 feet access hole was made in the UST using a pneumatic ripper gun with a non-sparking bit. The USTs were cleaned first with rubber squeegees and adsorbent material broomed on the sidewalls and bottom. The adsorbent material were then drummed and subsequently put into Ft. Monmouth's 'Oil Spill Debris' roll-off container for proper disposal. The atmosphere in and around the tank was monitored using an OVM and an Oxygen/Lower Explosive Level (LEL) meter to ensure safe working conditions during cutting and cleaning activities.

The fiberglass tanks were cut as to be placed into a 30 cubic yard roll-off container and shipped off site as non-hazardous bulk solid waste. Refer to Appendix C for UST disposal certificate.

The Subsurface Evaluator labeled the UST with the following information:

- site of origin
- NJDEP UST Facility ID number
- date of removal
- size of tank
- previous contents of tank

Photographic documentation of the UST is included in Appendix D.

2.0 REMEDIAL INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Remedial Investigation was managed and carried out by U.S. Army DPW personnel. All analyses were performed and reported by Fort Monmouth Environmental Testing Laboratory, a NJDEP-certified testing laboratory. All sampling was performed by a NJDEP Certified Subsurface Evaluator according to the methods described in the NJDEP Field Sampling Procedures Manual (August 2005, Updated 15 February 2008). Sampling frequency and parameters analyzed complied with the NJDEP document Technical Requirements for Site Remediation, 7:26E-3.9 (December 17, 2007 and revisions dated June 2, 2008) which was the applicable regulation at the date of the closure. All records of the Remedial Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Closure and Remedial Investigation Activities.

- Ft. Monmouth Directorate of Public Works-Environmental Division
  Contact Person: Joe Fallon
  Phone Number: (732) 532-2692

- Subsurface Evaluator: Charles Appleby
  Employer: US Army, CECOM
  Phone Number: (732) 532-6254
  NJDEP License No.: 9974

- Analytical Laboratory: Fort Monmouth Environmental Testing Laboratory
  Contact Person: Jackie Hamer
  Phone Number: (732) 532-4359
  NJDEP Laboratory Certification No.: 13461

- Hazardous Waste Hauler: Lorco Petroleum Services, Inc., Elizabeth, NJ
  Contact Person: Dan MacKay
  Phone Number: (908) 820-8800
  US EPA ID No.: NJR000023036

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP certified Subsurface Evaluator using an OVM and visual observations to identify potentially contaminated material. No impacted soils were encountered during the tank removal procedures. Clean overburden soils were stockpiled for later reuse.

2.3 SOIL SAMPLING

On June 2, 3, and 4, 2008, post-excavation soil samples collected from a total of thirteen (13) locations along the sidewalls and the bottom of the UST excavations. Groundwater was encountered at approximately eight (8) feet bgs. during the tank removal operations. Refer to soil sampling location map in Figure 3. All samples were analyzed for TPH and VO+10 in accordance with the requirements of Technical Requirements for Site Remediation.

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

Post-excavation soil samples were collected from a total of 13 locations on June 2, 3, and 4, 2008, to evaluate soil conditions following removal of the USTs. All samples were analyzed for TPH and VO+10. The post-excavation soil sample results were compared to the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided on Table 2 and Table 3. The analytical data package, including associated quality control data, is provided in Appendix E.

All post-excavation soil samples collected, from the UST remedial excavation contained concentrations of TPH below the NJDEP soil cleanup criteria.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all final post-excavation soil samples collected from the UST closure excavation at UST No. 009001-65, 66 and 67 were below the NJDEP soil cleanup criteria for total organic contaminants and volatile organic compounds.

No further action is proposed in regard to the closure and site assessment of UST No009001-65, 66 and 67 at Building 273.

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, BUILDING 273, UST No.009001-65, 66, 67

June 2, 3, and 4, 2008

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
273-1	8018201	02-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-2	8018202	02-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-3	8018203	02-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-4	8018204	02-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-5	8018205	02-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-66-1	8018401	03-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-66-2	8018402	03-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-65-1	8018901	04-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-65-2	8018902	04-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-65-3	8018903	04-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-65-4	8018904	04-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-65-5	8018905	04-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
273-65-6	8018906	04-June-08	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
TRIP BLANK	8018908	04-June-08	METHANOL	VOA	SW-846, 8260

ABBREVIATIONS:
TPH = Total Petroleum Hydrocarbons, Method NJDEP OQA-QAM-25
VOA = Volatile Organic Analysis, EPA SW-846 Method 8260

TABLE 2

SUMMARY OF LABORATORY ANALYTICAL RESULTS
FT. MONMOUTH, BUILDING 1006, UST No.009001-65, 66 and 67
June 2, 3 and 4, 2008

TOTAL PETROLEUM HYDROCARBONS (results in mg/kg)

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH (in feet)	MATRIX	TPH RESULTS
273-1	8018201	West Side, N	6-6.5’	Soil	ND
273-2	8018202	West Side, C	6-6.5’	Soil	ND
273-3	8018203	West Side S	6-6.5’	Soil	ND
273-4	8018204	North end	6-6.5	Soil	ND
273-5	8018205	South end	6-6.5’	Soil	ND
273-66-1	8018401	North End	6-6.5’	Soil	ND
273-66-2	8018402	South end	6-6.5’	Soil	ND
273-65-1	8018901	East side North	6-6.5	Soil	ND
273-65-2	8018902	East side Center	6-6.5	Soil	ND
273-65-3	8018903	East side south	6-6.5	Soil	ND
273-65-4	8018904	North End	6-6.5	Soil	ND
273-65-5	8018905	South end	6-6.5	Soil	ND
273-65-6	8018906	Piping	5-5.5	Soils	ND

ABBREVIATIONS:
mg/kg = Milligrams Per Kilogram = parts per million
ND = Compound Not Detected
NA = Compound Not Analyzed
*= Further Analyzed for Volatiles

Notes:
Gray shading indicates exceedance of NJDEP health based criterion of 10,000 ppm total organic contaminants

TABLE 3

SUMMARY OF LABORATORY ANALYTICAL RESULTS

FT. MONMOUTH, BUILDING 1006, UST No. 009001-65, 66 and 67

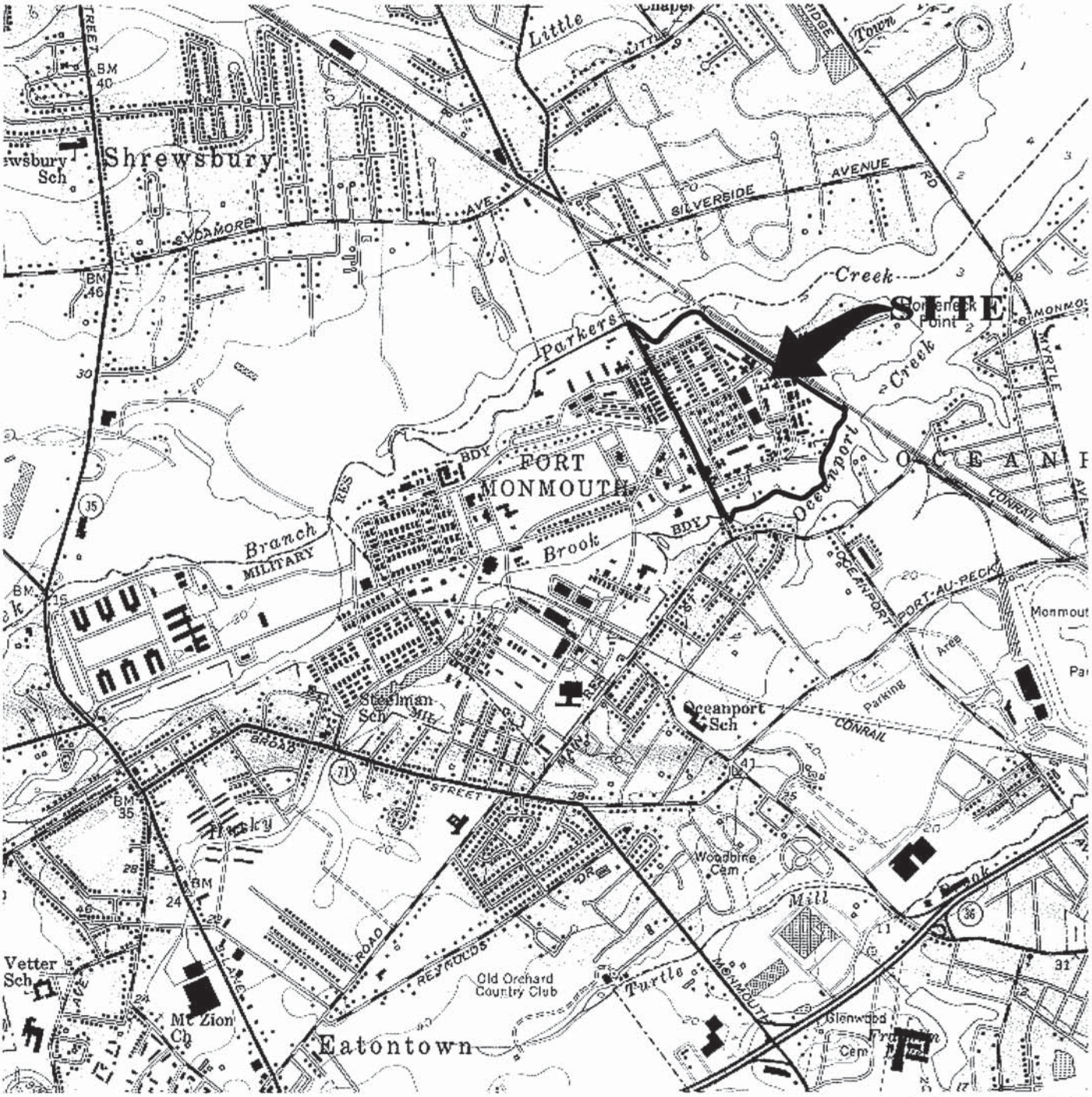
June 2, 3, and 4, 2008

VOLATILE ORGANIC COMPOUNDS (in mg/kg)

SAMPLE ID	SAMPLE DATE	Benzene	Toluene	Ethylbenzene	Xylenes (total)
273-1	02-June-08	0.034	0.025	ND	ND
273-2	02-June-08	ND	ND	ND	ND
273-3	02-June-08	ND	ND	ND	ND
273-4	02-June-08	ND	ND	ND	ND
273-5	02-June-08	ND	ND	ND	ND
273-66-1	03-June-08	ND	ND	ND	ND
273-66-2	03-June-08	ND	ND	ND	ND
273-65-1	04-June-08	ND	ND	ND	ND
273-65-2	04-June-08	ND	ND	ND	ND
273-65-3	04-June-08	ND	ND	ND	ND
273-65-4	04-June-08	ND	ND	ND	ND
273-65-5	04-June-08	ND	ND	ND	ND
273-65-6	04-June-08	ND	ND	ND	ND
NJDEP Criteria (in mg/kg)	Residential	2	6,300	7,800	12,000

ABBREVIATIONS:
mg/kg = Milligrams Per Kilogram = parts per million
ND = Compound Not Detected
NA = Compound Not Analyzed

Notes:
Gray shading indicates exceedance of NJDEP Residential Direct Contact Soil Cleanup Criteria



Mapped, edited and published by the Geological Survey

FIGURE 1

LOCATION MAP
Building 273
Main-Post East
Fort Monmouth Army Base
Monmouth County, NJ

Scale: 1" = 2000'

Date:

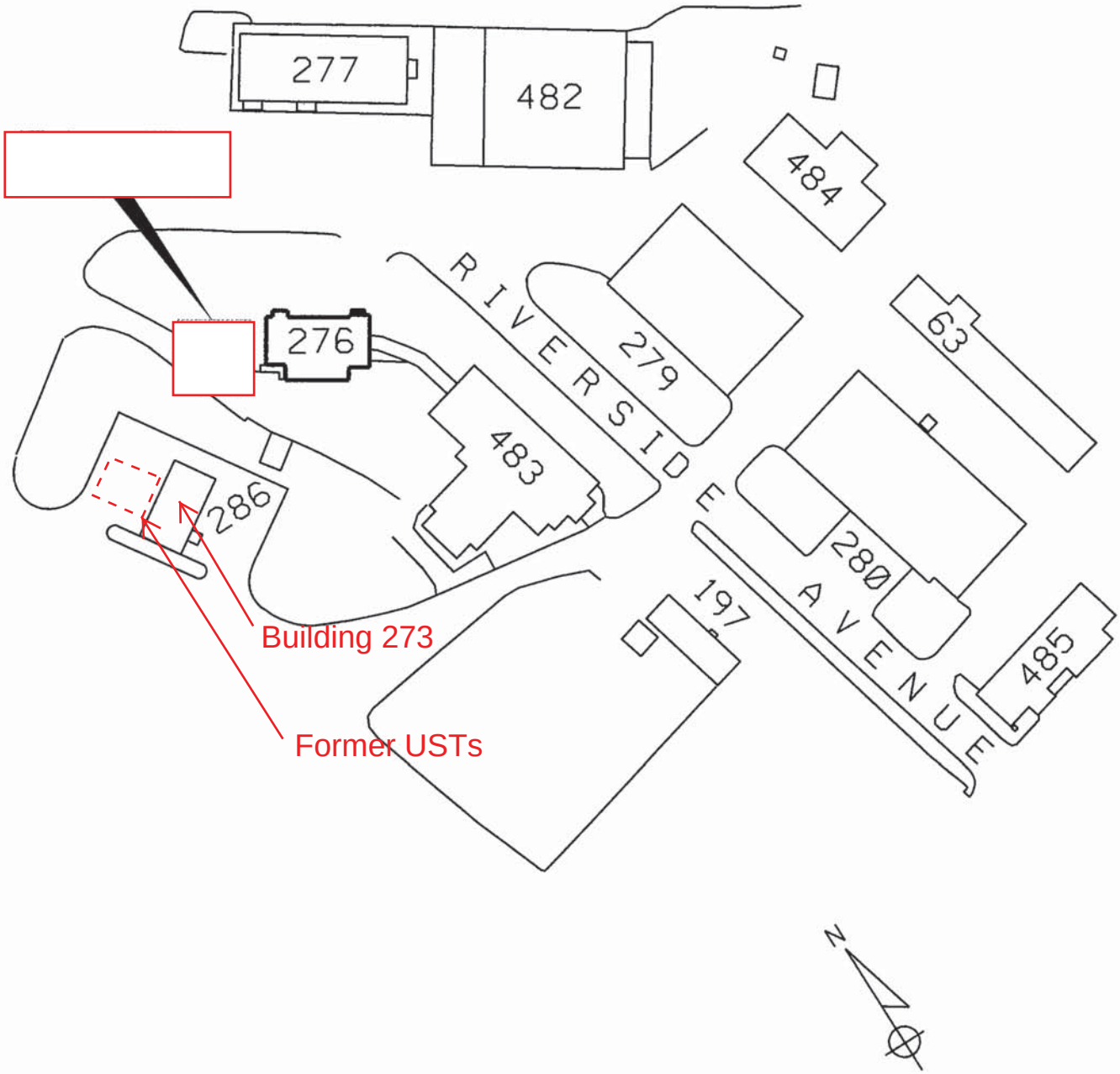
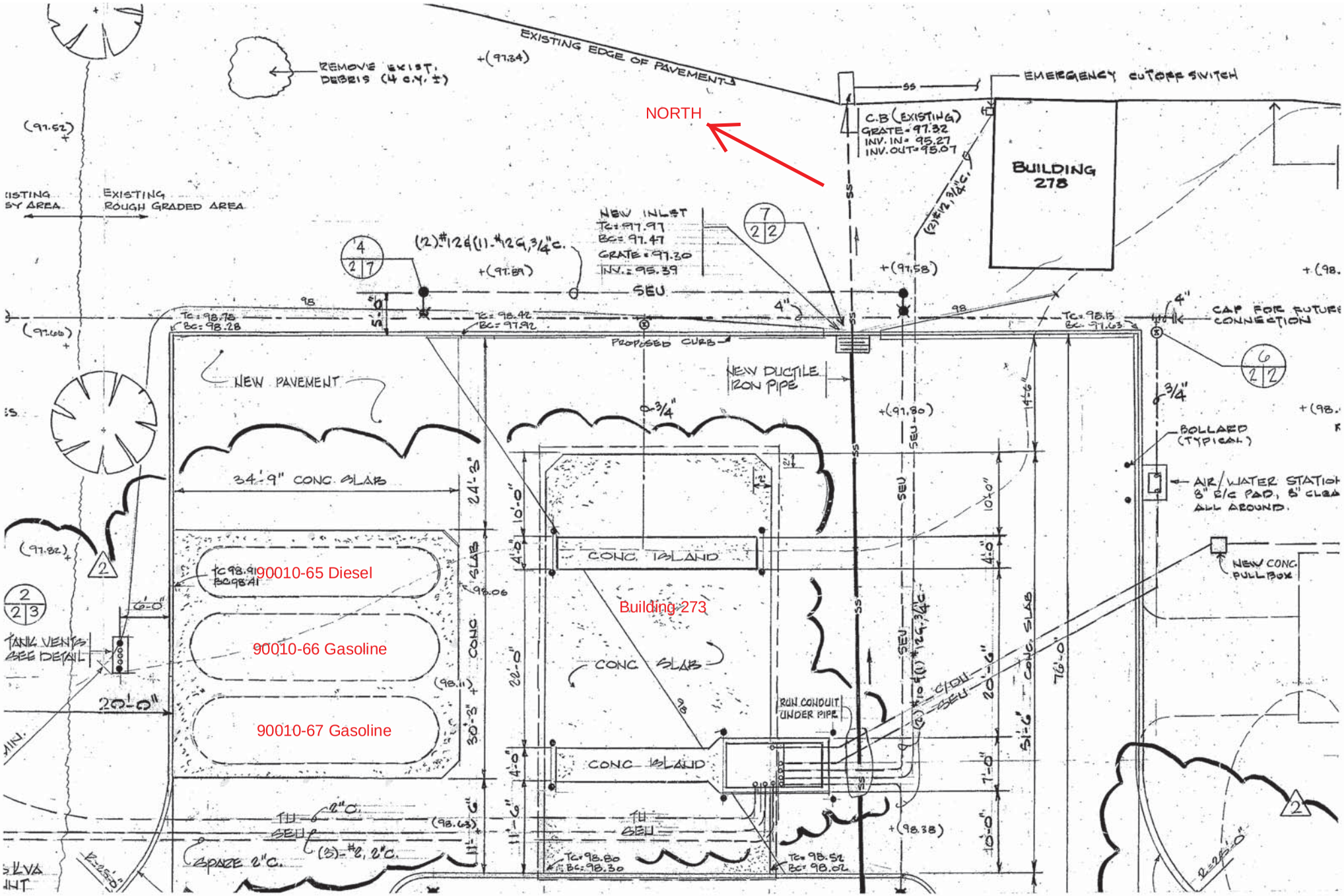


FIGURE 2
SITE MAP
BUILDING 273
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

SCALE: 1"=100'

DATE:

276 FIG2


EXISTING EDGE OF PAVEMENT
+(97.34)
REMOVE EXIST. DEBRIS (4 C.Y. ±)
EMERGENCY CUTOFF SWITCH
NORTH
C.B (EXISTING)
GRATE = 97.32
INV. IN = 95.27
INV. OUT = 95.07
BUILDING 278
(97.52)
EXISTING ROUGH GRADED AREA
NEW INLET
TC = 97.97
BC = 97.47
GRATE = 97.30
INV. = 95.39
(2)#12 & (1)#12 & 3/4"C.
+(97.89)
+(97.58)
SEU
4"
CAP FOR FUTURE CONNECTION
Tc = 98.78
Bc = 98.28
Tc = 98.42
Bc = 97.92
Tc = 98.13
Bc = 97.63
PROPOSED CURB
NEW PAVEMENT
NEW DUCTILE IRON PIPE
+(97.80)
BOLLARD (TYPICAL)
AIR/WATER STATION
8" E/C PAD, 5' CLEA
ALL AROUND.
34'-9" CONC. SLAB
24'-3"
CONC. ISLAND
90010-65 Diesel
Tc 98.91
Bc 98.41
Building 273
90010-66 Gasoline
CONC. SLAB
90010-67 Gasoline
NEW CONC. PULLBOX
TANK VENTS SEE DETAIL
20'-0"
RUN CONDUIT UNDER PIPE
CONC. ISLAND
SPACE 2"C.
(3)-#2, 2"C.
+(98.38)
Tc = 98.80
Bc = 98.30
Tc = 98.52
Bc = 98.02



Removed and labeled fiberglass USTs



Fiberglass UST being removed from excavation



UST ready to be lifted out of the ground



Fiberglass tank being spotted for inspection



All three tanks post excavation – note no obvious signs of corrosion



Evidence of groundwater in excavation

ATTACHMENT N, Enclosure 2

Closure Certification Documents

UST-C13, 11/2001

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CASE ASSIGNMENT and INITIAL NOTICE
401 EAST STATE STREET
P.O. BOX 435
TRENTON, NEW JERSEY 08625-0435

FACILITY ID # _____ *FOR NJDEP USE ONLY*

ACTIVITY #

TMS #

RECEIVED DATE

EARLIEST START OF CLOSURE DATE

CLOSURE OF AN UNDERGROUND STORAGE TANK (UST) SYSTEM FORM

Submission of this form is a requirement of N.J.A.C. 7:14B-9. This form replaces UST-013 and UST-N13. ***You can also use*** **NJDEP On-Line** ***at*** **www.njdeponline.com** ***for submittal of the Notice of Intent To Close An UST System.*** Additionally, an UST Facility Certification Questionnaire must be completed and submitted to the Department within seven days of the completion of all closure activities.

Has closure occurred prior to this submittal? ___YES/ __X__NO If Yes date of closure:

Check appropriate box for type of submittal (only one type per submittal)

X 1. **Notice of Intent To Close An UST System** Complete Sections A, B, D

As per N.J.A.C. 7:14B-9, the owner or operator of an underground storage tank system is required to notify the Department and all county and municipal health departments and municipal agencies of the **intent to close an underground storage tank system** on this closure form **at least 14 calendar days prior to the anticipated closure date**. This notification requires **no fee** . A verification from the Department will be sent to the address listed in Section D of this closure form indicating the earliest date you may begin the closure of the UST system and will include a Facility ID# and an Activity # for the activity proposed. The Department will use these numbers to track all activities associated with the tank(s) and/or piping listed on this closure form. **Therefore it is important that these numbers be used in all applicable future reports.** You must include a copy of this form with the application required for a local demolition permit.

NOTE: *If a closure plan approval (#2 below) has previously been issued for the UST system(s) being closed, notification will not be required unless additional UST systems are scheduled for closure.*

☐ 2. **UST Closure Plan Review / Variance Request Approval** Complete all Sections A, B, C, D

The owner or operator of an UST system may choose to submit a closure plan to the Department for review and approval instead of a notification. The closure plan should be submitted at least 60 days in advance of the anticipated closure date. This approval requires a **$450 fee** for review pursuant to N.J.A.C. 7:14B-3.5. All variances from the technical requirements of N.J.A.C.7:26E must be included with the closure plan pursuant to N.J.A.C. 7:26E-1.6(d). After review the Department will issue a written response either approving or denying the plan. Closure may begin immediately after receiving written approval from the Department and the local authorities.

☐ 3. **Out of Service UST Extension Request for more than 12 months** Complete Sections A, B, D

The owner or operator can request an extension for an UST system to remain out of service for a period more than 12 months without having to close the tank system per N.J.A.C. 7:14B-9.1(c). This form along with a Site Investigation Report completed in accordance with N.J.A.C. 7:26E must be submitted at least 30 calendar days prior to the expiration of the 12-month period. A **$750 fee** is required for review of the site investigation report. If a release monitoring system exists then an out of service UST extension request may be made as per N.J.A.C. 7:14B-9.1(c) 2.

NOTE: *A completed UST Facility Certification Questionnaire must have been previously submitted to the Bureau of Fund Management, Compliance & Recovery, Registration and Billing Section indicating the UST system(s) are out of service.*

NOTE: Change in Service from a Regulated to a Nonregulated Substance

In accordance with N.J.A.C. 7:14B-9.4, the owner or operator of an Underground Storage Tank System in which the substance being stored is being changed to a substance not regulated by this chapter shall: (1) Prior to storing the nonregulated substance, empty and clean the tank by removing all liquid and accumulated sludge; (2) Prior to storing the nonregulated substance, conduct a site investigation of the Underground Storage Tank System in accordance with N.J.A.C 7:26E-3: and (3) Submit a site investigation report prepared and presented in accordance with N.J.A.C. 7:26E-3.13 within 120 calendar days after the tank cleaning along with the required **$750 review fee**. Additionally, the owner/operator must submit a Facility Certification Questionnaire indicating the change to the Bureau of Fund Management, Compliance & Recovery, Registration and Billing Section. Should a discharge of hazardous substances be identified, refer to N.J.A.C. 7:14B-9.4(b). In accordance with N.J.A.C. 7:26E-6.3(b)6ii, contamination detected above an applicable remediation standard may require the removal of the tank system to facilitate remedial action.

- **Please type or print legibly in ink.** Call 609/633-0708 for help in completing this notification.
- The UST system must be registered. If the UST system is **not registered** this form will not be processed.

Section A - General Facility Information

1. FACILITY ID # 009001 BLOCK 105 LOT 1

   FACILITY NAME U S Army Garrison – Fort Monmouth, Main Post East

   FAC. ADDRESS LINE 1(# and Street) Building 273

   FAC. ADDRESS LINE 2 (PO Box, Suite)

   MUNICIPALITY Oceanport Boro COUNTY Monmouth

2. OWNER'S NAME / (Organization) US Army Garrison – Fort Monmouth

   CONTACT PERSON John McCarthy TITLE Environmental Engineer

   ADDRESS LINE 1 (#and Street) 173 Riverside Avenue

   ADDRESS LINE 2 (PO Box, Suite) IMNE-MON-PWE CITY Fort Monmouth

   STATE NJ ZIP 07703 TELEPHONE NUMBER 732-532-6224

3. OPERATOR'S NAME / (Organization) Directorate of Public Works

   CONTACT PERSON John McCarthy TITLE Environmental Engineer

   ADDRESS LINE 1(# and Street) 173 Riverside Avenue

   ADDRESS LINE 2 (PO Box, Suite) IMNE-MON-PWE CITY Fort Monmouth

   STATE NJ ZIP 07703 TELEPHONE NUMBER 732-532-6224

Section B - Specific Tank Information

Certifications *(Indicate below the name & cert. # of the firm & individual performing/performed the UST service):*

1. FOR UST CLOSURE ACTIVITIES (PHYSICAL REMOVAL OR ABANDONMENT)

Certification# US252302 Name of Certified Firm TECOM-Vinnell Services

Certification# 0010042 Name of Certified Individual Frank Accorsi

2. FOR SUBSURFACE EVALUATION (SITE INVESTIGATION, CORRECTIVE ACTION, etc.)

Certification# NA Name of Certified Firm US Army

Certification# 000974 Name of Certified Individual Charles Appleby

NOTE: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24.1 et seq., requires that any services performed on an UST system for the purposes of complying with P.L.1986, c.102 must be performed by, or under the immediate on-site supervision of, a person certified by the Department for that service. The certified person providing that service must be employed by a business that is also certified by the Department for that service.

Activity

Is this submittal in response to a discharge? ___YES/ X NO; If Yes enter Com.Center # (i.e. 00-00-00-0000-00)
Is this submittal related to an active SRP case? ___YES/ X NO; If Yes enter Case # (i.e. 000001USR010001)
Proposed Date Underground Storage Tank(s) and/or piping will be closed: **On or about May 27, 2008**

Complete the following information concerning UST system closure.
If piping is being closed without associated tank, please include associated Tank No., Tank Size, and Tank Contents fields and check **PIPING ONLY**.

Tank Closure

Tank No. (i.e. E1)	Length of Piping (ft)	Tank Size (gallons)	Tank Contents*	PIPING ONLY
65	30	6000	Medium Diesel Fuel (No. 2D)	☐
66	30	10,000	Unleaded Gasoline	☐
67	30	10, 000	Unleaded gasoline	☐
				☐
				☐
				☐

* If material is a hazardous substance but not a petroleum product, use chemical name and CAS number to identify tank's conent (Brand or trade names are unacceptable).

Check here and attach additional page(s) if needed. ___

Section C - Site Investigation Work Plan/ Tank Decommissioning Plan

Complete this section only if applying for UST Closure Plan Review/Variance Request Approval
Attach the following information as required by N.J.A.C. 7:14B-9.2:

a. Implementation schedule

b. A scaled site map clearly identifying the UST system location(s) scheduled for closure

c. Site Investigation Work Plan *(Check Correct Response)*:

____ SI will be performed in accordance with N.J.A.C. 7:26E. the Technical Requirements for Site Remediation. **(Do not submit additional SI information.)**

____ A variance from N.J.A.C. 7:26E is being requested. In accordance with N.J.A.C. 7:26E-1.6(d), an alternate SI plan is attached for review.

d. Decommissioning Plan *(Check Correct Response)*:

____ The UST Decommissioning Plan will conform to N.J.A.C. 7:26E-6.3(b); the New Jersey Uniform Construction Code (N.J.A.C. 5:23) and the current American Petroleum Institute's guidance (API Recommended Practice 1604).

____ A variance UST Decommissioning Plan is being requested. In accordance with N.J.A.C. 7:26E-1.6(d), an alternate UST Decommissioning Plan is attached for review.

Section D - This Notification has been submitted by:

Name (print or type) Barbara Folk Signature Barbara Folk

Title Director of Public Works Date 20 May 2008

Organization US Army Garrison – Fort Monmouth

Address Line 1(# and Street) 167 Riverside Avenue

Address Line 2 (PO Box, Suite) IMNE – MON - PW

City Fort Monmouth State NJ Zip

Telephone 732-427-1523 E-mail Address

Mail the Closure Certificate to: [X] *Check if same as above*

Name (print or type)

Title

Organization

Address

City _____ State _____ Zip

Telephone _____ E-mail Address

Jersey Department of Environmental Pro on

Division of Remediation Support
Bureau of Risk Management, Initial Notice and Case Assignment
PO Box 435
Trenton, NJ 08625-0435
(609) 633-0708

Fallon

CLOSURE - Notice of Intent
Underground Storage Tank System

DEP Received Date: 05/29/2008
Earliest Start of Work Date: 06/12/2008
Expiration Date: 05/29/2009

TMS #: N08-6337 **Facility ID #:** 009001
Activity #: UCL080001

Facility Name:
USARMY GARRISON FORTMONMOUTH MAN POST E

Facility Address:
BLDG 273
Oceanport Boro
Monmouth County

Decommission, close and conduct a site investigation for the UST(s) and all associated piping specified in this approval in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in N.J.A.C. 7:14B-8.2.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified person providing that service must be employed by a business that is also certified by the Department for that service.

Contact Person: BARBARA FOLK **Telephone #:** (732)427-1523

This Permit must be displayed at the Site during the Approved Activity and must be made available for inspections at all times.

The above listed facility is hereby granted approval to perform the attached activities in accordance with N.J.A.C. 7:14B-1 et. seq.

Rafael Rivera

Rafael Rivera, Supervisor
Bureau of Risk Management, Initial Notice and Case Assignment

This Permit consists of 2 pages.

The closure of th llowing:

One-10000 gallon Unleaded Gasoline underground storage tank, and appurtenant piping.
One-6000 gallon Medium Diesel Fuel (No. 2-D) underground storage tank, and appurtenant piping.
One-10000 gallon Unleaded Gasoline underground storage tank, and appurtenant piping.

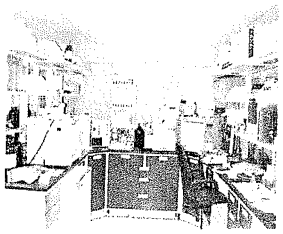
ATTACHMENT N, Enclosure 3

Analytical Data Report

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 532-4359 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: BLDG. 273

Bldg. 273

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
273-P1-West End	8016601	Soil	16-May-08 09:30	05/16/08
273-P2-West End + 10 feet	8016602	Soil	16-May-08 09:40	05/16/08
273-P1-West End + 20 feet	8016603	Soil	16-May-08 09:48	05/16/08
273-P2-West End + 30 feet	8016604	Soil	16-May-08 09:58	05/16/08
273-P1-West End + 40 feet	8016605	Soil	16-May-08 10:10	05/16/08
273-Duplicate	8016606	Soil	16-May-08 09:40	05/16/08
Trip Blank	8016607	Methanol	16-May-08	05/16/08
273-1 West Side, North	8018201	Soil	02-June-08 15:12	06/02/08
273-2 West Side, Center	8018202	Soil	02-June-08 15:24	06/02/08
273-3 West Side, South	8018203	Soil	02-June-08 15:35	06/02/08
273-4 North End	8018204	Soil	02-June-08 15:00	06/02/08
273-5 South End	8018205	Soil	02-June-08 15:40	06/02/08
273-Duplicate	8018206	Soil	02-June-08 15:40	06/02/08
Trip Blank	8018207	Methanol	02-June-08	06/02/08
273-66-1 North End	8018401	Soil	03-June-08 14:20	06/03/08
273-66-2 South End	8018402	Soil	03-June-08 14:45	06/03/08
273-66 Duplicate	8018403	Soil	03-June-08 14:45	06/03/08
Trip Blank	8018404	Methanol	03-June-08	06/03/08
273-65-1 East Side, North	8018901	Soil	04-June-08 13:30	06/04/08
273-65-2 East Side, Center	8018902	Soil	04-June-08 13:42	06/04/08
273-65-3 East Side, South	8018903	Soil	04-June-08 13:58	06/04/08
273-65-4 North End	8018904	Soil	04-June-08 14:15	06/04/08
273-65-5 South End	8018905	Soil	04-June-08 14:30	06/04/08
273-65-6 Piping	8018906	Soil	04-June-08 15:00	06/04/08
273-65-7 Duplicate	8018907	Soil	04-June-08 14:30	06/04/08
Trip Blank	8018908	Methanol	04-June-08	06/04/08

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, TPHC, % SOLIDS

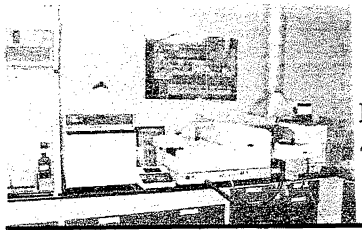
Jacqueline Hamer/Date 12/24/08
QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: JOE FALLON
Phone #: X26223
( )DERA ( )OMA (x)Other:_____
Project No: 08-65967
Location: BLDG. 273
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOA 15					VOA #	DEPTH (FT)	Remarks / Preservation Method
10160 01	273-P1-WEST END	5-16-08	0930	SOIL	2	X	X					6184	4-4.5	ICE
02	273-P2-W.END +10 FT.		0940		2	X	X					6185	4-4.5	
03	273-P3-W.END +20 FT.		0948		2	X	X					6186	4-4.5	
04	273-P4-W.END +30 FT		0958		2	X	X					6187	4-4.5	
05	273-P5-W.END +40 FT.		1010		2	X	X					6188	4-4.5	
06	273-DUPLICATE		0940		2	X	X					6189	4-4.5	
07	TRIP BLANK		—	AQ.	1		X					6190	—	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	5-16-08 1150				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, (_)Rush ____ Days, (_)ASAP Verbal ____Hrs.

Remarks:

000002

print legibly 0

SAMPLE RECEIPT FORM

Date Received: 5-16-08 Work Order ID#: 801606

Site/Proj. Name: Bldg 273 Cooler Temp (°C): 3.0°C

Received By: J. Vasquez Sign: J. Vasquez
(Print name)

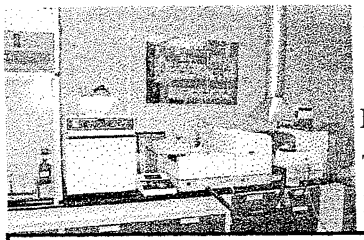
Check the appropriate box

1. Did the samples come in a cooler? ☑ yes ☐ no ☐ n/a
2. Were samples rec'd in good condition? ☑ yes ☐ no
3. Was the chain of custody filled out correctly and legibly? ☑ yes ☐ no
4. Was the chain of custody signed in the appropriate place? ☑ yes ☐ no
5. Did the labels agree with the chain of custody? ☑ yes ☐ no
6. Were the correct containers/preservatives used? ☑ yes ☐ no
7. Was a sufficient amount of sample supplied? ☑ yes ☐ no
8. Were air bubbles present in VOA vials? ☐ yes ☐ no ☑ n/a
9. Were samples received on ice? ☑ yes ☐ no
10. Were analyze-immediately tests perform within 15 minutes ☐ yes ☐ no ☑ n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative

Comments: _____



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:appleby@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: CHUCK APPLEBY
Phone #:
( )DERA ( )OMA (X)Other:_____

Project No: 08-65967
Location: B.273
UST # 67 (10 K-GASOLINE)

Samplers Name / Company ; FRANK ACCORSI / TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPH	* VOA's					Lead (T)	VOA #	Remarks / Preservation Method
SC152 01	273-1, WEST SIDE, N	6-2-08	1512	SOIL	2	X	X					6-6.5	6209	ICE
02	273-2, WEST SIDE, C		1524		2	X	X					6-6.5	6215	
03	273-3 WEST SIDE, S		1535		2	X	X					6-6.5	6211	
04	273-4, NORTH END		1500		2	X	X					6-6.5	6212	
05	273-5, SOUTH END		1540		2	X	X					6-6.5	6213	
06	273-DUPLICATE		B540		2	X	X					6-6.5	6214	
07	TRIP BLANK			AQ.	1		X					—	6216	

Analysis Parameters

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	6-2-08 1612				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified
Turnaround time: (X)Standard 4 wks, (_)Rush ____ Days, (_)ASAP Verbal ____ Hrs.

Remarks: * INCLUDE MTBE, TBA

000004

SAMPLE RECEIPT FORM

Date Received: 6-2-08 Lab Project ID#: 80152

Site/Project Name: Bldg 213/UST Cooler Temp (deg. C): 2.0°C

Received By: J. Delgado Sign: J. Delgado
(print name)

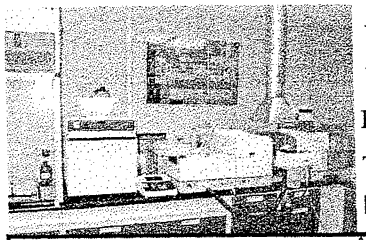
Check the appropriate answer

1. Did the samples come in a cooler?	☑ yes	☐ no	☐ NA
2. Were the chain of custody papers filled out correctly and legibly?	☑ yes	☐ no	
3. Did you sign the chain of custody in the appropriate place?	☑ yes	☐ no	
4. Did all the labels agree with the chain of custody and in good condition?	☑ yes	☐ no	
5. Were the correct containers and/or preservatives used for the tests indicated?	☑ yes	☐ no	
6. Was a sufficient amount of sample sent for the tests indicated?	☑ yes	☐ no	
7. Were bubbles absent from aqueous VOC sample containers?	☐ yes	☐ no	☑ NA

Fill out the following table for each sample bottle

Sample ID	pH	Preservative	Sample ID	pH	Preservative

Comments: _____



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:appleby@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: CHUCK APPLEBY
Phone #: 422692
( )DERA ( )OMA ( )Other: X

Project No: 08-65967
Location: B 273
UST # 9001O-66

Samplers Name / Company ; FRANK ACCORSI / TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOCs							Comments: Remarks / Preservation Method
801847 01	273-66-1, NORTH END	6-3-08	1420	SOIL	2	X	X							ICE
02	273-66-2, SOUTH END		1445		2	X	X							
03	273-66-DUPLICATE		1445		2	X	X							
04	TRIP BLANK		—	AQ	1		X							

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	6-3-08 1600				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified
Turnaround time: (X)Standard 4 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks: * TO INCLUDE MTBE, TBA

900006

SAMPLE RECEIPT FORM

Date Received: 10-3-05 Lab Project ID#: 80184

Site/Project Name: Bldg 273/ UST Cooler Temp (deg. C): 4.0°C

Received By: T. Vergara Sign:
(print name)

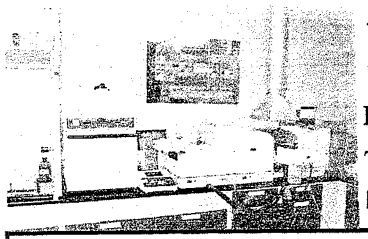
Check the appropriate answer

1. Did the samples come in a cooler?	☑ yes	☐ no	☐ NA
2. Were the chain of custody papers filled out correctly and legibly?	☑ yes	☐ no	
3. Did you sign the chain of custody in the appropriate place?	☑ yes	☐ no	
4. Did all the labels agree with the chain of custody and in good condition?	☑ yes	☐ no	
5. Were the correct containers and/or preservatives used for the tests indicated?	☑ yes	☐ no	
6. Was a sufficient amount of sample sent for the tests indicated?	☑ yes	☐ no	
7. Were bubbles absent from aqueous VOC sample containers?	☐ yes	☐ no	☑ NA

Fill out the following table for each sample bottle

Sample ID	pH	Preservative	Sample ID	pH	Preservative

Comments:



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: CHUCK APPLEBY | Project No: 08-65967 | Location: 6,273 | UST # 90010-65 (6K DIESEL)
Phone #:
( )DERA ( )OMA ( )Other:_____
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOLS*	610, SOILS				DEPTH (FT)	VOA #	Remarks / Preservation Method
80189 01	273-65-1, EAST SIDE NORTH	6-4-08	1330	SOIL	2	X	X	X				6-6.5	6221	ICE
02	273-65-2, EAST SIDE CENTER		1342		2	X	X	X				6-6.5	6222	
03	273-65-3, EAST SIDE SOUTH		1358		2	X	X	X				6-6.5	6223	
04	273-65-4, NORTH END		1415		2	X	X	X				6-6.5	6224	
05	273-65-5, SOUTH END		1430		2	X	X	X				6-6.5	6225	
06	273-65-6, PIPING		1500		2	X	X	X				6-6.5	6228	
07	273-65-7, DUPLICATE		1430		2	X	X	X				6-6.5	6226	
08	TRIP BLANK		—	AQ.	1		X					—	6227	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	6-4-08 1545				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks: *TO INCLUDE MTBE, TBA

800008

print legibly

SAMPLE RECEIPT FORM

Date Received: 6-4-08 Work Order ID#: 80189

Site/Proj. Name: Bldg 273/UST Cooler Temp (°C): 4.0°C

Received By: J. Clemmer Sign: J. Clemmer
(Print name)

Check the appropriate box

1. Did the samples come in a cooler? ☑ yes ☐ no ☐ n/a
2. Were samples rec'd in good condition? ☑ yes ☐ no
3. Was the chain of custody filled out correctly and legibly? ☑ yes ☐ no
4. Was the chain of custody signed in the appropriate place? ☑ yes ☐ no
5. Did the labels agree with the chain of custody? ☑ yes ☐ no
6. Were the correct containers/preservatives used? ☑ yes ☐ no
7. Was a sufficient amount of sample supplied? ☑ yes ☐ no
8. Were air bubbles present in VOA vials? ☐ yes ☐ no ☑ n/a
9. Were samples received on ice? ☑ yes ☐ no
10. Were analyze-immediately tests perform within 15 minutes ☐ yes ☐ no ☑ n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative

Comments: _____

FIELD DUPLICATE IDENTIFICATION

Field Duplicate Identification

Sample ID	Lab ID	Field Duplicate
273-P2 West End + 10 feet	8016602	8016606
273-5, South End	8018205	8018206
273-66-2, South End	8018402	8018403
273-65-5, South End	8018905	8018907

GPS COORDINATES

U.S. ARMY - FT. MONMOUTH, NJ

BUILDING 273-USTs #90010-065, #90010-066, #90010-067

SOIL SAMPLE GPS POSITIONS & COORDINATES

US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

(IN US SURVEY FEET)

SAMPLE POINTS

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
273.1 WEST SIDE-NORTH	541773.617	623171.191
273.2 WEST SIDE-CENTER	541769.349	623173.85
273.3 WEST SIDE-SOUTH	541762.614	623179.422
273.4 NORTH END	541766.435	623196.669
273.5 SOUTH END	541783.898	623166.575
273.66.1 NORTH END	541774.323	623200.772
273.66.2 SOUTH END	541789.297	623180.393
273.65.1 EAST SIDE-NORTH	541794.475	623197.467
273.65.2 EAST SIDE-CENTER	541786.042	623203.863
273.65.3 EAST SIDE-SOUTH	541777.052	623207.565
273.65.4 NORTH END	541796.695	623186.187
273.65.5 SOUTH END	541775.274	623207.417
273.65.6 PIPING	541795.611	623182.002
273 P1 WEST END(piping)	541760.337	623192.043
273 P2 WEST END + 10 FT	541770.962	623202.351
273 P3 WEST END + 20 FT	541781.206	623208.313
273 P4 WEST END + 30 FT	541789.333	623216.604
273 P5 WEST END + 40 FT	541795.418	623230.705

METHODOLOGY SUMMARY

Method Summary

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

A 10-gram volume of soil is combined with 25-ml of Methanol and surrogates in the field. Internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system. Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

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

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

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

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for Petroleum Hydrocarbons covering a range of C8-C42, including Pristane and Phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak. The final concentration of Total Petroleum Hydrocarbons is calculated using percent moisture, sample weight and concentration.

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms labeled/Compounds identified (Field samples and method blanks) — yes
2. Retention times for chromatograms provided — yes
3. GC/MS Tune Specifications
   a. BFB Meet Criteria — yes
   b. DFTPP Meet Criteria — NA
4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series — yes
5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — yes
6. GC/MS Calibration requirements
   a. Calibration Check Compounds Meet Criteria — yes
   b. System Performance Check Compounds Meet Criteria — yes
7. Blank Contamination – If yes, List compounds and concentrations in each blank: — NO
   a. VOA Fraction ____
   b. B/N Fraction NA
   c. Acid Fraction NA
8. Surrogate Recoveries Meet Criteria — NO

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

   a. VOA Fraction See Comments
   b. B/N Fraction NA
   c. Acid Fraction NA

   If not met, were the calculations checked and the results qualified as "estimated"? — yes
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria — NO
   (If not met, list those compounds and their recoveries, which fall outside the acceptable range)
   a. VOA Fraction Various recoveries out see summaries
   b. B/N Fraction NA
   c. Acid Fraction NA

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

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

    a. VOA Fraction_____
    b. B/N Fraction NA
    c. Acid Fraction NA

11. Extraction Holding Time Met — NA

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:
DSE high in the initial and reanalyses of 8018202, 8018203, 8018204, 8018905 and 8018906. both sets reported.

Laboratory Manager: Jacqueline Heeman Date: 6/24/08

TPHC CONFORMANCE/NON–CONFORMANCE SUMMARY REPORT

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

Additional comments: _____

Laboratory Manager: Jacqueline Hamer Date: 6/24/08

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

U: The compound was analyzed for but not detected.

B: Indicates that the compound was found in the associated method blank as well as in the sample.

J: Indicates an estimated value. This flag is used:

(1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

(2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.

D: This flag is used to identify all compounds (target or TIC) that required a dilution.

E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.

N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 5/23/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: MB 5/23/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA983.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 0 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 5/23/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: MB 5/23/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA983.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 0 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB 5/23/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: MB 5/23/08

Sample wt/vol: 5.0 (g/ml) G Lab File ID: VA983.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 0 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 1 (uL) Soil Aliquot Volume: 1 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 6/11/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/11/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1154.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 6/11/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/11/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1154.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB 6/11/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/11/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1154.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 6/12/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/12/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1176.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 6/12/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/12/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1176.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB 6/12/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/12/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1176.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 6/13/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/13/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1197.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 6/13/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/13/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1197.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB 6/13/08

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: MB 6/13/08

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1197.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273 TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016607

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA984.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 0 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273 TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016607

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA984.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 0 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273 TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016607

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA984.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 0 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018207

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1200.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018207

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1200.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018207

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1200.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018404

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1204.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018404

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1204.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

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Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018404

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1204.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018908

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1213.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018908

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1213.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	400	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018908

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA1213.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 0 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273 DUPLICATE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016606

Sample wt/vol: 10.2 (g/ml) G Lab File ID: VA992.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 16.16 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2300	U
107131	Acrylonitrile	2300	U
75650	tert-Butyl alcohol	2300	U
1634044	Methyl-tert-Butyl ether	230	U
108203	Di-isopropyl ether	230	U
75718	Dichlorodifluoromethane	230	U
74-87-3	Chloromethane	230	U
75-01-4	Vinyl Chloride	230	U
74-83-9	Bromomethane	230	U
75-00-3	Chloroethane	230	U
75-69-4	Trichlorofluoromethane	230	U
75-35-4	1,1-Dichloroethene	230	U
67-64-1	Acetone	230	U
75-15-0	Carbon Disulfide	230	U
75-09-2	Methylene Chloride	230	U
156-60-5	trans-1,2-Dichloroethene	230	U
75-35-3	1,1-Dichloroethane	230	U
108-05-4	Vinyl Acetate	230	U
78-93-3	2-Butanone	230	U
156-59-2	cis-1,2-Dichloroethene	230	U
67-66-3	Chloroform	230	U
75-55-6	1,1,1-Trichloroethane	230	U
56-23-5	Carbon Tetrachloride	230	U
71-43-2	Benzene	230	U
107-06-2	1,2-Dichloroethane	230	U
79-01-6	Trichloroethene	230	U
78-87-5	1,2-Dichloropropane	230	U
75-27-4	Bromodichloromethane	230	U
110-75-8	2-Chloroethyl vinyl ether	230	U
10061-01-5	cis-1,3-Dichloropropene	230	U
108-10-1	4-Methyl-2-Pentanone	230	U
108-88-3	Toluene	230	U
10061-02-6	trans-1,3-Dichloropropene	230	U
79-00-5	1,1,2-Trichloroethane	230	U
127-18-4	Tetrachloroethene	230	U
591-78-6	2-Hexanone	230	U
126-48-1	Dibromochloromethane	230	U
108-90-7	Chlorobenzene	230	U
100-41-4	Ethylbenzene	230	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273 DUPLICATE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016606

Sample wt/vol: 10.2 (g/ml) G Lab File ID: VA992.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 16.16 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	470	U
1330-20-7	o-Xylene	230	U
100-42-5	Styrene	230	U
75-25-2	Bromoform	230	U
79-34-5	1,1,2,2-Tetrachloroethane	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273 DUPLICATE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016606

Sample wt/vol: 10.2 (g/ml) G Lab File ID: VA992.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 16.16 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273 DUPLICATE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018206

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA1199.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.63 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

273 DUPLICATE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018206

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA1199.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.63 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	410	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273 DUPLICATE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018206

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA1199.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.63 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

:73-66 DUPLICATI

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018403

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA1203.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 12.13 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2100	U
107131	Acrylonitrile	2100	U
75650	tert-Butyl alcohol	2100	U
1634044	Methyl-tert-Butyl ether	210	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	210	U
75-01-4	Vinyl Chloride	210	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	210	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	210	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	210	U
75-09-2	Methylene Chloride	210	U
156-60-5	trans-1,2-Dichloroethene	210	U
75-34-3	1,1-Dichloroethane	210	U
108-05-4	Vinyl Acetate	210	U
78-93-3	2-Butanone	210	U
156-59-2	cis-1,2-Dichloroethene	210	U
67-66-3	Chloroform	210	U
71-55-6	1,1,1-Trichloroethane	210	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	210	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	210	U
78-87-5	1,2-Dichloropropane	210	U
75-27-4	Bromodichloromethane	210	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	210	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	210	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	210	U
591-78-6	2-Hexanone	210	U
124-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	210	U
100-41-4	Ethylbenzene	210	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

:73-66 DUPLICATE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018403

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA1203.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 12.13 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	430	U
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

:73-66 DUPLICATI

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018403

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA1203.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 12.13 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-1 WEST END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016601

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA985.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 16.11 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2200	U
107131	Acrylonitrile	2200	U
75650	tert-Butyl alcohol	2200	U
1634044	Methyl-tert-Butyl ether	220	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	220	U
74-87-3	Chloromethane	220	U
75-01-4	Vinyl Chloride	220	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	220	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	220	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	220	U
75-09-2	Methylene Chloride	220	U
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	220	U
108-05-4	Vinyl Acetate	220	U
78-93-3	2-Butanone	220	U
156-59-2	cis-1,2-Dichloroethene	220	U
67-66-3	Chloroform	220	U
75-55-6	1,1,1-Trichloroethane	220	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	220	U
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	220	U
78-87-5	1,2-Dichloropropane	220	U
75-27-4	Bromodichloromethane	220	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	220	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	220	U
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	220	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	220	U
100-41-4	Ethylbenzene	220	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-1 WEST END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016601

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA985.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 16.11 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	440	U
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

?73 P-1 WEST ENI

Lab Name: FMETL Contract:

Lab Code: 13461 Case No.: MW SAS No.: SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016601

Sample wt/vol: 10.9 (g/ml) G Lab File ID: VA985.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 16.11 Date Analyzed: 5/23/2008

GC Column: RTX-VM ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

>-2 W. END+10 FT

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016602

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA986.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 14.89 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2200	U
107131	Acrylonitrile	2200	U
75650	tert-Butyl alcohol	2200	U
1634044	Methyl-tert-Butyl ether	220	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	220	U
74-87-3	Chloromethane	220	U
75-01-4	Vinyl Chloride	220	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	220	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	220	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	220	U
75-09-2	Methylene Chloride	220	U
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	220	U
108-05-4	Vinyl Acetate	220	U
78-93-3	2-Butanone	220	U
156-59-2	cis-1,2-Dichloroethene	220	U
67-66-3	Chloroform	220	U
75-55-6	1,1,1-Trichloroethane	220	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	220	U
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	220	U
78-87-5	1,2-Dichloropropane	220	U
75-27-4	Bromodichloromethane	220	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	220	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	220	U
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	220	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	220	U
100-41-4	Ethylbenzene	220	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

)-2 W. END+10 FT

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016602

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA986.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 14.89 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	440	U
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

?-2 W. END+10 FT

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016602

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA986.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 14.89 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-3 W.END+20 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016603

Sample wt/vol: 9.7 (g/ml) G Lab File ID: VA987.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 17.98 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2500	U
107131	Acrylonitrile	2500	U
75650	tert-Butyl alcohol	2500	U
1634044	Methyl-tert-Butyl ether	250	U
108203	Di-isopropyl ether	250	U
75718	Dichlorodifluoromethane	250	U
74-87-3	Chloromethane	250	U
75-01-4	Vinyl Chloride	250	U
74-83-9	Bromomethane	250	U
75-00-3	Chloroethane	250	U
75-69-4	Trichlorofluoromethane	250	U
75-35-4	1,1-Dichloroethene	250	U
67-64-1	Acetone	250	U
75-15-0	Carbon Disulfide	250	U
75-09-2	Methylene Chloride	250	U
156-60-5	trans-1,2-Dichloroethene	250	U
75-35-3	1,1-Dichloroethane	250	U
108-05-4	Vinyl Acetate	250	U
78-93-3	2-Butanone	250	U
156-59-2	cis-1,2-Dichloroethene	250	U
67-66-3	Chloroform	250	U
75-55-6	1,1,1-Trichloroethane	250	U
56-23-5	Carbon Tetrachloride	250	U
71-43-2	Benzene	250	U
107-06-2	1,2-Dichloroethane	250	U
79-01-6	Trichloroethene	250	U
78-87-5	1,2-Dichloropropane	250	U
75-27-4	Bromodichloromethane	250	U
110-75-8	2-Chloroethyl vinyl ether	250	U
10061-01-5	cis-1,3-Dichloropropene	250	U
108-10-1	4-Methyl-2-Pentanone	250	U
108-88-3	Toluene	250	U
10061-02-6	trans-1,3-Dichloropropene	250	U
79-00-5	1,1,2-Trichloroethane	250	U
127-18-4	Tetrachloroethene	250	U
591-78-6	2-Hexanone	250	U
126-48-1	Dibromochloromethane	250	U
108-90-7	Chlorobenzene	250	U
100-41-4	Ethylbenzene	250	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-3 W.END+20 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016603

Sample wt/vol: 9.7 (g/ml) G Lab File ID: VA987.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 17.98 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	500	U
1330-20-7	o-Xylene	250	U
100-42-5	Styrene	250	U
75-25-2	Bromoform	250	U
79-34-5	1,1,2,2-Tetrachloroethane	250	U
541-73-1	1,3-Dichlorobenzene	250	U
106-46-7	1,4-Dichlorobenzene	250	U
95-50-1	1,2-Dichlorobenzene	250	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

P-3 W.END+20 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016603

Sample wt/vol: 9.7 (g/ml) G Lab File ID: VA987.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 17.98 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-4 W.END+30 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016604

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA990.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 19.08 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2200	U
107131	Acrylonitrile	2200	U
75650	tert-Butyl alcohol	2200	U
1634044	Methyl-tert-Butyl ether	220	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	220	U
74-87-3	Chloromethane	220	U
75-01-4	Vinyl Chloride	220	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	220	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	220	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	220	U
75-09-2	Methylene Chloride	220	U
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	220	U
108-05-4	Vinyl Acetate	220	U
78-93-3	2-Butanone	220	U
156-59-2	cis-1,2-Dichloroethene	220	U
67-66-3	Chloroform	220	U
75-55-6	1,1,1-Trichloroethane	220	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	220	U
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	220	U
78-87-5	1,2-Dichloropropane	220	U
75-27-4	Bromodichloromethane	220	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	220	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	220	U
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	220	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	220	U
100-41-4	Ethylbenzene	220	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-4 W.END+30 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016604

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA990.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 19.08 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	440	U
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

P-4 W.END+30 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016604

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA990.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 19.08 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-5 W.END+40 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016605

Sample wt/vol: 12.0 (g/ml) G Lab File ID: VA991.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 18.47 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

P-5 W.END+40 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016605

Sample wt/vol: 12.0 (g/ml) G Lab File ID: VA991.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 18.47 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	410	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

P-5 W.END+40 FT.

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80166

Matrix: (soil/water) SOIL Lab Sample ID: 8016605

Sample wt/vol: 12.0 (g/ml) G Lab File ID: VA991.D

Level: (low/med) MED Date Received: 5/16/2008

% Moisture: not dec. 18.47 Date Analyzed: 5/23/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-1 WEST SIDE I

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018201

Sample wt/vol: 10.2 (g/ml) G Lab File ID: VA1215.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 10.03 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2200	U
107131	Acrylonitrile	2200	U
75650	tert-Butyl alcohol	2200	U
1634044	Methyl-tert-Butyl ether	220	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	220	U
74-87-3	Chloromethane	220	U
75-01-4	Vinyl Chloride	220	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	220	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	220	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	220	U
75-09-2	Methylene Chloride	220	U
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	220	U
108-05-4	Vinyl Acetate	220	U
78-93-3	2-Butanone	220	U
156-59-2	cis-1,2-Dichloroethene	220	U
67-66-3	Chloroform	220	U
75-55-6	1,1,1-Trichloroethane	220	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	34	J
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	220	U
78-87-5	1,2-Dichloropropane	220	U
75-27-4	Bromodichloromethane	220	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	220	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	25	J
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	220	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	220	U
100-41-4	Ethylbenzene	220	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-1 WEST SIDE I

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018201

Sample wt/vol: 10.2 (g/ml) G Lab File ID: VA1215.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 10.03 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	440	U
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

73-1 WEST SIDE I

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018201

Sample wt/vol: 10.2 (g/ml) G Lab File ID: VA1215.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 10.03 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-2 WEST SIDE (

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018202

Sample wt/vol: 9.6 (g/ml) G Lab File ID: VA1189.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 8.62 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2300	U
107131	Acrylonitrile	2300	U
75650	tert-Butyl alcohol	2300	U
1634044	Methyl-tert-Butyl ether	230	U
108203	Di-isopropyl ether	230	U
75718	Dichlorodifluoromethane	230	U
74-87-3	Chloromethane	230	U
75-01-4	Vinyl Chloride	230	U
74-83-9	Bromomethane	230	U
75-00-3	Chloroethane	230	U
75-69-4	Trichlorofluoromethane	230	U
75-35-4	1,1-Dichloroethene	230	U
67-64-1	Acetone	230	U
75-15-0	Carbon Disulfide	230	U
75-09-2	Methylene Chloride	230	U
156-60-5	trans-1,2-Dichloroethene	230	U
75-35-3	1,1-Dichloroethane	230	U
108-05-4	Vinyl Acetate	230	U
78-93-3	2-Butanone	230	U
156-59-2	cis-1,2-Dichloroethene	230	U
67-66-3	Chloroform	230	U
75-55-6	1,1,1-Trichloroethane	230	U
56-23-5	Carbon Tetrachloride	230	U
71-43-2	Benzene	230	U
107-06-2	1,2-Dichloroethane	230	U
79-01-6	Trichloroethene	230	U
78-87-5	1,2-Dichloropropane	230	U
75-27-4	Bromodichloromethane	230	U
110-75-8	2-Chloroethyl vinyl ether	230	U
10061-01-5	cis-1,3-Dichloropropene	230	U
108-10-1	4-Methyl-2-Pentanone	230	U
108-88-3	Toluene	230	U
10061-02-6	trans-1,3-Dichloropropene	230	U
79-00-5	1,1,2-Trichloroethane	230	U
127-18-4	Tetrachloroethene	230	U
591-78-6	2-Hexanone	230	U
126-48-1	Dibromochloromethane	230	U
108-90-7	Chlorobenzene	230	U
100-41-4	Ethylbenzene	230	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-2 WEST SIDE (

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018202

Sample wt/vol: 9.6 (g/ml) G Lab File ID: VA1189.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 8.62 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	460	U
1330-20-7	o-Xylene	230	U
100-42-5	Styrene	230	U
75-25-2	Bromoform	230	U
79-34-5	1,1,2,2-Tetrachloroethane	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

73-2 WEST SIDE (

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018202

Sample wt/vol: 9.6 (g/ml) G Lab File ID: VA1189.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 8.62 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-2 WEST SIDE (

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018202CF

Sample wt/vol: 9.6 (g/ml) G Lab File ID: VA1168.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 8.62 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2300	U
107131	Acrylonitrile	2300	U
75650	tert-Butyl alcohol	2300	U
1634044	Methyl-tert-Butyl ether	230	U
108203	Di-isopropyl ether	230	U
75718	Dichlorodifluoromethane	230	U
74-87-3	Chloromethane	230	U
75-01-4	Vinyl Chloride	230	U
74-83-9	Bromomethane	230	U
75-00-3	Chloroethane	230	U
75-69-4	Trichlorofluoromethane	230	U
75-35-4	1,1-Dichloroethene	230	U
67-64-1	Acetone	230	U
75-15-0	Carbon Disulfide	230	U
75-09-2	Methylene Chloride	230	U
156-60-5	trans-1,2-Dichloroethene	230	U
75-35-3	1,1-Dichloroethane	230	U
108-05-4	Vinyl Acetate	230	U
78-93-3	2-Butanone	230	U
156-59-2	cis-1,2-Dichloroethene	230	U
67-66-3	Chloroform	230	U
75-55-6	1,1,1-Trichloroethane	230	U
56-23-5	Carbon Tetrachloride	230	U
71-43-2	Benzene	230	U
107-06-2	1,2-Dichloroethane	230	U
79-01-6	Trichloroethene	230	U
78-87-5	1,2-Dichloropropane	230	U
75-27-4	Bromodichloromethane	230	U
110-75-8	2-Chloroethyl vinyl ether	230	U
10061-01-5	cis-1,3-Dichloropropene	230	U
108-10-1	4-Methyl-2-Pentanone	230	U
108-88-3	Toluene	230	U
10061-02-6	trans-1,3-Dichloropropene	230	U
79-00-5	1,1,2-Trichloroethane	230	U
127-18-4	Tetrachloroethene	230	U
591-78-6	2-Hexanone	230	U
126-48-1	Dibromochloromethane	230	U
108-90-7	Chlorobenzene	230	U
100-41-4	Ethylbenzene	230	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-2 WEST SIDE (

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018202CF

Sample wt/vol: 9.6 (g/ml) G Lab File ID: VA1168.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 8.62 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	460	U
1330-20-7	o-Xylene	230	U
100-42-5	Styrene	230	U
75-25-2	Bromoform	230	U
79-34-5	1,1,2,2-Tetrachloroethane	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

73-2 WEST SIDE (

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018202CF

Sample wt/vol: 9.6 (g/ml) G Lab File ID: VA1168.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 8.62 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-3 WEST SIDE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018203

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VA1190.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.12 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2100	U
107131	Acrylonitrile	2100	U
75650	tert-Butyl alcohol	2100	U
1634044	Methyl-tert-Butyl ether	210	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	210	U
75-01-4	Vinyl Chloride	210	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	210	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	210	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	210	U
75-09-2	Methylene Chloride	210	U
156-60-5	trans-1,2-Dichloroethene	210	U
75-35-3	1,1-Dichloroethane	210	U
108-05-4	Vinyl Acetate	210	U
78-93-3	2-Butanone	210	U
156-59-2	cis-1,2-Dichloroethene	210	U
67-66-3	Chloroform	210	U
75-55-6	1,1,1-Trichloroethane	210	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	210	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	210	U
78-87-5	1,2-Dichloropropane	210	U
75-27-4	Bromodichloromethane	210	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	210	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	210	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	210	U
591-78-6	2-Hexanone	210	U
126-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	210	U
100-41-4	Ethylbenzene	210	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-3 WEST SIDE S

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018203

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VA1190.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.12 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	420	U
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

73-3 WEST SIDE S

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018203

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VA1190.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.12 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-3 WEST SIDE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018203CF

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VA1169.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.12 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2100	U
107131	Acrylonitrile	2100	U
75650	tert-Butyl alcohol	2100	U
1634044	Methyl-tert-Butyl ether	210	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	210	U
75-01-4	Vinyl Chloride	210	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	210	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	210	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	210	U
75-09-2	Methylene Chloride	210	U
156-60-5	trans-1,2-Dichloroethene	210	U
75-35-3	1,1-Dichloroethane	210	U
108-05-4	Vinyl Acetate	210	U
78-93-3	2-Butanone	210	U
156-59-2	cis-1,2-Dichloroethene	210	U
67-66-3	Chloroform	210	U
75-55-6	1,1,1-Trichloroethane	210	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	210	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	210	U
78-87-5	1,2-Dichloropropane	210	U
75-27-4	Bromodichloromethane	210	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	210	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	210	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	210	U
591-78-6	2-Hexanone	210	U
126-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	210	U
100-41-4	Ethylbenzene	210	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-3 WEST SIDE S

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018203CF

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VA1169.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.12 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	420	U
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

73-3 WEST SIDE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018203CF

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VA1169.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.12 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-4 NORTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018204

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1191.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 14.83 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2100	U
107131	Acrylonitrile	2100	U
75650	tert-Butyl alcohol	2100	U
1634044	Methyl-tert-Butyl ether	210	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	210	U
75-01-4	Vinyl Chloride	210	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	210	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	210	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	210	U
75-09-2	Methylene Chloride	210	U
156-60-5	trans-1,2-Dichloroethene	210	U
75-35-3	1,1-Dichloroethane	210	U
108-05-4	Vinyl Acetate	210	U
78-93-3	2-Butanone	210	U
156-59-2	cis-1,2-Dichloroethene	210	U
67-66-3	Chloroform	210	U
75-55-6	1,1,1-Trichloroethane	210	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	210	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	210	U
78-87-5	1,2-Dichloropropane	210	U
75-27-4	Bromodichloromethane	210	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	210	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	210	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	210	U
591-78-6	2-Hexanone	210	U
126-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	210	U
100-41-4	Ethylbenzene	210	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-4 NORTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018204

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1191.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 14.83 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	430	U
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273-4 NORTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018204

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1191.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 14.83 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

273-4 NORTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018204CF

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1170.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 14.83 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2100	U
107131	Acrylonitrile	2100	U
75650	tert-Butyl alcohol	2100	U
1634044	Methyl-tert-Butyl ether	210	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	210	U
75-01-4	Vinyl Chloride	210	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	210	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	210	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	210	U
75-09-2	Methylene Chloride	210	U
156-60-5	trans-1,2-Dichloroethene	210	U
75-35-3	1,1-Dichloroethane	210	U
108-05-4	Vinyl Acetate	210	U
78-93-3	2-Butanone	210	U
156-59-2	cis-1,2-Dichloroethene	210	U
67-66-3	Chloroform	210	U
75-55-6	1,1,1-Trichloroethane	210	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	210	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	210	U
78-87-5	1,2-Dichloropropane	210	U
75-27-4	Bromodichloromethane	210	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	210	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	210	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	210	U
591-78-6	2-Hexanone	210	U
126-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	210	U
100-41-4	Ethylbenzene	210	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-4 NORTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018204CF

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1170.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 14.83 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	430	U
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273-4 NORTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018204CF

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1170.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 14.83 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-5 SOUTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018205

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1198.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.8 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

273-5 SOUTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018205

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1198.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.8 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	410	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273-5 SOUTH END

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80182

Matrix: (soil/water) SOIL Lab Sample ID: 8018205

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1198.D

Level: (low/med) MED Date Received: 6/2/2008

% Moisture: not dec. 9.8 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-66-1 NORTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018401

Sample wt/vol: 10.1 (g/ml) G Lab File ID: VA1201.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 14.41 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2300	U
107131	Acrylonitrile	2300	U
75650	tert-Butyl alcohol	2300	U
1634044	Methyl-tert-Butyl ether	230	U
108203	Di-isopropyl ether	230	U
75718	Dichlorodifluoromethane	230	U
74-87-3	Chloromethane	230	U
75-01-4	Vinyl Chloride	230	U
74-83-9	Bromomethane	230	U
75-00-3	Chloroethane	230	U
75-69-4	Trichlorofluoromethane	230	U
75-35-4	1,1-Dichloroethene	230	U
67-64-1	Acetone	230	U
75-15-0	Carbon Disulfide	230	U
75-09-2	Methylene Chloride	230	U
156-60-5	trans-1,2-Dichloroethene	230	U
75-35-3	1,1-Dichloroethane	230	U
108-05-4	Vinyl Acetate	230	U
78-93-3	2-Butanone	230	U
156-59-2	cis-1,2-Dichloroethene	230	U
67-66-3	Chloroform	230	U
75-55-6	1,1,1-Trichloroethane	230	U
56-23-5	Carbon Tetrachloride	230	U
71-43-2	Benzene	230	U
107-06-2	1,2-Dichloroethane	230	U
79-01-6	Trichloroethene	230	U
78-87-5	1,2-Dichloropropane	230	U
75-27-4	Bromodichloromethane	230	U
110-75-8	2-Chloroethyl vinyl ether	230	U
10061-01-5	cis-1,3-Dichloropropene	230	U
108-10-1	4-Methyl-2-Pentanone	230	U
108-88-3	Toluene	230	U
10061-02-6	trans-1,3-Dichloropropene	230	U
79-00-5	1,1,2-Trichloroethane	230	U
127-18-4	Tetrachloroethene	230	U
591-78-6	2-Hexanone	230	U
124-48-1	Dibromochloromethane	230	U
108-90-7	Chlorobenzene	230	U
100-41-4	Ethylbenzene	230	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-66-1 NORTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018401

Sample wt/vol: 10.1 (g/ml) G Lab File ID: VA1201.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 14.41 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	460	U
1330-20-7	o-Xylene	230	U
100-42-5	Styrene	230	U
75-25-2	Bromoform	230	U
79-34-5	1,1,2,2-Tetrachloroethane	230	U
541-73-1	1,3-Dichlorobenzene	230	U
106-46-7	1,4-Dichlorobenzene	230	U
95-50-1	1,2-Dichlorobenzene	230	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

'3-66-1 NORTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018401

Sample wt/vol: 10.1 (g/ml) G Lab File ID: VA1201.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 14.41 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-66-2 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018402

Sample wt/vol: 12.1 (g/ml) G Lab File ID: VA1202.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 12.26 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	1900	U
107131	Acrylonitrile	1900	U
75650	tert-Butyl alcohol	1900	U
1634044	Methyl-tert-Butyl ether	190	U
108203	Di-isopropyl ether	190	U
75718	Dichlorodifluoromethane	190	U
74-87-3	Chloromethane	190	U
75-01-4	Vinyl Chloride	190	U
74-83-9	Bromomethane	190	U
75-00-3	Chloroethane	190	U
75-69-4	Trichlorofluoromethane	190	U
75-35-4	1,1-Dichloroethene	190	U
67-64-1	Acetone	190	U
75-15-0	Carbon Disulfide	190	U
75-09-2	Methylene Chloride	190	U
156-60-5	trans-1,2-Dichloroethene	190	U
75-35-3	1,1-Dichloroethane	190	U
108-05-4	Vinyl Acetate	190	U
78-93-3	2-Butanone	190	U
156-59-2	cis-1,2-Dichloroethene	190	U
67-66-3	Chloroform	190	U
75-55-6	1,1,1-Trichloroethane	190	U
56-23-5	Carbon Tetrachloride	190	U
71-43-2	Benzene	190	U
107-06-2	1,2-Dichloroethane	190	U
79-01-6	Trichloroethene	190	U
78-87-5	1,2-Dichloropropane	190	U
75-27-4	Bromodichloromethane	190	U
110-75-8	2-Chloroethyl vinyl ether	190	U
10061-01-5	cis-1,3-Dichloropropene	190	U
108-10-1	4-Methyl-2-Pentanone	190	U
108-88-3	Toluene	190	U
10061-02-6	trans-1,3-Dichloropropene	190	U
79-00-5	1,1,2-Trichloroethane	190	U
127-18-4	Tetrachloroethene	190	U
591-78-6	2-Hexanone	190	U
124-48-1	Dibromochloromethane	190	U
108-90-7	Chlorobenzene	190	U
100-41-4	Ethylbenzene	190	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

'3-66-2 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018402

Sample wt/vol: 12.1 (g/ml) G Lab File ID: VA1202.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 12.26 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	380	U
1330-20-7	o-Xylene	190	U
100-42-5	Styrene	190	U
75-25-2	Bromoform	190	U
79-34-5	1,1,2,2-Tetrachloroethane	190	U
541-73-1	1,3-Dichlorobenzene	190	U
106-46-7	1,4-Dichlorobenzene	190	U
95-50-1	1,2-Dichlorobenzene	190	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

'3-66-2 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80184

Matrix: (soil/water) SOIL Lab Sample ID: 8018402

Sample wt/vol: 12.1 (g/ml) G Lab File ID: VA1202.D

Level: (low/med) MED Date Received: 6/3/2008

% Moisture: not dec. 12.26 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

5-1 EAST SIDE NC

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018901

Sample wt/vol: 10.1 (g/ml) G Lab File ID: VA1209.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 8.16 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2100	U
107131	Acrylonitrile	2100	U
75650	tert-Butyl alcohol	2100	U
1634044	Methyl-tert-Butyl ether	210	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	210	U
75-01-4	Vinyl Chloride	210	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	210	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	210	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	210	U
75-09-2	Methylene Chloride	210	U
156-60-5	trans-1,2-Dichloroethene	210	U
75-35-3	1,1-Dichloroethane	210	U
108-05-4	Vinyl Acetate	210	U
78-93-3	2-Butanone	210	U
156-59-2	cis-1,2-Dichloroethene	210	U
67-66-3	Chloroform	210	U
75-55-6	1,1,1-Trichloroethane	210	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	210	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	210	U
78-87-5	1,2-Dichloropropane	210	U
75-27-4	Bromodichloromethane	210	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	210	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	210	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	210	U
591-78-6	2-Hexanone	210	U
126-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	210	U
100-41-4	Ethylbenzene	210	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

5-1 EAST SIDE NC

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018901

Sample wt/vol: 10.1 (g/ml) G Lab File ID: VA1209.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 8.16 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	430	U
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

5-1 EAST SIDE N(

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018901

Sample wt/vol: 10.1 (g/ml) G Lab File ID: VA1209.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 8.16 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

5-2 EAST SIDE CE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018902

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1210.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 5.17 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	1900	U
107131	Acrylonitrile	1900	U
75650	tert-Butyl alcohol	1900	U
1634044	Methyl-tert-Butyl ether	190	U
108203	Di-isopropyl ether	190	U
75718	Dichlorodifluoromethane	190	U
74-87-3	Chloromethane	190	U
75-01-4	Vinyl Chloride	190	U
74-83-9	Bromomethane	190	U
75-00-3	Chloroethane	190	U
75-69-4	Trichlorofluoromethane	190	U
75-35-4	1,1-Dichloroethene	190	U
67-64-1	Acetone	190	U
75-15-0	Carbon Disulfide	190	U
75-09-2	Methylene Chloride	190	U
156-60-5	trans-1,2-Dichloroethene	190	U
75-35-3	1,1-Dichloroethane	190	U
108-05-4	Vinyl Acetate	190	U
78-93-3	2-Butanone	190	U
156-59-2	cis-1,2-Dichloroethene	190	U
67-66-3	Chloroform	190	U
75-55-6	1,1,1-Trichloroethane	190	U
56-23-5	Carbon Tetrachloride	190	U
71-43-2	Benzene	190	U
107-06-2	1,2-Dichloroethane	190	U
79-01-6	Trichloroethene	190	U
78-87-5	1,2-Dichloropropane	190	U
75-27-4	Bromodichloromethane	190	U
110-75-8	2-Chloroethyl vinyl ether	190	U
10061-01-5	cis-1,3-Dichloropropene	190	U
108-10-1	4-Methyl-2-Pentanone	190	U
108-88-3	Toluene	190	U
10061-02-6	trans-1,3-Dichloropropene	190	U
79-00-5	1,1,2-Trichloroethane	190	U
127-18-4	Tetrachloroethene	190	U
591-78-6	2-Hexanone	190	U
126-48-1	Dibromochloromethane	190	U
108-90-7	Chlorobenzene	190	U
100-41-4	Ethylbenzene	190	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

5-2 EAST SIDE CE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018902

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1210.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 5.17 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	380	U
1330-20-7	o-Xylene	190	U
100-42-5	Styrene	190	U
75-25-2	Bromoform	190	U
79-34-5	1,1,2,2-Tetrachloroethane	190	U
541-73-1	1,3-Dichlorobenzene	190	U
106-46-7	1,4-Dichlorobenzene	190	U
95-50-1	1,2-Dichlorobenzene	190	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

5-2 EAST SIDE CE

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018902

Sample wt/vol: 11.1 (g/ml) G Lab File ID: VA1210.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 5.17 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

5-3 EAST SIDE S(

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018903

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1211.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.85 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2200	U
107131	Acrylonitrile	2200	U
75650	tert-Butyl alcohol	2200	U
1634044	Methyl-tert-Butyl ether	220	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	220	U
74-87-3	Chloromethane	220	U
75-01-4	Vinyl Chloride	220	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	220	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	220	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	220	U
75-09-2	Methylene Chloride	220	U
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	220	U
108-05-4	Vinyl Acetate	220	U
78-93-3	2-Butanone	220	U
156-59-2	cis-1,2-Dichloroethene	220	U
67-66-3	Chloroform	220	U
75-55-6	1,1,1-Trichloroethane	220	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	220	U
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	220	U
78-87-5	1,2-Dichloropropane	220	U
75-27-4	Bromodichloromethane	220	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	220	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	220	U
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	220	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	220	U
100-41-4	Ethylbenzene	220	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

5-3 EAST SIDE S(

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018903

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1211.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.85 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	440	U
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

5-3 EAST SIDE S(

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018903

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1211.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.85 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-65-4 NORTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018904

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA1214.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 8.46 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-65-4 NORTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018904

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA1214.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 8.46 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	410	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

'3-65-4 NORTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018904

Sample wt/vol: 10.6 (g/ml) G Lab File ID: VA1214.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 8.46 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-65-5 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018905

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1182.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.84 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2200	U
107131	Acrylonitrile	2200	U
75650	tert-Butyl alcohol	2200	U
1634044	Methyl-tert-Butyl ether	220	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	220	U
74-87-3	Chloromethane	220	U
75-01-4	Vinyl Chloride	220	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	220	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	220	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	220	U
75-09-2	Methylene Chloride	220	U
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	220	U
108-05-4	Vinyl Acetate	220	U
78-93-3	2-Butanone	220	U
156-59-2	cis-1,2-Dichloroethene	220	U
67-66-3	Chloroform	220	U
75-55-6	1,1,1-Trichloroethane	220	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	220	U
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	220	U
78-87-5	1,2-Dichloropropane	220	U
75-27-4	Bromodichloromethane	220	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	220	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	220	U
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	220	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	220	U
100-41-4	Ethylbenzene	220	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-65-5 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018905

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1182.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.84 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	440	U
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

'3-65-5 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018905

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1182.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.84 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD ID.

'3-65-5 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018905CF

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1159.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.84 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2200	U
107131	Acrylonitrile	2200	U
75650	tert-Butyl alcohol	2200	U
1634044	Methyl-tert-Butyl ether	220	U
108203	Di-isopropyl ether	220	U
75718	Dichlorodifluoromethane	220	U
74-87-3	Chloromethane	220	U
75-01-4	Vinyl Chloride	220	U
74-83-9	Bromomethane	220	U
75-00-3	Chloroethane	220	U
75-69-4	Trichlorofluoromethane	220	U
75-35-4	1,1-Dichloroethene	220	U
67-64-1	Acetone	220	U
75-15-0	Carbon Disulfide	220	U
75-09-2	Methylene Chloride	220	U
156-60-5	trans-1,2-Dichloroethene	220	U
75-35-3	1,1-Dichloroethane	220	U
108-05-4	Vinyl Acetate	220	U
78-93-3	2-Butanone	220	U
156-59-2	cis-1,2-Dichloroethene	220	U
67-66-3	Chloroform	220	U
75-55-6	1,1,1-Trichloroethane	220	U
56-23-5	Carbon Tetrachloride	220	U
71-43-2	Benzene	220	U
107-06-2	1,2-Dichloroethane	220	U
79-01-6	Trichloroethene	220	U
78-87-5	1,2-Dichloropropane	220	U
75-27-4	Bromodichloromethane	220	U
110-75-8	2-Chloroethyl vinyl ether	220	U
10061-01-5	cis-1,3-Dichloropropene	220	U
108-10-1	4-Methyl-2-Pentanone	220	U
108-88-3	Toluene	220	U
10061-02-6	trans-1,3-Dichloropropene	220	U
79-00-5	1,1,2-Trichloroethane	220	U
127-18-4	Tetrachloroethene	220	U
591-78-6	2-Hexanone	220	U
126-48-1	Dibromochloromethane	220	U
108-90-7	Chlorobenzene	220	U
100-41-4	Ethylbenzene	220	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

'3-65-5 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018905CF

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1159.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.84 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	440	U
1330-20-7	o-Xylene	220	U
100-42-5	Styrene	220	U
75-25-2	Bromoform	220	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
541-73-1	1,3-Dichlorobenzene	220	U
106-46-7	1,4-Dichlorobenzene	220	U
95-50-1	1,2-Dichlorobenzene	220	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

'3-65-5 SOUTH EN

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018905CF

Sample wt/vol: 11.0 (g/ml) G Lab File ID: VA1159.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.84 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-65-6 PIPING

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018906

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VA1183.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 6.8 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-65-6 PIPING

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018906

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VA1183.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 6.8 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	410	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273-65-6 PIPING

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018906

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VA1183.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 6.8 Date Analyzed: 6/12/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-65-6 PIPING

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018906CF

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VA1164.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 6.8 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2000	U
107131	Acrylonitrile	2000	U
75650	tert-Butyl alcohol	2000	U
1634044	Methyl-tert-Butyl ether	200	U
108203	Di-isopropyl ether	200	U
75718	Dichlorodifluoromethane	200	U
74-87-3	Chloromethane	200	U
75-01-4	Vinyl Chloride	200	U
74-83-9	Bromomethane	200	U
75-00-3	Chloroethane	200	U
75-69-4	Trichlorofluoromethane	200	U
75-35-4	1,1-Dichloroethene	200	U
67-64-1	Acetone	200	U
75-15-0	Carbon Disulfide	200	U
75-09-2	Methylene Chloride	200	U
156-60-5	trans-1,2-Dichloroethene	200	U
75-35-3	1,1-Dichloroethane	200	U
108-05-4	Vinyl Acetate	200	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	200	U
67-66-3	Chloroform	200	U
75-55-6	1,1,1-Trichloroethane	200	U
56-23-5	Carbon Tetrachloride	200	U
71-43-2	Benzene	200	U
107-06-2	1,2-Dichloroethane	200	U
79-01-6	Trichloroethene	200	U
78-87-5	1,2-Dichloropropane	200	U
75-27-4	Bromodichloromethane	200	U
110-75-8	2-Chloroethyl vinyl ether	200	U
10061-01-5	cis-1,3-Dichloropropene	200	U
108-10-1	4-Methyl-2-Pentanone	200	U
108-88-3	Toluene	200	U
10061-02-6	trans-1,3-Dichloropropene	200	U
79-00-5	1,1,2-Trichloroethane	200	U
127-18-4	Tetrachloroethene	200	U
591-78-6	2-Hexanone	200	U
126-48-1	Dibromochloromethane	200	U
108-90-7	Chlorobenzene	200	U
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

273-65-6 PIPING

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018906CF

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VA1164.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 6.8 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	410	U
1330-20-7	o-Xylene	200	U
100-42-5	Styrene	200	U
75-25-2	Bromoform	200	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
541-73-1	1,3-Dichlorobenzene	200	U
106-46-7	1,4-Dichlorobenzene	200	U
95-50-1	1,2-Dichlorobenzene	200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

273-65-6 PIPING

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018906CF

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VA1164.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 6.8 Date Analyzed: 6/11/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-65-7 DUPLICAT

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018907

Sample wt/vol: 11.7 (g/ml) G Lab File ID: VA1212.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.87 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	2100	U
107131	Acrylonitrile	2100	U
75650	tert-Butyl alcohol	2100	U
1634044	Methyl-tert-Butyl ether	210	U
108203	Di-isopropyl ether	210	U
75718	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	210	U
75-01-4	Vinyl Chloride	210	U
74-83-9	Bromomethane	210	U
75-00-3	Chloroethane	210	U
75-69-4	Trichlorofluoromethane	210	U
75-35-4	1,1-Dichloroethene	210	U
67-64-1	Acetone	210	U
75-15-0	Carbon Disulfide	210	U
75-09-2	Methylene Chloride	210	U
156-60-5	trans-1,2-Dichloroethene	210	U
75-35-3	1,1-Dichloroethane	210	U
108-05-4	Vinyl Acetate	210	U
78-93-3	2-Butanone	210	U
156-59-2	cis-1,2-Dichloroethene	210	U
67-66-3	Chloroform	210	U
75-55-6	1,1,1-Trichloroethane	210	U
56-23-5	Carbon Tetrachloride	210	U
71-43-2	Benzene	210	U
107-06-2	1,2-Dichloroethane	210	U
79-01-6	Trichloroethene	210	U
78-87-5	1,2-Dichloropropane	210	U
75-27-4	Bromodichloromethane	210	U
110-75-8	2-Chloroethyl vinyl ether	210	U
10061-01-5	cis-1,3-Dichloropropene	210	U
108-10-1	4-Methyl-2-Pentanone	210	U
108-88-3	Toluene	210	U
10061-02-6	trans-1,3-Dichloropropene	210	U
79-00-5	1,1,2-Trichloroethane	210	U
127-18-4	Tetrachloroethene	210	U
591-78-6	2-Hexanone	210	U
126-48-1	Dibromochloromethane	210	U
108-90-7	Chlorobenzene	210	U
100-41-4	Ethylbenzene	210	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

73-65-7 DUPLICAT

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018907

Sample wt/vol: 11.7 (g/ml) G Lab File ID: VA1212.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.87 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
1330-20-7	m+p-Xylenes	410	U
1330-20-7	o-Xylene	210	U
100-42-5	Styrene	210	U
75-25-2	Bromoform	210	U
79-34-5	1,1,2,2-Tetrachloroethane	210	U
541-73-1	1,3-Dichlorobenzene	210	U
106-46-7	1,4-Dichlorobenzene	210	U
95-50-1	1,2-Dichlorobenzene	210	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.
73-65-7 DUPLICAT

Lab Name: FMETL NJDEP # 13461

Project: 08-65967 Case No.: MW Location: BLDG. SDG No.: 80189

Matrix: (soil/water) SOIL Lab Sample ID: 8018907

Sample wt/vol: 11.7 (g/ml) G Lab File ID: VA1212.D

Level: (low/med) MED Date Received: 6/4/2008

% Moisture: not dec. 16.87 Date Analyzed: 6/13/2008

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

TPHC

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

Client :	U.S. Army	**Project # :**	**80166**
	DPW. SELFM-PW-EV	**Location :**	**Bldg. 273**
	Bldg. 173	**ECP**	
	Ft. Monmouth, NJ 07703	**WORK ORDER#**	**80166**
Analysis :	OQA-QAM-025	**Date Received :**	16-May-08
Matrix :	Soil	**Date Extracted :**	20-May-08
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	21-May-08
Injection Volume :	1uL	**Analyst :**	R. Szot/J. Pawlish
BLANK CONC.	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
8016601	273-P1-WEST END	1.00	15.01	85.58	75	389	0.00
8016602	273-P2-WEST END + 10 FT.	1.00	15.09	86.74	74	382	0.00
8016603	273-P3-WEST END + 20 FT.	1.00	15.08	84.14	76	394	0.00
8016604	273-P4-WEST END + 30 FT.	1.00	14.93	83.16	78	403	0.00
8016605	273-P5-WEST END + 40 FT.	1.00	15.06	83.51	77	398	0.00
8016606	273 DUPLICATE	1.00	15.06	85.11	75	390	0.00
8015901MS	DUPLICATEMS	1.00	14.93	92.60	70	362	2052.85
8015901MSD	DUPLICATEMSD	1.00	15.07	92.60	69	358	2023.20
METHOD BLANK	MB-04240801	1.00	15.00	100.00	64	333	0.00

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

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

000254

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

Client :	U.S. Army	**Project # :**	**80182**
	DPW. SELFM-PW-EV	**Location :**	**Building 273**
	Bldg. 173	**ECP**	
	Ft. Monmouth, NJ 07703	**WORK ORDER#**	**80182**
Analysis :	OQA-QAM-025	**Date Received :**	02-Jun-08
Matrix :	Soil	**Date Extracted :**	05-Jun-08
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	06-Jun-08
Injection Volume :	1uL	**Analyst :**	R. Szot/J. Pawlish
BLANK CONC.	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
8018201	273-1 WEST SIDE N	**1.00**	15.04	89.97	71	370	**0.00**
8018202	273-2 WEST SIDE C	**1.00**	15.06	91.38	70	363	**0.00**
8018203	273-3 WEST SIDE S	**1.00**	15.69	90.88	68	351	**0.00**
8018204	273-4 NORTH END	**1.00**	15.25	85.17	74	385	**0.00**
8018205	273-5 SOUTH END	**1.00**	14.69	90.20	73	377	**0.00**
8018206	273 DUPLICATE	**1.00**	15.10	90.37	71	366	**0.00**
8018201MS	DUPLICATEMS	**1.00**	15.04	89.97	71	370	**799.69**
8018201MSD	DUPLICATEMSD	**1.00**	15.04	89.97	71	370	**872.94**
METHOD BLANK	MB-06050801	**1.00**	15.00	100.00	64	333	**0.00**

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

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

000255

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

Client :	U.S. Army	**Project # :**	**80184**
	DPW. SELFM-PW-EV	**Location :**	**Building 273**
	Bldg. 173	**ECP**	
	Ft. Monmouth, NJ 07703	**WORK ORDER#**	**80184**
Analysis :	OQA-QAM-025	**Date Received :**	03-Jun-08
Matrix :	Soil	**Date Extracted :**	05-Jun-08
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	06-Jun-08
Injection Volume :	1uL	**Analyst :**	R. Szot/J. Pawlish
BLANK CONC.	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
8018401	273-66-1 NORTH END	**1.00**	15.29	85.59	74	382	**0.00**
8018402	273-66-2 SOUTH END	**1.00**	15.39	87.74	71	370	**0.00**
8018403	273-66 DUPLICATE	**1.00**	15.26	87.87	72	373	**0.00**
8018201MS	DUPLICATEMS	**1.00**	15.04	89.97	71	370	**799.69**
8018201MSD	DUPLICATEMSD	**1.00**	15.04	89.97	71	370	**872.94**
METHOD BLANK	MB-06050801	**1.00**	15.00	100.00	64	333	**0.00**

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

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

000256

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

Client :	U.S. Army	**Project # :**	**80189**
	DPW. SELFM-PW-EV	**Location :**	**Building 273**
	Bldg. 173	**ECP**	
	Ft. Monmouth, NJ 07703	**WORK ORDER#**	**80189**
Analysis :	OQA-QAM-025	**Date Received :**	02-Jun-08
Matrix :	Soil	**Date Extracted :**	05-Jun-08
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	06-Jun-08
Injection Volume :	1uL	**Analyst :**	R. Szot/J. Pawlish
BLANK CONC.	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
8018901	273-65-1 EAST SIDE NORTH	1.00	15.73	91.84	67	346	0.00
8018902	273-65-2 EAST SIDE CENTER	1.00	15.48	94.83	66	341	0.00
8018903	273-65-3 EAST SIDE SOUTH	1.00	14.96	83.15	77	402	0.00
8018904	273-65-4 NORTH END	1.00	15.23	91.54	69	359	0.00
8018905	273-65-5 SOUTH END	1.00	14.54	83.16	80	414	0.00
8018906	273-65-6 PIPING	1.00	15.66	93.20	66	343	0.00
8018907	273-65-7 DUPLICATE	1.00	15.77	83.13	73	381	0.00
8018201MS	DUPLICATEMS	1.00	15.04	89.97	71	370	799.69
8018201MSD	DUPLICATEMSD	1.00	15.04	89.97	71	370	872.94
METHOD BLANK	MB-06050801	1.00	15.00	100.00	64	333	0.00

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

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

000257

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature [signature]
Date: 6/24/08

Laboratory Certification # 13461

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

Laboratory Authentication Statement

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

Jacqueline Hamer
QA/QC Supervisor

ATTACHMENT O

UST 482 File Review and Analyses

Contents:

- Bldg. 482 Underground Storage Tank File Review
- Enclosure 1 – Fort Monmouth 2010 Work Order Report
- Enclosure 2 –Analytical Data Reports (10372, 10373, and 11264)

UNDERGROUND STORAGE TANK FILE REVIEW
FORT MONMOUTH BRAC 05 FACILITY
OCEANPORT, NEW JERSEY

Date: *July 21, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 482*** Registration ID: 90010-54

Recommended Status of Site: ***Case Closed (no change)***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***None***

Based on the file review, were there indications of a contaminant release? [X] Yes [ ] No

NJDEP Release No. or DICAR (If applicable): 94-8-11-1345-43

Did NJDEP approve No Further Action (NFA) for this site? [X] Yes [ ] No [ ] Not Applicable

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: #2 Fuel Oil

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 8/11/1994

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg

Were closure soil sample results less than comparison criteria? ? [ ] Yes [X] No

Brief Narrative

This steel No. 2 fuel oil UST was located adjacent to Building 482. Following tank removal in April 1994, soil samples were collected from the tank excavation and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). The initial soil sample results indicated some residual contamination, and a total of 80 cubic yards of petroleum-contaminated soil was excavated for offsite disposal. The final soil sample results ranged from 41 mg/kg to 2689 mg/kg for TPH, except for two locations that were sampled after soil excavation that contained 14,100 mg/kg to 29,400 mg/kg. Due to these elevated concentrations, additional soil samples were collected from seven additional locations and analyzed for TPH and volatile organic compounds (VOCs). VOCs were not detected in the additional samples, and TPH results from these later samples were less than the then-current remediation criteria of 10,000 mg/kg. Since sheen was observed on groundwater, two monitoring wells were installed downgradient of the tank excavation, and two rounds of groundwater were sampled and analyzed for VOCs and SVOCs. Groundwater results were less than the then-current Ground Water Quality Criteria (GWQC). A UST closure report for tank 482 was prepared in 2002 by Versar (*Underground Storage Tank Closure and Site Investigation Report, Building 482, Main Post-East Area*) and submitted to NJDEP. The site was approved for No Further Action (NFA) by NJDEP in their letter dated January 10, 2003.

Additional sampling of soil and groundwater was completed by FTMM in August 2010 at the former UST 482 site. A Scope of Work and additional field notes describing the sampling activities is presented in Enclosure 1, and the resulting analytical data is presented in Enclosure 2. The concentration of 2-methylnaphthalene in soil sample 482/SB-1 (5.0 to 5.5 ft bgs; collected on August 31, 2010) was 11.35 mg/kg, which exceeded NJDEP's impact to groundwater pathway screening level of 5 mg/kg. There were also multiple Tentatively Identified Compounds (TICs) in this soil sample that were consistent with petroleum hydrocarbon contamination. A temporary well groundwater sample 482/TMP-1 was also

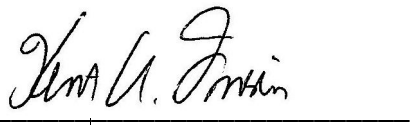
collected on August 31, 2010 that contained no detected VOC target analytes, but multiple VOC TICs (sum estimated concentration of 512 µg/L) that were consistent with petroleum hydrocarbon contamination. The target SVOC analyte 2-methylnaphthalene was detected in this groundwater sample at a concentration of 8 µg/L, which is less than the NJDEP interim ground water quality criterion of 30 µg/L. Multiple SVOC TICs (sum estimated concentration of 184 µg/L) were also detected in this sample that were consistent with petroleum hydrocarbon contamination.

An additional temporary well groundwater sample 482-GW2 was collected on June 25, 2011 for VOCs and total lead analysis; detected constituents included benzene (0.17 µg/L, which is less than the NJDEP GWQS of 1 µg/L), VOC TICs (sum estimated concentration of 602 µg/L), and lead (80.6 µg/L, which exceeds the NJDEP GWQS of 5 µg/L).

Further discussion is warranted regarding the 2010 and 2011 groundwater results. Lead exceeded the NJDEP GWQS, but is not likely a constituent of fuel oil; however, lead is a potential analyte of concern at the adjacent Site 108 gasoline USTs (also known as IRP Site FTMM-57). Further, lead could be attributed to sample turbidity in the temporary well. Therefore, the lead results are not likely attributed to the 482 UST site. 2-Methylnaphthalene is a likely fuel oil constituent that was detected in Site 482 groundwater, but the most recent (2010) data indicates that the concentration of this analyte is less than the interim GWQS of 30 µg/L.

In summary, NFA is warranted for soil and groundwater at Site 482.

Recommendations (if any): Submit for review; however, NFA already approved from NJDEP

Signed: 

Kent A. Friesen, Parsons

ATTACHMENT O, Enclosure 1

UST 482 - Fort Monmouth 2010 Work Order Report

Fort Monmouth
Work Order Report **10-182255**

Work Type:	SO	Status Date:	8/12/2010
Parent:		Priority:	
Requestor:	ROB YOUHAS	Status:	INPRG
Phone 1:	24359	PWS:	07A ENVIRONMENTAL
Phone 2:		Shop:	27 ENVIRONMENTAL FIELD SHOP
Facility:	00482 DPW/STORAGE	POC:	
Location:		POC Phone:	
		Assign To:	BOYCEG

Work INSTALL TEMP MONITORING POINT AND 3 SOIL BORINGS

Appointment Scheduled:
Start:
Finish:

Last Name	First Initial	Time In	Time Out	Hours	Work Date	Initials
Boyce	G	0730	1515	7	8/31/10	GB
Youhas	R	0730	1515	7	08/31/10	RY

Geoprobe - soil & water samples

Is Job Complete? (Y/N) Y Comments:

Customer Signature _____ Date: _____

Supervisor Signature _____ Date: _____

Date Prepared: August 12, 2010

Prepared by: Robert Youhas

Scope of Work for Building 482

Background

On August 11, 1994, one, 1,000-gallon, steel heating oil underground storage tank (UST) was removed from an area approximately 10 feet east of building 482. No pitting or holes were observed on the surface of the UST (#0090010-54). However, staining was observed in soil surrounding the UST and a sheen was observed on groundwater present in the excavation. Approximately 80 cubic yards of visually contaminated soil was removed. Based on the staining observed, the New Jersey Department of Environmental Protection (NJDEP) was notified and case #94-8-11-1345-43 was assigned. During removal of the UST and excavation of visually contaminated soil, remnants of a septic /wastewater system (concrete pit) were discovered. Post-excavation soil samples were collected in the concrete pit area and analyzed for total petroleum hydrocarbons (TPHC) only. The soil samples collected in the concrete pit area were not analyzed for the full, required list of analytical parameters [Priority Pollutants (PP+40) list required for unknown wastewater systems].

Between August 12, 1994 and February 20, 2002, additional excavation events were conducted. TPHC concentrations for all post-excavation soil samples collected on February 20, 2002 were determined to be in compliance with NJDEP soil standards that were in effect at the time.

On August 11, 1995, monitoring wells 482MW01 and 482MW02 were installed in the vicinity of the UST excavation area. Between 1995 and 1998, groundwater samples were collected from monitoring wells 482MW1 and 482MW02 and analyzed for volatile organic compounds (VOCs)+15 and semi-volatile organic compounds (SVOCs)+15. All groundwater analytical results were determined to be in compliance with the NJDEP Ground Water Quality Standards (GWQS).

In March 2002, no further action (NFA) for NJDEP case #94-8-11-1345-43 was requested in a *UST Closure and Site Investigation Report*. On January 10, 2003, NFA was approved by the NJDEP.

Purpose

To determine if the former septic/wastewater system discovered during UST excavation activities impacted soil and groundwater in the vicinity of building 482.

Scope of Work

Advance three soil borings (482SB-1, 482SB-2, 483SB-3) to the groundwater table (approximately 5 feet below grade). Scan the soil column collected in each acetate sleeve with a photoionzation detector (PID). Collect a single soil sample within six inches of the groundwater table (soil-water interface) from each soil boring. If elevated PID readings are encountered at a shallower depth, collect a soil sample at that location, in addition to the soil sample collected within six inches of the groundwater table. Submit soil samples to Fort Monmouth laboratory for PP+40 analysis.

Convert soil boring 482SB-1 into a temporary well point and collect a groundwater sample. Submit groundwater sample to Fort Monmouth laboratory for PP+40 analysis.

Results

BN +15
TAL Metals
VOA +15

Acid extractable +10

Recommendations

{Solid 2 - 8 oz Jars
Methanol
Trip}

1 - Liter
4 - 1 liter amber
1 500 + acids (Metals)
3 VOA
Trip
Field Blank

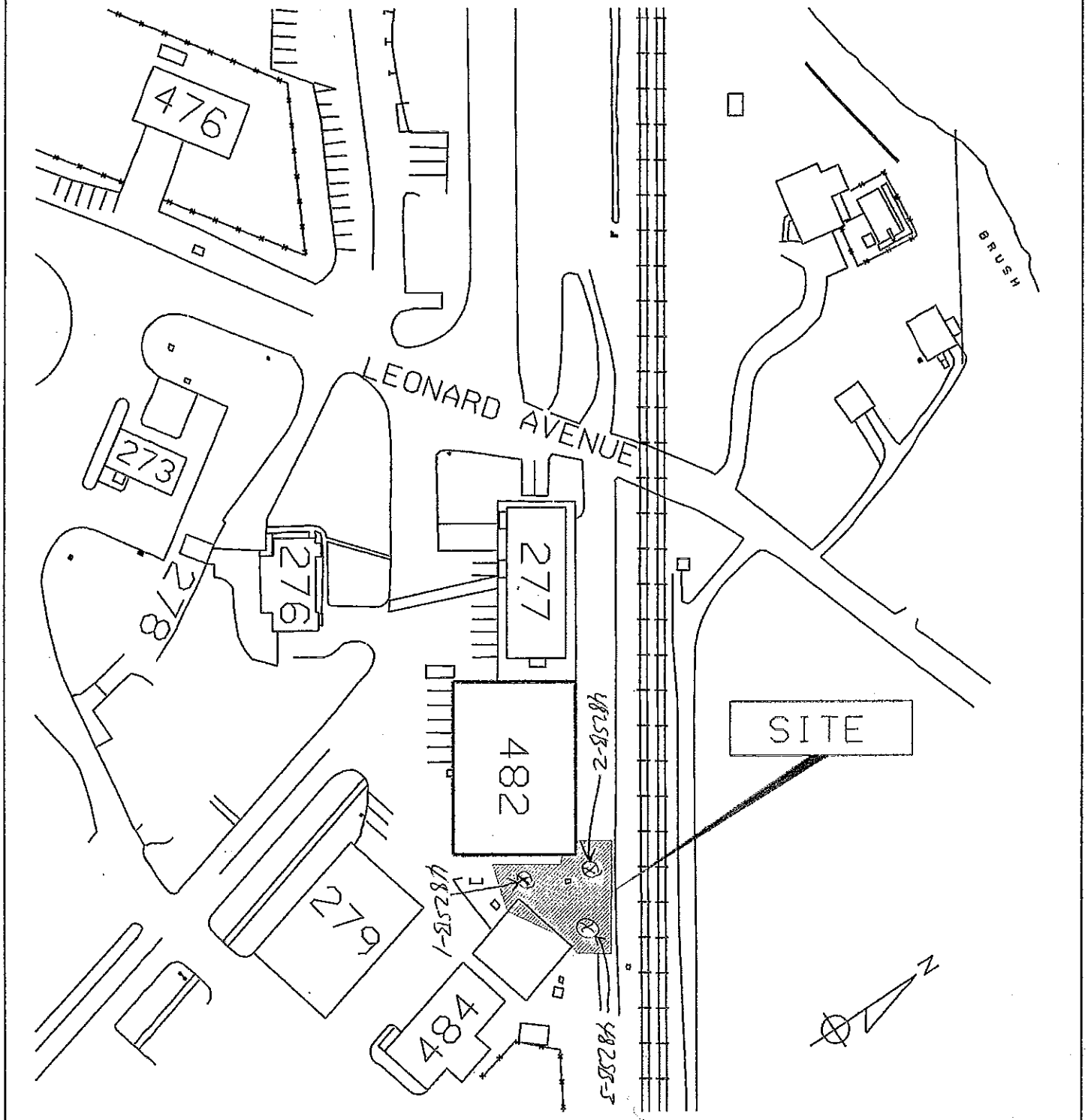


FIGURE 2
SITE MAP
BUILDING 482
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1" = 100'

DATE: AUGUST 1994

9·18·98 484/482 Friday

Collect post excavation soil samples from the edge of 484 Excavation (484-12 and 484-13) see diagram on pages 20-21.

Collect post excavation soil samples from the bottom of the former septic tank (concrete) (482a-septic and 482b-septic) See diagram on pgs 20-21.

Collect post excavation soil samples from within the 482 Excavation (482-9 through 482-15) see diagram on pgs 20-21.

See next page for all COC info for these sampling points, etc.

2:00 leave site for Bristol office — D.H.S.

9·18·98 484/482 Friday

COC INFO

	TIME	VOA #	# Jars	H-Nu
484-12 (6')		075	3	
484-13 (6')		076	3	
→ Highest TPH results gets full scan				
482a-septic (7')		077	3	
482b-septic (7')		078	3	
→ Full scan on everything				
482-9 (6')		—	1	
482-10 (6')		—	1	
482-11 (7')		—	1	
482-12 (7')		—	1	
482-13 (6')		079	2	
482-14 (6')		080	2	
482-15 (6')		081	2	

Note: 482-15 is a duplicate of sample 482-14

TPH results over 1,000 ppm gets VOA+10 scan

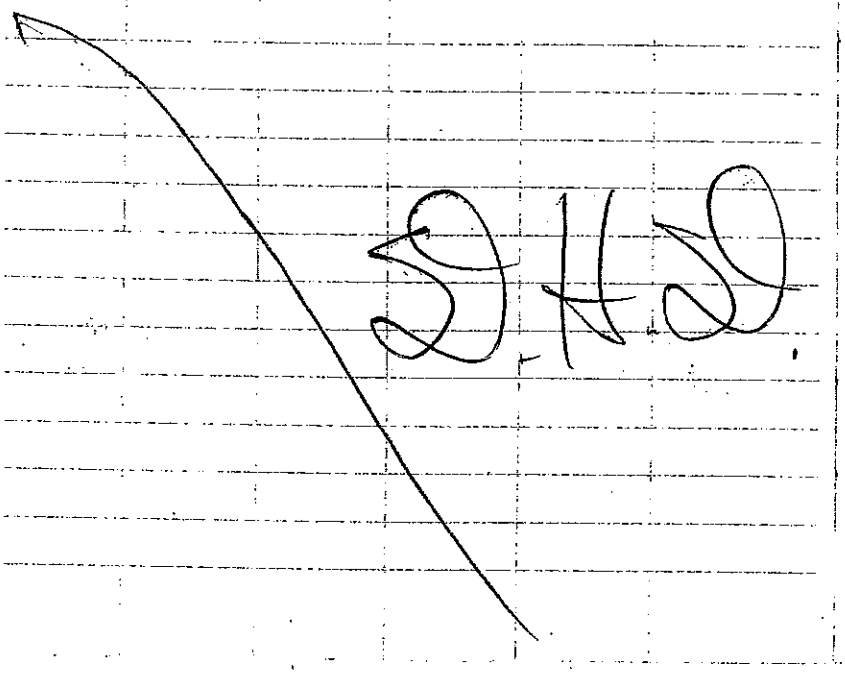
9.25.98 482 Friday

COC INFO

		H-Nrg	TPH/VOHO
482-22(6')	12:30	40	↓
482-23(6')	12:35	40	

* 482-23 is a duplicate of 482-22.

See ~~pages~~ 29 for location of this sample.



9.28.98 277

Objective: Remediation of so
at Building 277 associated
a former leaking No. 2 F
oil UST. (UST pulled by

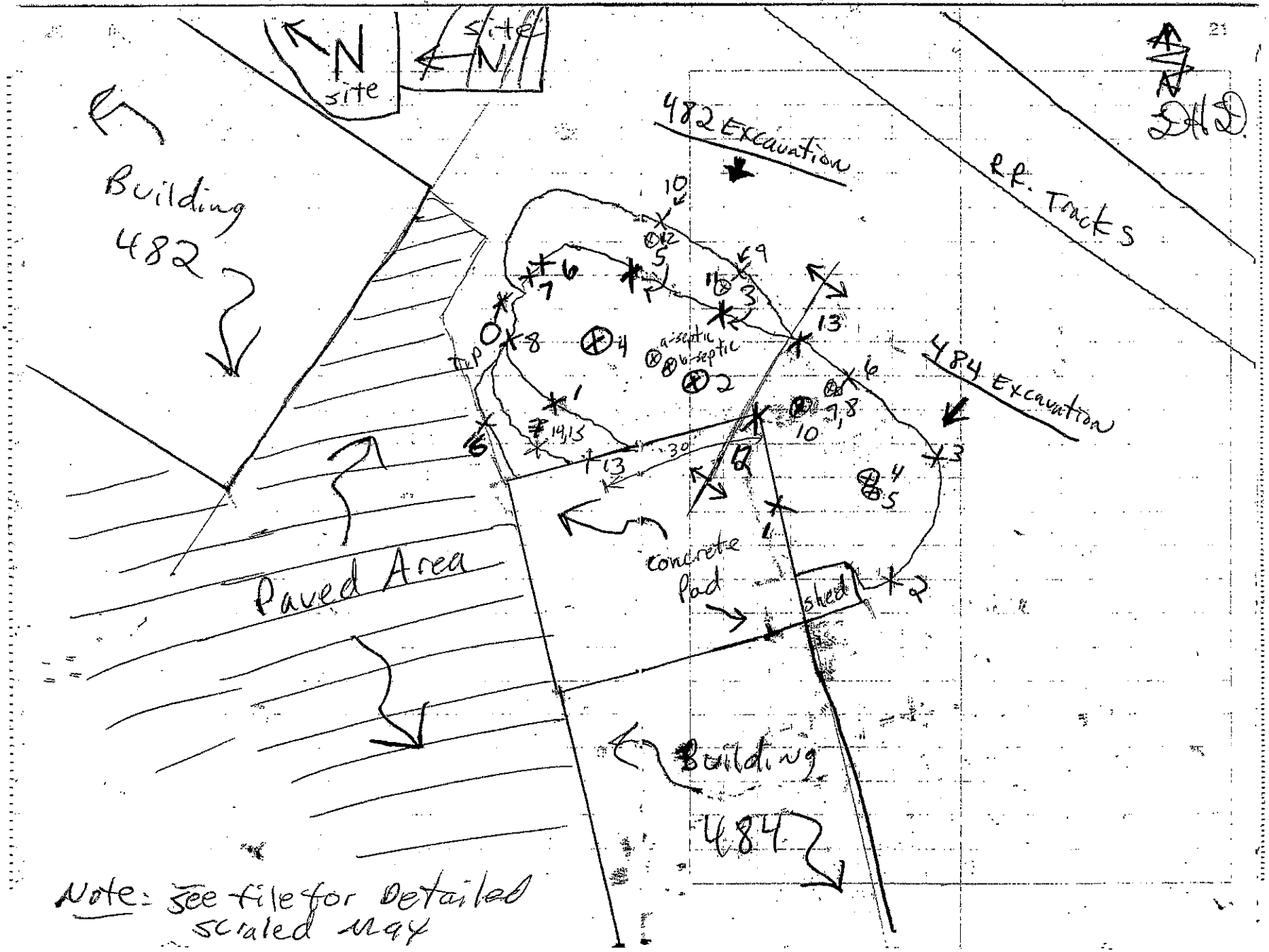
Weather: Partly Sunny, 60s-7

Staff: DD, TK & MS

Remediation activities along
the building and the parki
The clean overburden soil
hauled to our clean pile st
area behind the trailers. T
1 1/2" stones in the former
hole is excavated and hauled
our clean staging area. All
contaminated soil is hauled
490 Staging area.

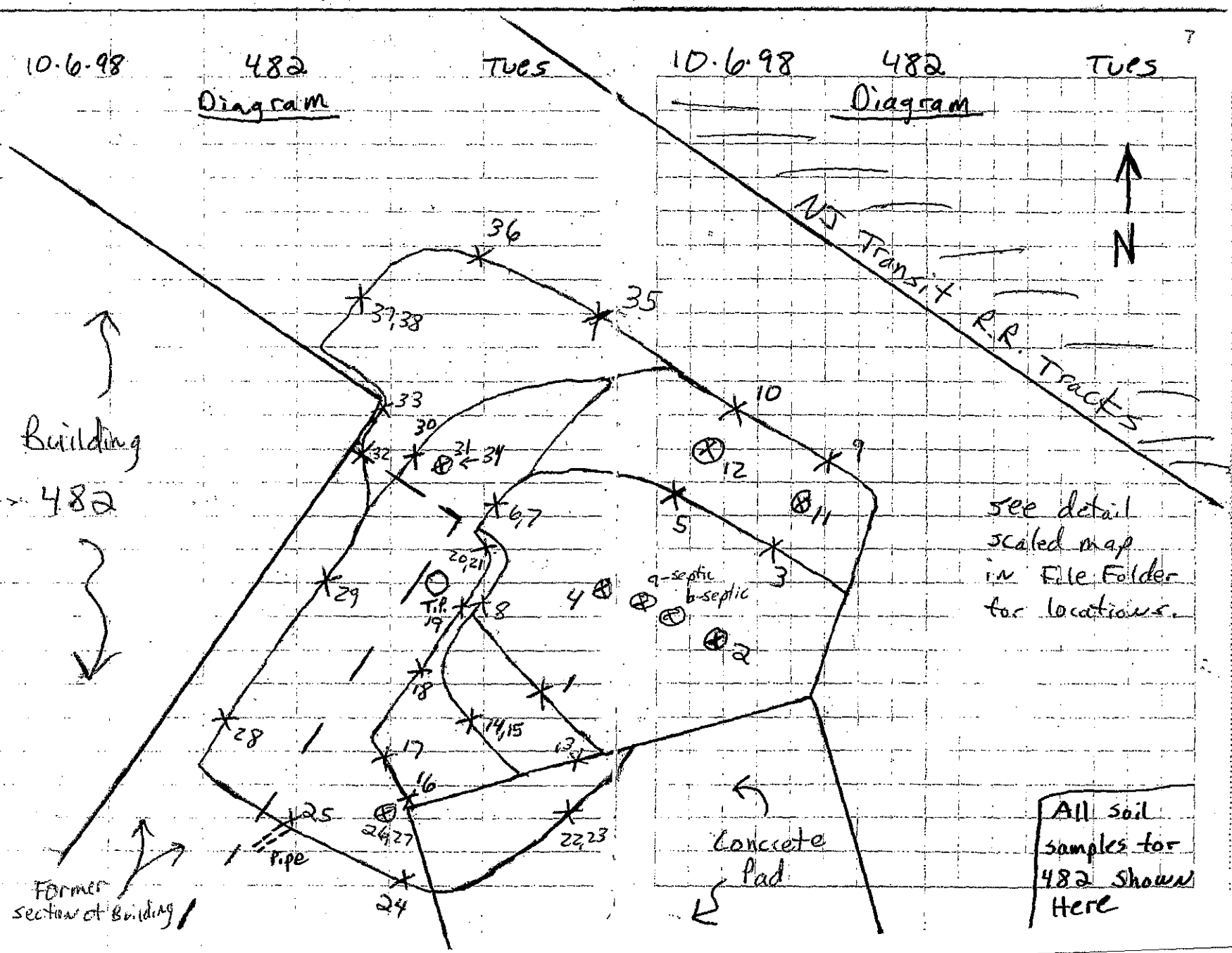
After a few truck loads of
contaminated soil is hauled
I prepair to collect soil
samples from the west side o
see next page for locations of
277-7 and 277-9.

7118148


N site
site N
Building 482
482 Excavation
R.R. Tracks
484 Excavation
Paved Area
concrete pad
shed
Building 484
aseptic
bseptic
30'
Note: See file for Detailed scaled map

111+
Septic
work

10·6·98 482 Tues
Diagram



See detail scaled map in File Folder for locations.

All soil samples for 482 shown Here

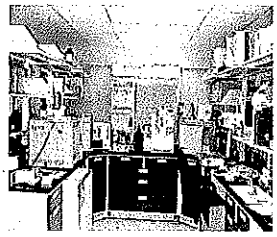
10·6·98 482 Tues
Diagram

ATTACHMENT O, Enclosure 2

UST 482 – Analytical Data Reports (10372, 10373, and 11264)

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

Bldg. 482

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
Trip Blank	1037201	Methanol	31-Aug-10 10:35	08/31/10
482/SB-1 (5.0-5.5)	1037202	Soil	31-Aug-10 10:35	08/31/10

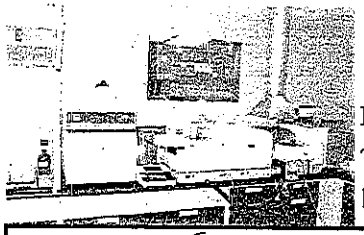
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, ABN+25, PESTICIDES, PCB's
PP METALS, %SOLIDS

ACCUTEST LABORATORIES
TOTAL CYANIDE

Dean Tardiff/Date: 10/29/10
Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-6352 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Fort Monmouth / C. Appleby
Phone #: X22692
( )DERA ( )OMA ( )Other:_____
Project No:
Location: 482
Samplers Name / Company: Robert Youker / TVS

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	VOA's	SVOC's	Pesticides	PCB's	RP Metals	Total Cyanide	% Moisture		Remarks / Preservation Method
10372 01	TRIP	08/31/10	10:30	Soil	1	✓								6883 Meth.
02	482SB-1(5-5.5')	08/31/10	10:35	Soil	5	✓	✓	✓	✓	✓	✓	✓		6884 Meth.

Analysis Parameters

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	08/31/10 11:00				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, ( )Reduced, (✓)Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (✓)Standard 3 wks, ( )Rush ____Wk., ( )ASAP Verbal ____Hrs.

Remarks:

000002

print legibly

COC Copy.xls8/16/2010

SAMPLE RECEIPT FORM

Date Received: 8-31-10 Work Order ID#: 10372

Site/Proj. Name: Bldg 482 Cooler Temp (°C): 3.5 °C

Received By: J. Vergara Sign: J. Vergara
(Print name)

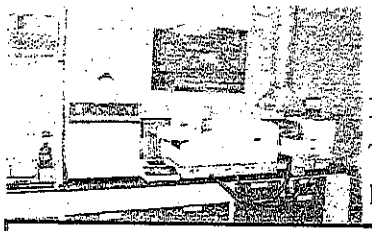
Check the appropriate box

1. Did the samples come in a cooler?	yes	no	n/a
2. Were samples rec'd in good condition?	yes	no	
3. Was the chain of custody filled out correctly and legibly?	yes	no	
4. Was the chain of custody signed in the appropriate place?	yes	no	
5. Did the labels agree with the chain of custody?	yes	no	
6. Were the correct containers/preservatives used?	yes	no	
7. Was a sufficient amount of sample supplied?	yes	no	
8. Were air bubbles present in VOA vials?	yes	no	n/a
9. Were samples received on ice?	yes	no	
10. Were analyze-immediately tests perform within 15 minutes	yes	no	n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative

Comments: _____



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Dean Tardiff
Phone #: (732)532-4359
( )DERA ( )OMA ( )Other:_____

Project No:
Location: Bldg. 482

Samplers Name / Company:

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: Total Cyanide								Comments: Remarks / Preservation Method
1037202	482/SB-5.0-5.5'	8/31/2010	10:35	Soil	1	X								

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	8-31-10 1215				
[signature]					

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: (X)Standard 3 wks, ( )Rush Wk., ( )ASAP Verbal ____Hrs.

Comments: PO C09-20650

000004

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10372 SUBOUT FORT.Cyanide B.483.xls8/31/2010

CONFORMANCE/ NON-CONFORMANCE SUMMARY

10372 VOA

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

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

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

Indicate Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction _____

11. Extraction Holding Time Met — N/A

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: [signature] Date: 10/29/10

[signature] 9/9/10

10372 SVOA

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

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

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

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction _____

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: Jean Tarcy Date: 10/29/10

Ant of 10/13/10

ACCUTEST Laboratories

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Fort Monmouth Environmental Testing Lab.	**Job No**	JA55188
Site:	Building 482	**Report Date**	9/14/2010 2:18:41 PM

On 08/31/2010, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA55188 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Wet Chemistry By Method SM18 2540G

Matrix	SO	Batch ID:	GN42022

- The data for SM18 2540G meets quality control requirements.

Wet Chemistry By Method SW846 9012 M/LACHAT

Matrix	SO	Batch ID:	GP55336

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA55447-1DUP, JA55447-1MS were used as the QC samples for Cyanide.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks) — Y

2. Retention times for chromatograms provided — Y

3. Standards Summary Meet Criteria — Y

4. Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 12 hours of sample analysis — Y

5. Blank Contamination – If yes, list compounds and concentrations in each blank: — N
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____
   d. Pesticide/PCB's _____
   e. Other _____

6. Surrogate Recoveries Meet Criteria — Y
   If not met, list those compounds and their recoveries which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____
   d. Pesticide/PCB's _____
   e. Other _____

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

7. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria — Y
   If not met, list those compounds and their recoveries which fall outside the acceptable range
   a. VOA Fraction _____
   f. B/N Fraction _____
   g. Acid Fraction _____
   h. Pesticide/PCB's _____
   i. Other _____

8. Retention Time Summary for primary and confirmation analyses meet criteria — Y

9. Were samples run on dissimilar columns? — Y

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

Indicate Yes, No, N/A

10. Extraction Holding Time Met — Y

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

11. Analysis Holding Time Met — Y

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

Additional Comments: _____

Laboratory Manager: [signature] Date: 10-25-10

METHOD SUMMARY

Method Summary

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

A 10-gram volume of soil is combined with 25-ml of Methanol and surrogates in the field. Internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system. Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA SW-846 Method 8270
Gas Chromatographic Determination of Semi-volatiles in Soil

Surrogates are added to a 10-gram soil sample that has been dried with sodium sulfate. The sample is then extracted using a soxtherm extractor. The extract is concentrated to 1 ml. Internal standards are added and the sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA SW-846 Method 8082
Gas Chromatographic Determination of PCB's in Soil

Surrogates are added to a 10-gram soil sample, which has been dried with sodium sulfate. The sample is then extracted using a soxtherm extractor. The extract is concentrated to 10 ml. Internal standards are added and the extract is injected into a GC/ECD system. PCB's are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA SW-846 Method 3051, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 1.0 to 5.0 grams is digested in 10 ml of concentrated nitric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) microvessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 100-ml volume and analyzed by ICP.

EPA SW-846 Method 6010B, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 3115B, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 45ml is digested in 4 ml of concentrated nitric acid and 1 ml concentrated hydrochloric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) microvessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 50 ml volume and analyzed by ICP.

Standard Methods for the Examination of Water and Wastewater 18th Edition, Method 3120B: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 7470A, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: Mercury

Varian SpectrAA-640, VGA-77
The flameless AA procedure is a physical method based on the absorption of radiation at 253.7 nm by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrometer. Absorbency (peak height) is measured as a function of mercury concentration and recorded in the usual manner.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10372 **Site:** Bldg. 482

	Date	Hold Time
Date Sampled	08/31/10	NA
Receipt/Refrigeration	08/31/10	NA

Analyses		
1. Volatiles	09/02/10	14 Days
2. Semi-Volatiles	10/05/10*	14 Days
3. Pesticides	09/13/10*	14 Days
4. PCB's	10/05/10*	14 Days
5. PP Metals	09/02/10	6 Months
6. Cyanide	09/04/10	14 Days

* Semi-Volatiles Extracted (09/10/10)
* Pesticides Extracted (09/10/10)
* PCB Extracted Extracted (09/10/10)

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

U: The compound was analyzed for but not detected.

B: Indicates that the compound was found in the associated method blank as well as in the sample.

J: Indicates an estimated value. This flag is used:

(1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the reporting limit but greater than the MDL.

(2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.

D: This flag is used to identify all compounds (target or TIC) that required a dilution.

E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.

N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

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

Data File	VA7348.D	Sample Name	MB09021001	Sample Weight	10.00 g
Operator	ROBERTS	Field ID	METHOD 8260 9/2/10	Percent Solids	100.0 %
Date Acquired	2 Sep 2010 2:24 pm	Sample Multiplier	0.100	Methanol extract volume	25 ml
				Methanol aliquot volume	1.25 ml

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (mg/kg)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	0.5	0.436 mg/kg	0.500 mg/kg	
107131	Acrylonitrile			not detected	0.9	0.215 mg/kg	0.500 mg/kg	
75650	tert-Butyl alcohol			not detected	1400	0.411 mg/kg	0.500 mg/kg	
1634044	Methyl-tert-Butyl ether			not detected	110	0.032 mg/kg	0.050 mg/kg	
108203	Di-isopropyl ether			not detected	NLE	0.038 mg/kg	0.050 mg/kg	
75718	Dichlorodifluoromethane			not detected	490	0.104 mg/kg	0.050 mg/kg	
74-87-3	Chloromethane			not detected	4	0.043 mg/kg	0.050 mg/kg	
75-01-4	Vinyl Chloride			not detected	0.7	0.050 mg/kg	0.050 mg/kg	
74-83-9	Bromomethane			not detected	25	0.052 mg/kg	0.050 mg/kg	
75-00-3	Chloroethane			not detected	220	0.044 mg/kg	0.050 mg/kg	
75-69-4	Trichlorofluoromethane			not detected	23000	0.085 mg/kg	0.050 mg/kg	
75-35-4	1,1-Dichloroethene			not detected	11	0.077 mg/kg	0.050 mg/kg	
67-64-1	Acetone			not detected	70000	0.082 mg/kg	0.050 mg/kg	
75-15-0	Carbon Disulfide			not detected	7800	0.068 mg/kg	0.050 mg/kg	
75-09-2	Methylene Chloride			not detected	34	0.065 mg/kg	0.050 mg/kg	
156-60-5	trans-1,2-Dichloroethene			not detected	300	0.059 mg/kg	0.050 mg/kg	
75-35-3	1,1-Dichloroethane			not detected	8	0.058 mg/kg	0.050 mg/kg	
108-05-4	Vinyl Acetate			not detected	NLE	0.033 mg/kg	0.100 mg/kg	
78-93-3	2-Butanone			not detected	3100	0.071 mg/kg	0.050 mg/kg	
156-59-2	cis-1,2-Dichloroethene			not detected	230	0.058 mg/kg	0.050 mg/kg	
67-66-3	Chloroform			not detected	0.6	0.074 mg/kg	0.050 mg/kg	
75-55-6	1,1,1-Trichloroethane			not detected	290	0.063 mg/kg	0.050 mg/kg	
56-23-5	Carbon Tetrachloride			not detected	0.6	0.062 mg/kg	0.050 mg/kg	
71-43-2	Benzene			not detected	2	0.057 mg/kg	0.050 mg/kg	
107-06-2	1,2-Dichloroethane			not detected	0.9	0.045 mg/kg	0.050 mg/kg	
79-01-6	Trichloroethene			not detected	7	0.054 mg/kg	0.050 mg/kg	
78-87-5	1,2-Dichloropropane			not detected	2	0.058 mg/kg	0.050 mg/kg	
75-27-4	Bromodichloromethane			not detected	1	0.048 mg/kg	0.050 mg/kg	
110-75-8	2-Chloroethyl vinyl ether			not detected	NLE	0.061 mg/kg	0.100 mg/kg	
10061-01-5	cis-1,3-Dichloropropene			not detected	2	0.038 mg/kg	0.050 mg/kg	
108-10-1	4-Methyl-2-Pentanone			not detected	NLE	0.054 mg/kg	0.100 mg/kg	
108-88-3	Toluene			not detected	6300	0.071 mg/kg	0.050 mg/kg	
10061-02-6	trans-1,3-Dichloropropene			not detected	2	0.045 mg/kg	0.050 mg/kg	
79-00-5	1,1,2-Trichloroethane			not detected	2	0.051 mg/kg	0.050 mg/kg	
127-18-4	Tetrachloroethene			not detected	2	0.066 mg/kg	0.050 mg/kg	
591-78-6	2-Hexanone			not detected	NLE	0.047 mg/kg	0.100 mg/kg	
126-48-1	Dibromochloromethane			not detected	3.0	0.046 mg/kg	0.050 mg/kg	
108-90-7	Chlorobenzene			not detected	510	0.065 mg/kg	0.050 mg/kg	
100-41-4	Ethylbenzene			not detected	7800	0.069 mg/kg	0.050 mg/kg	
630-20-6	1,1,1,2-tetrachloroethane			not detected	NLE	0.070 mg/kg	0.050 mg/kg	
1330-20-7	m+p-Xylenes			not detected	1200	0.131 mg/kg	0.100 mg/kg	
1330-20-7	o-Xylene			not detected	1200	0.062 mg/kg	0.050 mg/kg	
100-42-5	Styrene			not detected	90	0.054 mg/kg	0.050 mg/kg	
75-25-2	Bromoform			not detected	81	0.040 mg/kg	0.050 mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.054 mg/kg	0.050 mg/kg	
541-73-1	1,3-Dichlorobenzene			not detected	5300	0.058 mg/kg	0.050 mg/kg	
106-46-7	1,4-Dichlorobenzene			not detected	5	0.056 mg/kg	0.050 mg/kg	
95-50-1	1,2-Dichlorobenzene			not detected	5300	0.059 mg/kg	0.050 mg/kg	

*Results between MDL and RL are estimated values

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated value, concentration lies between R.L. and M.D.L.

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

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB09021001

Lab Name: FMETL NJDEP # 13461

Project: Case No.: MW Location: SDG No.: 10372

Matrix: (soil/water) SOIL Lab Sample ID: MB09021001

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA7348.D

Level: (low/med) MED Date Received: 8/31/2010

% Moisture: not dec. 0 Date Analyzed: 9/2/2010

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	VA7364.D	Sample Name	1037201	Sample Weight	10.00 g
Operator	ROBERTS	Field ID	TRIP BLANK	Percent Solids	100.0 %
Date Acquired	2 Sep 2010 10:36 pm	Sample Multiplier	0.100	Methanol extract volume	25 ml
				Methanol aliquot volume	1.25 ml

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (mg/kg)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	0.5	0.436 mg/kg	0.500 mg/kg	
107131	Acrylonitrile			not detected	0.9	0.215 mg/kg	0.500 mg/kg	
75650	tert-Butyl alcohol			not detected	1400	0.411 mg/kg	0.500 mg/kg	
1634044	Methyl-tert-Butyl ether			not detected	110	0.032 mg/kg	0.050 mg/kg	
108203	Di-isopropyl ether			not detected	NLE	0.038 mg/kg	0.050 mg/kg	
75718	Dichlorodifluoromethane			not detected	490	0.104 mg/kg	0.050 mg/kg	
74-87-3	Chloromethane			not detected	4	0.043 mg/kg	0.050 mg/kg	
75-01-4	Vinyl Chloride			not detected	0.7	0.050 mg/kg	0.050 mg/kg	
74-83-9	Bromomethane			not detected	25	0.052 mg/kg	0.050 mg/kg	
75-00-3	Chloroethane			not detected	220	0.044 mg/kg	0.050 mg/kg	
75-69-4	Trichlorofluoromethane			not detected	23000	0.085 mg/kg	0.050 mg/kg	
75-35-4	1,1-Dichloroethene			not detected	11	0.077 mg/kg	0.050 mg/kg	
67-64-1	Acetone			not detected	70000	0.082 mg/kg	0.050 mg/kg	
75-15-0	Carbon Disulfide			not detected	7800	0.068 mg/kg	0.050 mg/kg	
75-09-2	Methylene Chloride			not detected	34	0.065 mg/kg	0.050 mg/kg	
156-60-5	trans-1,2-Dichloroethene			not detected	300	0.059 mg/kg	0.050 mg/kg	
75-35-3	1,1-Dichloroethane			not detected	8	0.058 mg/kg	0.050 mg/kg	
108-05-4	Vinyl Acetate			not detected	NLE	0.033 mg/kg	0.100 mg/kg	
78-93-3	2-Butanone			not detected	3100	0.071 mg/kg	0.050 mg/kg	
156-59-2	cis-1,2-Dichloroethene			not detected	230	0.058 mg/kg	0.050 mg/kg	
67-66-3	Chloroform			not detected	0.6	0.074 mg/kg	0.050 mg/kg	
75-55-6	1,1,1-Trichloroethane			not detected	290	0.063 mg/kg	0.050 mg/kg	
56-23-5	Carbon Tetrachloride			not detected	0.6	0.062 mg/kg	0.050 mg/kg	
71-43-2	Benzene			not detected	2	0.057 mg/kg	0.050 mg/kg	
107-06-2	1,2-Dichloroethane			not detected	0.9	0.045 mg/kg	0.050 mg/kg	
79-01-6	Trichloroethene			not detected	7	0.054 mg/kg	0.050 mg/kg	
78-87-5	1,2-Dichloropropane			not detected	2	0.058 mg/kg	0.050 mg/kg	
75-27-4	Bromodichloromethane			not detected	1	0.048 mg/kg	0.050 mg/kg	
110-75-8	2-Chloroethyl vinyl ether			not detected	NLE	0.061 mg/kg	0.100 mg/kg	
10061-01-5	cis-1,3-Dichloropropene			not detected	2	0.038 mg/kg	0.050 mg/kg	
108-10-1	4-Methyl-2-Pentanone			not detected	NLE	0.054 mg/kg	0.100 mg/kg	
108-88-3	Toluene			not detected	6300	0.071 mg/kg	0.050 mg/kg	
10061-02-6	trans-1,3-Dichloropropene			not detected	2	0.045 mg/kg	0.050 mg/kg	
79-00-5	1,1,2-Trichloroethane			not detected	2	0.051 mg/kg	0.050 mg/kg	
127-18-4	Tetrachloroethene			not detected	2	0.066 mg/kg	0.050 mg/kg	
591-78-6	2-Hexanone			not detected	NLE	0.047 mg/kg	0.100 mg/kg	
126-48-1	Dibromochloromethane			not detected	3.0	0.046 mg/kg	0.050 mg/kg	
108-90-7	Chlorobenzene			not detected	510	0.065 mg/kg	0.050 mg/kg	
100-41-4	Ethylbenzene			not detected	7800	0.069 mg/kg	0.050 mg/kg	
630-20-6	1,1,1,2-tetrachloroethane			not detected	NLE	0.070 mg/kg	0.050 mg/kg	
1330-20-7	m+p-Xylenes			not detected	1200	0.131 mg/kg	0.100 mg/kg	
1330-20-7	o-Xylene			not detected	1200	0.062 mg/kg	0.050 mg/kg	
100-42-5	Styrene			not detected	90	0.054 mg/kg	0.050 mg/kg	
75-25-2	Bromoform			not detected	81	0.040 mg/kg	0.050 mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.054 mg/kg	0.050 mg/kg	
541-73-1	1,3-Dichlorobenzene			not detected	5300	0.058 mg/kg	0.050 mg/kg	
106-46-7	1,4-Dichlorobenzene			not detected	5	0.056 mg/kg	0.050 mg/kg	
95-50-1	1,2-Dichlorobenzene			not detected	5300	0.059 mg/kg	0.050 mg/kg	

*Results between MDL and RL are estimated values

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated value, concentration lies between R.L. and M.D.L.

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

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: Case No.: MW Location: SDG No.: 10372

Matrix: (soil/water) SOIL Lab Sample ID: 1037201

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VA7364.D

Level: (low/med) MED Date Received: 8/31/2010

% Moisture: not dec. 0 Date Analyzed: 9/2/2010

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	VA7365.D	Sample Name	1037202	Sample Weight	9.39 g
Operator	ROBERTS	Field ID	482 SB-1 (5-5.5')	Percent Solids	83.1 %
Date Acquired	2 Sep 2010 11:07 pm	Sample Multiplier	0.128	Methanol extract volume	25 ml
				Methanol aliquot volume	1.25 ml

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (mg/kg)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	0.5	0.559 mg/kg	0.641 mg/kg	
107131	Acrylonitrile			not detected	0.9	0.276 mg/kg	0.641 mg/kg	
75650	tert-Butyl alcohol			not detected	1400	0.527 mg/kg	0.641 mg/kg	
1634044	Methyl-tert-Butyl ether			not detected	110	0.041 mg/kg	0.064 mg/kg	
108203	Di-isopropyl ether			not detected	NLE	0.049 mg/kg	0.064 mg/kg	
75718	Dichlorodifluoromethane			not detected	490	0.133 mg/kg	0.064 mg/kg	
74-87-3	Chloromethane			not detected	4	0.055 mg/kg	0.064 mg/kg	
75-01-4	Vinyl Chloride			not detected	0.7	0.064 mg/kg	0.064 mg/kg	
74-83-9	Bromomethane			not detected	25	0.067 mg/kg	0.064 mg/kg	
75-00-3	Chloroethane			not detected	220	0.056 mg/kg	0.064 mg/kg	
75-69-4	Trichlorofluoromethane			not detected	23000	0.109 mg/kg	0.064 mg/kg	
75-35-4	1,1-Dichloroethene			not detected	11	0.099 mg/kg	0.064 mg/kg	
67-64-1	Acetone			not detected	70000	0.105 mg/kg	0.064 mg/kg	
75-15-0	Carbon Disulfide			not detected	7800	0.087 mg/kg	0.064 mg/kg	
75-09-2	Methylene Chloride			not detected	34	0.083 mg/kg	0.064 mg/kg	
156-60-5	trans-1,2-Dichloroethene			not detected	300	0.076 mg/kg	0.064 mg/kg	
75-35-3	1,1-Dichloroethane			not detected	8	0.074 mg/kg	0.064 mg/kg	
108-05-4	Vinyl Acetate			not detected	NLE	0.042 mg/kg	0.128 mg/kg	
78-93-3	2-Butanone			not detected	3100	0.091 mg/kg	0.064 mg/kg	
156-59-2	cis-1,2-Dichloroethene			not detected	230	0.074 mg/kg	0.064 mg/kg	
67-66-3	Chloroform			not detected	0.6	0.095 mg/kg	0.064 mg/kg	
75-55-6	1,1,1-Trichloroethane			not detected	290	0.081 mg/kg	0.064 mg/kg	
56-23-5	Carbon Tetrachloride			not detected	0.6	0.079 mg/kg	0.064 mg/kg	
71-43-2	Benzene			not detected	2	0.073 mg/kg	0.064 mg/kg	
107-06-2	1,2-Dichloroethane			not detected	0.9	0.058 mg/kg	0.064 mg/kg	
79-01-6	Trichloroethene			not detected	7	0.069 mg/kg	0.064 mg/kg	
78-87-5	1,2-Dichloropropane			not detected	2	0.074 mg/kg	0.064 mg/kg	
75-27-4	Bromodichloromethane			not detected	1	0.062 mg/kg	0.064 mg/kg	
110-75-8	2-Chloroethyl vinyl ether			not detected	NLE	0.078 mg/kg	0.128 mg/kg	
10061-01-5	cis-1,3-Dichloropropene			not detected	2	0.049 mg/kg	0.064 mg/kg	
108-10-1	4-Methyl-2-Pentanone			not detected	NLE	0.069 mg/kg	0.128 mg/kg	
108-88-3	Toluene			not detected	6300	0.091 mg/kg	0.064 mg/kg	
10061-02-6	trans-1,3-Dichloropropene			not detected	2	0.058 mg/kg	0.064 mg/kg	
79-00-5	1,1,2-Trichloroethane			not detected	2	0.065 mg/kg	0.064 mg/kg	
127-18-4	Tetrachloroethene			not detected	2	0.085 mg/kg	0.064 mg/kg	
591-78-6	2-Hexanone			not detected	NLE	0.060 mg/kg	0.128 mg/kg	
126-48-1	Dibromochloromethane			not detected	3.0	0.059 mg/kg	0.064 mg/kg	
108-90-7	Chlorobenzene			not detected	510	0.083 mg/kg	0.064 mg/kg	
100-41-4	Ethylbenzene			not detected	7800	0.088 mg/kg	0.064 mg/kg	
630-20-6	1,1,1,2-tetrachloroethane			not detected	NLE	0.090 mg/kg	0.064 mg/kg	
1330-20-7	m+p-Xylenes			not detected	1200	0.168 mg/kg	0.128 mg/kg	
1330-20-7	o-Xylene			not detected	1200	0.079 mg/kg	0.064 mg/kg	
100-42-5	Styrene			not detected	90	0.069 mg/kg	0.064 mg/kg	
75-25-2	Bromoform			not detected	81	0.051 mg/kg	0.064 mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.069 mg/kg	0.064 mg/kg	
541-73-1	1,3-Dichlorobenzene			not detected	5300	0.074 mg/kg	0.064 mg/kg	
106-46-7	1,4-Dichlorobenzene			not detected	5	0.072 mg/kg	0.064 mg/kg	
95-50-1	1,2-Dichlorobenzene			not detected	5300	0.076 mg/kg	0.064 mg/kg	

*Results between MDL and RL are estimated values

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

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated value, concentration lies between R.L. and M.D.L.

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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

482 SB-1 (5-5.5')

Lab Name: FMETL NJDEP # 13461

Project: Case No.: MW Location: SDG No.: 10372

Matrix: (soil/water) SOIL Lab Sample ID: 1037202

Sample wt/vol: 9.4 (g/ml) G Lab File ID: VA7365.D

Level: (low/med) MED Date Received: 8/31/2010

% Moisture: not dec. 16.9 Date Analyzed: 9/2/2010

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 125 (uL)

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E495.D	Misc Info	METHOD 8270 9/10/10	Sample Weight	10.00 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	100.0 %
Date Acquired	5-Oct-10	Sample Multiplier	0.100		
Sample Name	MB09101001	*Sample multiplier = (0.001*Dilution factor)/([sample weight(kg)]*[percent solids/100])*			
		Multiplied by 0.001 to convert ug/kg to mg/kg.			

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	0.099	0.50	mg/kg	
62-75-9	N-nitroso-dimethylamine			not	detected	0.168	0.50	mg/kg	
62-53-3	Aniline			not	detected	0.267	0.50	mg/kg	
108-95-2	Phenol			not	detected	0.248	0.50	mg/kg	
111-44-4	bis-2-chloroethyl ether			not	detected	0.193	0.50	mg/kg	
95-57-8	2-chlorophenol			not	detected	0.233	0.50	mg/kg	
541-73-1	1,3-dichlorobenzene			not	detected	0.167	0.50	mg/kg	
106-46-7	1,4-dichlorobenzene			not	detected	0.174	0.50	mg/kg	
100-51-6	Benzyl alcohol			not	detected	0.258	0.50	mg/kg	
95-50-1	1,2-dichlorobenzene			not	detected	0.194	0.50	mg/kg	
95-48-7	2-methylphenol			not	detected	0.275	0.50	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	0.224	0.50	mg/kg	
106-44-5	4-methylphenol			not	detected	0.308	0.50	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not	detected	0.253	0.50	mg/kg	
67-72-1	Hexachloroethane			not	detected	0.189	0.50	mg/kg	
98-95-3	Nitrobenzene			not	detected	0.226	0.50	mg/kg	
78-59-1	Isophorone			not	detected	0.240	0.50	mg/kg	
88-75-5	2-nitrophenol			not	detected	0.224	0.50	mg/kg	
105-67-9	2,4-dimethylphenol			not	detected	0.255	0.50	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not	detected	0.198	0.50	mg/kg	
120-83-2	2,4-dichlorophenol			not	detected	0.252	0.50	mg/kg	
65-85-0	Benzoic acid			not	detected	0.207	0.50	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not	detected	0.219	0.50	mg/kg	
91-20-3	Naphthalene			not	detected	0.242	0.50	mg/kg	
106-47-8	4-chloroaniline			not	detected	0.370	0.50	mg/kg	
87-68-3	Hexachlorobutadiene			not	detected	0.216	0.50	mg/kg	
59-50-7	4-chloro-3-methylphenol			not	detected	0.272	0.50	mg/kg	
91-57-6	2-methylnaphthalene			not	detected	0.260	0.50	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not	detected	0.146	0.50	mg/kg	
88-06-2	2,4,6-trichlorophenol			not	detected	0.278	0.50	mg/kg	
95-95-4	2,4,5-trichlorophenol			not	detected	0.289	0.50	mg/kg	
91-58-7	2-chloronaphthalene			not	detected	0.251	0.50	mg/kg	
88-74-4	2-nitroaniline			not	detected	0.307	0.50	mg/kg	
131-11-3	Dimethylphthalate			not	detected	0.264	0.50	mg/kg	
208-96-8	Acenaphthylene			not	detected	0.272	0.50	mg/kg	
606-20-2	2,6-dinitrotoluene			not	detected	0.261	0.50	mg/kg	
99-09-2	3-nitroaniline			not	detected	0.221	0.50	mg/kg	
83-32-9	Acenaphthene			not	detected	0.271	0.50	mg/kg	
51-28-5	2,4-dinitrophenol			not	detected	0.174	0.50	mg/kg	
132-64-9	Dibenzofuran			not	detected	0.319	0.50	mg/kg	
100-02-07	4-nitrophenol			not	detected	0.246	0.50	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E495.D**	Misc Info	**METHOD 8270 9/10/10**	Sample Weight	**10.00 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**100.0 %**
Date Acquired	**5-Oct-10**	Sample Multiplier	**0.100**		
Sample Name	**MB09101001**	*Sample multiplier = (0.001*Dilution factor)/([sample weight(kg)]*[percent solids/10*			
		Multiplied by 0.001 to convert ug/kg to mg/kg.			

CAS#	Name	R.T.	Response	Result			RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	0.261	0.50	mg/kg	
84-66-2	Diethylphthalate			not	detected	0.250	0.50	mg/kg	
86-73-7	Fluorene			not	detected	0.283	0.50	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not	detected	0.278	0.50	mg/kg	
100-01-6	4-nitroaniline			not	detected	0.273	0.50	mg/kg	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	0.241	1.00	mg/kg	
86-30-6	N-nitrosodiphenylamine			not	detected	0.271	0.50	mg/kg	
103-33-3	Azobenzene			not	detected	0.287	0.50	mg/kg	
101-55-3	4-bromophenyl-phenylether			not	detected	0.288	0.50	mg/kg	
118-74-1	Hexachlorobenzene			not	detected	0.300	0.50	mg/kg	
87-86-5	Pentachlorophenol			not	detected	0.288	0.50	mg/kg	
85-01-8	Phenanthrene			not	detected	0.297	0.50	mg/kg	
120-12-7	Anthracene			not	detected	0.299	0.50	mg/kg	
84-74-2	Di-n-butylphthalate			not	detected	0.286	0.50	mg/kg	
206-44-0	Fluoranthene			not	detected	0.297	0.50	mg/kg	
92-87-5	Benzidine			not	detected	0.269	0.50	mg/kg	
129-00-0	Pyrene			not	detected	0.317	0.50	mg/kg	
85-68-7	Butylbenzylphthalate			not	detected	0.263	0.50	mg/kg	
56-55-3	Benzo[a]anthracene			not	detected	0.298	0.50	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not	detected	0.272	0.50	mg/kg	
218-01-9	Chrysene			not	detected	0.281	0.50	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	0.316	0.50	mg/kg	
117-84-0	Di-n-octylphthalate			not	detected	0.265	0.50	mg/kg	
205-99-2	Benzo[b]fluoranthene			not	detected	0.214	0.50	mg/kg	
207-08-9	Benzo[k]fluoranthene			not	detected	0.257	0.50	mg/kg	
50-32-8	Benzo[a]pyrene			not	detected	0.230	0.50	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.195	0.50	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.182	0.50	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not	detected	0.185	0.50	mg/kg	

* Higher of PQL's and Interim Criteria as per NJAC 7:9-6.9(c).

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
RL= Reporting Limit. The values between the MDL and RL are considered estimated.
J= Estimated concentration, value lies between RL and MDL
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB09101001**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: _____ Location: _____ SDG No.: 10372

Matrix: (soil/water) SOIL Lab Sample ID: MB09101001

Sample wt/vol: 10 (g/ml) G Lab File ID: E495.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: 0 decanted: (Y/N) N Date Extracted: 9/10/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.05	850	J
2.	extraction by-product	6.77	42000	J
3.	extraction by-product	13.90	410	J
4.	extraction by-product	15.70	810	J
5.	extraction by-product	19.14	1200	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E497.D	Misc Info	482 SB-1 (5-5.5')	Sample Weight	10.10 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	83.1 %
Date Acquired	5-Oct-10	Sample Multiplier	0.119		
Sample Name	10372 02	*Sample multiplier = (0.001*Dilution factor)/([sample weight(kg)]*[percent solids/100])*			
		Multiplied by 0.001 to convert ug/kg to mg/kg.			

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	0.118	0.60	mg/kg	
62-75-9	N-nitroso-dimethylamine			not	detected	0.200	0.60	mg/kg	
62-53-3	Aniline			not	detected	0.318	0.60	mg/kg	
108-95-2	Phenol			not	detected	0.295	0.60	mg/kg	
111-44-4	bis-2-chloroethyl ether			not	detected	0.230	0.60	mg/kg	
95-57-8	2-chlorophenol			not	detected	0.278	0.60	mg/kg	
541-73-1	1,3-dichlorobenzene			not	detected	0.199	0.60	mg/kg	
106-46-7	1,4-dichlorobenzene			not	detected	0.207	0.60	mg/kg	
100-51-6	Benzyl alcohol			not	detected	0.307	0.60	mg/kg	
95-50-1	1,2-dichlorobenzene			not	detected	0.231	0.60	mg/kg	
95-48-7	2-methylphenol			not	detected	0.328	0.60	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	0.267	0.60	mg/kg	
106-44-5	4-methylphenol			not	detected	0.367	0.60	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not	detected	0.301	0.60	mg/kg	
67-72-1	Hexachloroethane			not	detected	0.225	0.60	mg/kg	
98-95-3	Nitrobenzene			not	detected	0.269	0.60	mg/kg	
78-59-1	Isophorone			not	detected	0.286	0.60	mg/kg	
88-75-5	2-nitrophenol			not	detected	0.267	0.60	mg/kg	
105-67-9	2,4-dimethylphenol			not	detected	0.304	0.60	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not	detected	0.236	0.60	mg/kg	
120-83-2	2,4-dichlorophenol			not	detected	0.300	0.60	mg/kg	
65-85-0	Benzoic acid			not	detected	0.247	0.60	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not	detected	0.261	0.60	mg/kg	
91-20-3	Naphthalene			not	detected	0.288	0.60	mg/kg	
106-47-8	4-chloroaniline			not	detected	0.441	0.60	mg/kg	
87-68-3	Hexachlorobutadiene			not	detected	0.257	0.60	mg/kg	
59-50-7	4-chloro-3-methylphenol			not	detected	0.324	0.60	mg/kg	
91-57-6	2-methylnaphthalene	11.82	15671565	11.35	detected	0.310	0.60	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not	detected	0.174	0.60	mg/kg	
88-06-2	2,4,6-trichlorophenol			not	detected	0.331	0.60	mg/kg	
95-95-4	2,4,5-trichlorophenol			not	detected	0.344	0.60	mg/kg	
91-58-7	2-chloronaphthalene			not	detected	0.299	0.60	mg/kg	
88-74-4	2-nitroaniline			not	detected	0.366	0.60	mg/kg	
131-11-3	Dimethylphthalate			not	detected	0.315	0.60	mg/kg	
208-96-8	Acenaphthylene			not	detected	0.324	0.60	mg/kg	
606-20-2	2,6-dinitrotoluene			not	detected	0.311	0.60	mg/kg	
99-09-2	3-nitroaniline			not	detected	0.263	0.60	mg/kg	
83-32-9	Acenaphthene			not	detected	0.323	0.60	mg/kg	
51-28-5	2,4-dinitrophenol			not	detected	0.207	0.60	mg/kg	
132-64-9	Dibenzofuran			not	detected	0.380	0.60	mg/kg	
100-02-07	4-nitrophenol			not	detected	0.293	0.60	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	E497.D	Misc Info	482 SB-1 (5-5.5')	Sample Weight	10.10 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	83.1 %
Date Acquired	5-Oct-10	Sample Multiplier	0.119		
Sample Name	10372 02	*Sample multiplier = (0.001*Dilution factor)/([sample weight(kg)]*[percent solic*			
		Multiplied by 0.001 to convert ug/kg to mg/kg.			

CAS#	Name	R.T.	Response	Result			RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	0.311	0.60	mg/kg	
84-66-2	Diethylphthalate			not	detected	0.298	0.60	mg/kg	
86-73-7	Fluorene			not	detected	0.337	0.60	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not	detected	0.331	0.60	mg/kg	
100-01-6	4-nitroaniline			not	detected	0.325	0.60	mg/kg	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	0.287	1.19	mg/kg	
86-30-6	N-nitrosodiphenylamine			not	detected	0.323	0.60	mg/kg	
103-33-3	Azobenzene			not	detected	0.342	0.60	mg/kg	
101-55-3	4-bromophenyl-phenylether			not	detected	0.343	0.60	mg/kg	
118-74-1	Hexachlorobenzene			not	detected	0.357	0.60	mg/kg	
87-86-5	Pentachlorophenol			not	detected	0.343	0.60	mg/kg	
85-01-8	Phenanthrene			not	detected	0.354	0.60	mg/kg	
120-12-7	Anthracene			not	detected	0.356	0.60	mg/kg	
84-74-2	Di-n-butylphthalate			not	detected	0.341	0.60	mg/kg	
206-44-0	Fluoranthene			not	detected	0.354	0.60	mg/kg	
92-87-5	Benzidine			not	detected	0.321	0.60	mg/kg	
129-00-0	Pyrene			not	detected	0.378	0.60	mg/kg	
85-68-7	Butylbenzylphthalate			not	detected	0.313	0.60	mg/kg	
56-55-3	Benzo[a]anthracene			not	detected	0.355	0.60	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not	detected	0.324	0.60	mg/kg	
218-01-9	Chrysene			not	detected	0.335	0.60	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	0.376	0.60	mg/kg	
117-84-0	Di-n-octylphthalate			not	detected	0.316	0.60	mg/kg	
205-99-2	Benzo[b]fluoranthene			not	detected	0.255	0.60	mg/kg	
207-08-9	Benzo[k]fluoranthene			not	detected	0.306	0.60	mg/kg	
50-32-8	Benzo[a]pyrene			not	detected	0.274	0.60	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.232	0.60	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.217	0.60	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not	detected	0.220	0.60	mg/kg	

* Higher of PQL's and Interim Criteria as per NJAC 7:9-6.9(c).

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
RL= Reporting Limit. The values between the MDL and RL are considered estimated.
J= Estimated concentration, value lies between RL and MDL
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

000027

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **482 SB-1 (5-5.5')**

Lab Name: FMETL Lab Code 13461

Project: Case No.: Location: SDG No.: 10372

Matrix: (soil/water) SOIL Lab Sample ID: 1037202

Sample wt/vol: 10.1 (g/ml) G Lab File ID: E497.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: 16.9 decanted: (Y/N) N Date Extracted: 9/10/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 25 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.77	29000	J
2. 000091-17-8	Naphthalene, decahydro-	9.53	4100	JN
3.	Alkane: Cyclic	9.86	4000	J
4.	Alkane: Cyclic	11.20	4100	J
5. 000090-12-0	Naphthalene, 1-methyl-	11.96	4400	JN
6.	Alkane: Cyclic	12.09	4000	J
7.	Alkane: Branched	12.26	5900	J
8.	unknown hydrocarbon	12.47	4700	J
9.	1H-Indene-dihydro-trimethyl	12.57	4500	J
10.	Naphthalene, ethyl-	12.63	4300	J
11.	Naphthalene, dimethyl-	12.74	6900	J
12.	Naphthalene, dimethyl-	12.85	6500	J
13.	Alkane: Straight-Chain	12.93	6900	J
14.	Naphthalene, dimethyl-	13.02	4600	J
15.	Alkane: Branched	13.16	4100	J
16.	unknown hydrocarbon	13.23	4900	J
17.	Naphthalene, trimethyl-	13.63	4600	J
18.	Naphthalene, trimethyl-	13.69	6000	J
19.	Naphthalene, trimethyl-	13.85	4000	J
20.	Naphthalene, trimethyl-	13.95	5200	J
21.	Alkane: Branched	14.03	5100	J
22.	unknown hydrocarbon	14.14	6000	J
23.	Alkane: Straight-Chain	14.28	7700	J
24.	Alkane: Branched	14.68	5800	J
25.	Alkane: Branched	17.92	4200	J

PESTICIDES/PCB's

Ft. Monmouth Environmental Laboratory
173 Riverside Ave.
Ft. Monmouth, NJ 07703

Client:	US Army	Location:	Bldg 482
Project Name:	Bldg 482	MATRIX:	Hexane
Field ID:	Method Blank	Ext. Batch:	PP09101001
Lab ID:	MB09101001	Date Extracted:	9/10/2010
Filename:	09131019.D	Date Analyzed:	9/13/2010
Lab Project :	10372	Dilution:	1
		Analyst:	CR

CAS #	COMPOUNDS	RESULTS	Reporting Limit	Soil Remediation	Qualifier	MDL
		(mg/kg)	(mg/kg)	Standard (mg/kg)**		(mg/kg)
319-84-6	alpha-BHC	ND	0.0200	0.1		0.0007
319-85-7	beta-BHC	ND	0.0200	0.4		0.0009
58-89-9	gamma-BHC	ND	0.0200	0.4		0.0006
319-86-8	delta-BHC	ND	0.0200	NLE		0.0005
76-44-8	Heptachlor	ND	0.0200	0.1		0.0085
309-00-2	Aldrin	ND	0.0200	0.04		0.0020
1024-57-3	Heptachlor epoxide	ND	0.0200	0.07		0.0008
5103-74-2	gamma-Chlordane	ND	0.0200	NLE		0.0014
5103-71-9	alpha-Chlordane	ND	0.0200	NLE		0.0013
959-98-8	Endosulfan I	ND	0.0200	470		0.0016
72-55-9	4,4'-DDE	ND	0.0200	2		0.0017
60-57-1	Dieldrin	ND	0.0200	0.04		0.0017
72-20-8	Endrin	ND	0.0200	23		0.0006
33213-65-9	Endosulfan II	ND	0.0200	470		0.0005
72-54-8	4,4'-DDD	ND	0.0200	3		0.0006
7421-93-4	Endrin aldehyde	ND	0.0200	NLE		0.0006
50-29-3	4,4'-DDT	ND	0.0200	2		0.0010
1031-07-8	Endosulfan sulfate	ND	0.0200	470		0.0005
53494-70-5	Endrin ketone	ND	0.0200	NLE		0.0006
72-43-5	Methoxychlor	ND	0.0200	390		0.0007
8001-35-2	Toxaphene	ND	0.0500	0.6		0.0237
57-74-9	Total Chlordane	ND	0.0500	0.5		0.0120

% Solids	100
Initial Mass (g)	10
Final Vol.(ml)	10

MDL = Method Detection Limit.
ND =Not Detected / Below MDL.
B = Present in the associated Blank.
E = Exceeded Calibration Range, Dilution to follow.
D = Dilution.
NLE = No Limit Established.
RL = Reporting Limit.

*Results between MDL and RL are estimated.
Column-Primary: Rtx-CLPesticides 30/.32mm ID/.25um.
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.5um.

**Residential Direct Contact Soil Remediation Standard as per N.J.A.C. 7:26D June 2, 2008

Ft. Monmouth Environmental Laboratory
173 Riverside Ave.
Ft. Monmouth, NJ 07703

Client:	US Army	Location:	Bldg 482
Project Name:	Bldg 482	MATRIX:	Hexane
Field ID:	Method Blank	Ext. Batch:	PP09101001
Lab ID:	MB091010-1	Date Extracted:	9/10/2010
Filename:	10051016.D	Date Analyzed:	10/5/2010
Lab Project :	10372	Dilution:	1
		Analyst:	CR

CAS #	COMPOUNDS	RESULTS (mg/kg)	Reporting Limit (mg/kg)	Qualifier	MDL (mg/kg)
12674-11-2	Arochlor 1016	ND	0.050		0.0290
11104-28-2	Arochlor 1221	ND	0.050		0.0230
11141-16-5	Arochlor 1232	ND	0.050		0.0230
53469-21-9	Arochlor 1242	ND	0.050		0.0060
12672-29-6	Arochlor 1248	ND	0.050		0.0085
11097-69-1	Arochlor 1254	ND	0.050		0.0110
11096-82-5	Arochlor 1260	ND	0.050		0.0140

MDL = Method Detection Limit.
ND =Not Detected / Below MDL.
B = Present in the associated Blank.
E = Exceeded Calibration Range, Dilution to follow.
D = Dilution.
*Results between MDL and RL are estimated.

% Solids	100
Initial Mass (g)	10.00
Final Vol.(ml)	10

Column-Primary: Rtx-CLPesticides 30/.32mm ID/.25um.
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.5um.

Ft. Monmouth Environmental Laboratory
173 Riverside Ave.
Ft. Monmouth, NJ 07703

Client:	US Army	Location:	Bldg 482
Project Name:	Bldg 482	MATRIX:	Soil
Field ID:	482SB-1 (5-5.5')	Ext. Batch:	PP09101001
Lab ID:	10372-02	Date Extracted:	9/10/2010
Filename:	09131023.D	Date Analyzed:	9/13/2010
Lab Project:	10372	Dilution:	1
		Analyst:	CR

CAS #	COMPOUNDS	RESULTS (mg/kg)	Reporting Limit (mg/kg)	Soil Remediation Standard (mg/kg)**	Qualifier	MDL (mg/kg)
319-84-6	alpha-BHC	ND	0.0241	0.1		0.0008
319-85-7	beta-BHC	ND	0.0241	0.4		0.0011
58-89-9	gamma-BHC	ND	0.0241	0.4		0.0007
319-86-8	delta-BHC	ND	0.0241	NLE		0.0006
76-44-8	Heptachlor	ND	0.0241	0.1		0.0102
309-00-2	Aldrin	ND	0.0241	0.04		0.0024
1024-57-3	Heptachlor epoxide	ND	0.0241	0.07		0.0010
5103-74-2	gamma-Chlordane	ND	0.0241	NLE		0.0017
5103-71-9	alpha-Chlordane	ND	0.0241	NLE		0.0016
959-98-8	Endosulfan I	ND	0.0241	470		0.0019
72-55-9	4,4'-DDE	ND	0.0241	2		0.0020
60-57-1	Dieldrin	ND	0.0241	0.04		0.0020
72-20-8	Endrin	ND	0.0241	23		0.0007
33213-65-9	Endosulfan II	ND	0.0241	470		0.0006
72-54-8	4,4'-DDD	ND	0.0241	3		0.0007
7421-93-4	Endrin aldehyde	ND	0.0241	NLE		0.0007
50-29-3	4,4'-DDT	ND	0.0241	2		0.0012
1031-07-8	Endosulfan sulfate	ND	0.0241	470		0.0006
53494-70-5	Endrin ketone	ND	0.0241	NLE		0.0007
72-43-5	Methoxychlor	ND	0.0241	390		0.0008
8001-35-2	Toxaphene	ND	0.0602	0.6		0.0285
57-74-9	Total Chlordane	ND	0.0602	0.2		0.0144

% Solids	83.1
Initial Mass (g)	10.13
Final Vol.(ml)	10

MDL = Method Detection Limit.
ND =Not Detected / Below MDL.
B = Present in the associated Blank.
E = Exceeded Calibration Range, Dilution to follow.
D = Dilution.
NLE = No Limit Established.
RL = Reporting Limit.

*Results between MDL and RL are estimated.
Column-Primary: Rtx-CLPesticides 30/.32mm ID/.25um.
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.5um.

**Residential Direct Contact Soil Remediation Standard as per N.J.A.C. 7:26D

Ft. Monmouth Environmental Laboratory
173 Riverside Ave.
Ft. Monmouth, NJ 07703

Client:	US Army	Location:	Bldg 482
Project Name:	Bldg 482	MATRIX:	Soil
Field ID:	482SB-1 (5-5.5')	Ext. Batch:	PP09101001
Lab ID:	10372-02	Date Extracted:	9/10/2010
Filename:	10051018.D	Date Analyzed:	10/25/2010
Lab Project:	10372	Dilution:	1
		Analyst:	CR

CAS #	COMPOUNDS	RESULTS (mg/kg)	Reporting Limit (mg/kg)		Qualifier	MDL (mg/kg)
12674-11-2	Arochlor 1016	ND	0.060			0.0265
11104-28-2	Arochlor 1221	ND	0.060			0.0168
11141-16-5	Arochlor 1232	ND	0.060			0.0132
53469-21-9	Arochlor 1242	ND	0.060			0.0072
12672-29-6	Arochlor 1248	ND	0.060			0.0349
11097-69-1	Arochlor 1254	ND	0.060			0.0193
11096-82-5	Arochlor 1260	ND	0.060			0.0301

MDL = Method Detection Limit.	% Solids	83.1
ND =Not Detected / Below MDL.	Initial Mass (g)	10.13
B = Present in the associated Blank.	Final Vol.(ml)	10

E = Exceeded Calibration Range, Dilution to follow.
D = Dilution.
NLE = No Limit Established.
RL = Reporting Limit.
PQL = Practical Quantitation Limit.

*Results between MDL and RL are estimated.
Column-Primary: Rtx-CLPesticides 30/.32mm ID/.25um.
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.5um.

PP METALS

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Site: Bldg. 482

Lab ID #: 10372
Sample Received: NA
Sample Matrix: Aqueous
Date Prepared: 09/01/10

Field ID: Method Blank

Method of Digestion: E.P.A SW-846, Method 3051A
Method of Analysis: EPA SW-846 Method 6010B, 7471A

TAL-METALS RESULTS SUMMARY (mg/L)

Element	Date of Analysis	Result (mg/L)	R.L. (mg/L)	MDL (mg/L)
Antimony	09/02/10	ND	0.010	0.0033
Arsenic	09/02/10	ND	0.005	0.005
Beryllium	09/02/10	ND	0.0005	0.0003
Cadmium	09/02/10	ND	0.002	0.0007
Chromium	09/02/10	0.191	0.005	0.0013
Copper	09/02/10	0.024	0.015	0.013
Lead	09/02/10	0.004	0.005	0.0026
Mercury	09/09/10	ND	0.0005	0.00004
Nickel	09/02/10	0.024	0.005	0.0022
Selenium	09/02/10	0.009	0.020	0.007
Silver	09/02/10	ND	0.005	0.001
Thallium	09/02/10	ND	0.010	0.005
Zinc	09/02/10	ND	0.050	0.022

ND = Not Detected, NLE = No Limit Established,
R.L. = Reporting limit, MDL = Method Detection Limit
Estimated results between MDL & R.L

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 1037202
Sample Received: 08/31/10
Sample Matrix: Soil

Site: Bldg. 482

Field ID: 482/ SB-1 (5.0-5.5)

Method of Digestion: E.P.A SW-846, Method 3051A
Method of Analysis: EPA SW-846 Method 6010B, 7471A

PP-METALS RESULTS SUMMARY (mg/kg)

Element	Date of Analysis	Result (mg/kg)	Soil Cleanup Criteria (mg/kg)*	R.L. (mg/kg)	MDL (mg/kg)
Antimony	09/02/10	2.45	31	4.28	1.413
Arsenic	09/02/10	12.3	19	2.14	2.141
Beryllium	09/02/10	1.82	16	0.21	0.128
Cadmium	09/02/10	1.97	78	0.86	0.300
Chromium	09/02/10	149	NLE	2.14	0.557
Copper	09/02/10	8.27	3100	6.42	5.567
Lead	09/02/10	10.8	400	2.14	1.113
Mercury	09/09/10	ND	23	0.21	0.017
Nickel	09/02/10	7.94	1600	2.14	0.942
Selenium	09/02/10	ND	390	8.56	2.997
Silver	09/02/10	10.2	390	2.14	0.428
Thallium	09/02/10	ND	5	4.28	2.141
Zinc	09/02/10	49.9	23000	10.70	9.420

ND = Not Detected, NLE = No Limit Established, NA = Standard Not Available
* Residential Direct Contact Soil Remediation Standard as per N.J.A.C. 7:26D June 2, 2008
R.L. = Reporting limit, MDL = Method Detection Limit
Estimated results between MDL & R.L.

WET CHEMISTRY

Accutest Laboratories

Report of Analysis

Client Sample ID:	1037202 482/SB-5.0-5.5'		
Lab Sample ID:	JA55188-1	Date Sampled:	08/31/10
Matrix:	SO - Soil	Date Received:	08/31/10
		Percent Solids:	83.6
Project:	Building 482		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	<0.26	0.26	mg/kg	1	09/04/10 14:32	NR	SW846 9012 M/LACHAT
Solids, Percent	83.6		%	1	09/08/10	AL	SM18 2540G

RL = Reporting Limit

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1.	Cover Page, Title Page listing Lab Certification #, facility name and address, & date of report submitted.	✓
2.	Table of Contents submitted.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	✓
4.	Document paginated and legible.	✓
5.	Chain of Custody submitted.	✓
6.	Samples submitted to lab within 48 hours of sample collection.	✓
7.	Methodology Summary submitted.	✓
8.	Laboratory Chronicle and Holding Time Check submitted.	✓
9.	Results submitted on a dry weight basis.	✓
10.	Method Detection Limits submitted.	✓
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	✓

Laboratory Manager or Environmental Consultant's Signature _____

Date: 10/29/10

Laboratory Certification # 13461

*Refer to NJAC 7:26E – Appendix A, Section IV – Reduced Data Deliverables – Non-USEPA/CLP Methods for further guidance.

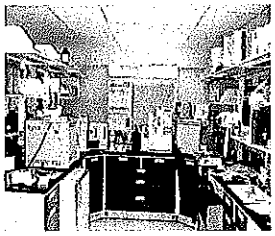
Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Dean Tardiff 10/29/10
Dean Tardiff
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: UST Program

Bldg. 482

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
Trip Blank	1037301	Aqueous	31-Aug-10 08:45	08/31/10
Field Blank	1037302	Aqueous	31-Aug-10 13:30	08/31/10
482/TMP-1	1037303	Aqueous	31-Aug-10 13:45	08/31/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, ABN+25, PESTICIDES, PCB's
PP METALS,

ACCUTEST LABORATORIES
TOTAL CYANIDE

Dean Tardiff/Date: 10/29/10
Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-6352 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Fort Monmouth
Phone #: X22642 / C. Hankey
( )DERA ( )OMA ( )Other:_____
Project No:
Location: 482
Samplers Name / Company: Robert Touhaj / TUS

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	VOA's	SVOC's	Pesticides	PCB's	RP Metals	Total Cyanide			Comments: Remarks / Preservation Method
103736	TRIP	08/31/10	08:45	GW	2	✓	✓	✓						HCl, NaOH
02	Field Blank	08/31/10	13:30	GW	7	✓	✓	✓	✓	✓	✓			HCl, NaOH
03	482TMP-1	08/31/10	13:45	GW	7	✓	✓	✓	✓	✓	✓			HCl, NaOH

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	08/31/10 1500				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (✓)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (✓)Standard 3 wks, (_)Rush ____Wk., (_)ASAP Verbal ____Hrs.

Remarks:

print legibly

COC Copy.xls8/16/2010

200002

SAMPLE RECEIPT FORM

Date Received: 8-31-10 Work Order ID#: 10373

Site/Proj. Name: Bldg 482 Cooler Temp (°C): 3.0ac

Received By: J. Vergara Sign: J. Vergara
(Print name)

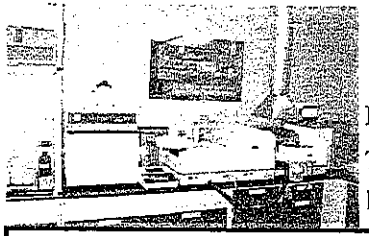
Check the appropriate box

1. Did the samples come in a cooler?	yes	no	n/a
2. Were samples rec'd in good condition?	yes	no	
3. Was the chain of custody filled out correctly and legibly?	yes	no	
4. Was the chain of custody signed in the appropriate place?	yes	no	
5. Did the labels agree with the chain of custody?	yes	no	
6. Were the correct containers/preservatives used?	yes	no	
7. Was a sufficient amount of sample supplied?	yes	no	
8. Were air bubbles present in VOA vials?	yes	no	n/a
9. Were samples received on ice?	yes	no	
10. Were analyze-immediately tests perform within 15 minutes	yes	no	n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
10373 1-3	N/A	HCL			
2-3	2	HNO3			

Comments: _____



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Dean Tardiff
Phone #: (732)532-4359
( )DERA ( )OMA ( )Other:_____

Project No:
Location: Bldg. 482

Samplers Name / Company:

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: Total Cyanide								Comments: Remarks / Preservation Method
1037202	Field Blank	8/31/2010	13:30	AQ	1	X								
1037303	TMP-1	8/31/2010	13:45	AQ	1	X								

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	9-1-10 1130				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (_)Reduced, (X)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, ( )Rush Wk., _(_)ASAP Verbal ____Hrs.

Comments: PO C09-20650

000004

print legibly

10372 SUBOUT FORT.Cyanide B.482.xls9/1/2010

CONFORMANCE/ NON-CONFORMANCE SUMMARY

10373 VOA

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	Indicate Yes, No, N/A
1. Chromatograms labeled/Compounds identified (Field samples and method blanks)	Yes
2. Retention times for chromatograms provided	Yes
3. GC/MS Tune Specifications	
a. BFB Meet Criteria	Yes
b. DFTPP Meet Criteria	N/A
4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series	Yes
5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	Yes
6. GC/MS Calibration requirements	
a. Calibration Check Compounds Meet Criteria	Yes
b. System Performance Check Compounds Meet Criteria	Yes
7. Blank Contamination – If yes, List compounds and concentrations in each blank:	No
a. VOA Fraction_____	
b. B/N Fraction_____	
c. Acid Fraction_____	
8. Surrogate Recoveries Meet Criteria	Yes
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
a. VOA Fraction_____	
b. B/N Fraction_____	
c. Acid Fraction_____	
If not met, were the calculations checked and the results qualified as "estimated"?	
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range)	No
a. VOA Fraction See MS/MSD report footnotes	
b. B/N Fraction_____	
c. Acid Fraction_____	

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

a. VOA Fraction_____
b. B/N Fraction_____
c. Acid Fraction_____

11. Extraction Holding Time Met — N/A

If not met, list the number of days exceeded for each sample:_____

12. Analysis Holding Time Met — Yes

If not met, list the number of days exceeded for each sample:_____

Additional Comments:

Laboratory Manager: Dean Tarca Date: 10/29/10

9/9/10

10373 SVOA

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	Indicate Yes, No, N/A
1. Chromatograms labeled/Compounds identified (Field samples and method blanks)	Yes
2. Retention times for chromatograms provided	Yes
3. GC/MS Tune Specifications	
a. BFB Meet Criteria	N/A
b. DFTPP Meet Criteria	Yes
4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series	Yes
5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	Yes
6. GC/MS Calibration requirements	
a. Calibration Check Compounds Meet Criteria	Yes
b. System Performance Check Compounds Meet Criteria	Yes
7. Blank Contamination – If yes, List compounds and concentrations in each blank:	As 10/13/10 ~~N/A~~ Yes
a. VOA Fraction	
b. B/N Fraction	
c. Acid Fraction	
8. Surrogate Recoveries Meet Criteria	No
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
a. VOA Fraction	
b. B/N Fraction	
c. Acid Fraction 2,4,6-tribromophenol fails low due to matrix interference.	
If not met, were the calculations checked and the results qualified as "estimated"?	
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range)	N/A
a. VOA Fraction	
b. B/N Fraction	
c. Acid Fraction	

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

a. VOA Fraction_____
b. B/N Fraction_____
c. Acid Fraction_____

11. Extraction Holding Time Met — Yes

If not met, list the number of days exceeded for each sample:_____

12. Analysis Holding Time Met — Yes

If not met, list the number of days exceeded for each sample:_____

Additional Comments:

Laboratory Manager: Dennis Tenuta Date: 10/29/10

10/13/10

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified
(Field Samples and Method Blanks) — Y

2. Retention times for chromatograms provided — Y

3. Standards Summary Meet Criteria — Y

4. Calibration – Initial Calibration performed before
sample analysis and continuing calibration performed
within 12 hours of sample analysis — Y

5. Blank Contamination – If yes, list compounds and concentrations
in each blank: — N
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____
   d. Pesticide/PCB's _____
   e. Other _____

6. Surrogate Recoveries Meet Criteria — Y
If not met, list those compounds and their recoveries
which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction _____
   d. Pesticide/PCB's _____
   e. Other _____

If not met, were the calculations checked and the results qualified as "estimated"? _____

7. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria — Y
If not met, list those compounds and their recoveries
which fall outside the acceptable range
   a. VOA Fraction _____
   f. B/N Fraction _____
   g. Acid Fraction _____
   h. Pesticide/PCB's _____
   i. Other _____

8. Retention Time Summary for primary and confirmation analyses meet criteria — Y

9. Were samples run on dissimilar columns? — Y

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (CONTINUED)

Indicate Yes, No, N/A

10. Extraction Holding Time Met — Y

If not met, list number of days exceeded for each sample: _____

11. Analysis Holding Time Met — Y

If not met, list number of days exceeded for each sample: _____

Additional Comments: _____

Laboratory Manager: [signature] Date: 10-25-10

METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Project: 10373
Method: 3120 B

		Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	✓
2.	ICP Interference Check Sample Results Meet Criteria	✓
3.	Serial Dilutions Meet Criteria 1037403	✓
4.	Laboratory Control Samples Meet Criteria BS090910-1	✓
5.	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank MB090910-1	✓
6.	Spike Sample Recoveries Meet Criteria 1037403	✓
7.	Duplicates Meet Criteria 1037403	✓
8.	Analysis Holding Time Met If not met, list number of days exceeded for each sample	✓

Additional Comments

Analyst: [signature] Date: 10-9-10

Administrative Review: [signature] Date: 10/19/10

FLAA/GFAA ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Lab ID: 10373
Method: 3112B

		Indicate Yes, No, N/A
1.	Initial Calibration has a correlation coefficient of 0.995 or higher	✓
2.	Initial and Continuing Calibration Verifications Meet Criteria CCV-1 = 110.8% Samples reported < R.L.	No.
3.	Laboratory Control Samples Meet Criteria	✓
4.	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank	✓
5.	Spike Sample Recoveries Meet Criteria 1037302	✓
6.	Duplicates Meet Criteria 1037302	✓
7.	Analysis Holding Time Met If not met, list number of days exceeded for each sample	✓
8.	Over range samples are diluted within the calibration. List samples that exceed high standard and are flagged with an "E" (estimate).	N/A

Additional Comments _____

Laboratory Manager: _____ Date: 10/29/10

FLAA/GFAA ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Lab ID: 10373
Method: ~~3112B~~ 3113B/279.2

Indicate Yes, No, N/A

1. Initial Calibration has a correlation coefficient of 0.995 or higher — ✓

2. Initial and Continuing Calibration Verifications Meet Criteria — No.
   TL CCV-3 = 100.8% All preceding Samples < MDL.

3. Laboratory Control Samples Meet Criteria — ✓

4. Preparation, Method and Calibration Blank Contamination — ✓
   If yes, list compounds and concentrations in each blank

5. Spike Sample Recoveries Meet Criteria — No.
   1037404 AS = 62.8% TL = 39.3%

6. Duplicates Meet Criteria — ✓
   1037404

7. Analysis Holding Time Met — ✓
   If not met, list number of days exceeded for each sample

8. Over range samples are diluted within the calibration. — N/A
   List samples that exceed high standard and are flagged with an "E" (estimate).

Additional Comments MS-MSD recovery indicates Suspect matrix interference

Laboratory Manager: [signature] Date: 10/24/12

ACCUTEST Laboratories

2

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Fort Monmouth Environmental Testing Lab. **Job No** JA55318

Site: Building 482 **Report Date** 9/15/2010 2:23:38 PM

On 09/01/2010, 2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 2.6 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA55318 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Wet Chemistry By Method EPA 335.4/LACHAT

Matrix: AQ **Batch ID:** GP55348

- All samples were prepared within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA55327-4DUP, JA55327-4MS were used as the QC samples for Cyanide.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

METHOD SUMMARY

Method Summary

EPA SW-846 Method 8260
Gas Chromatographic Determination of Volatiles in Methanol

A 10-gram volume of soil is combined with 25-ml of Methanol and surrogates in the field. Internal standards are added and the sample is placed on a purge and trap concentrator. The sample as purged and desorbed into a GC/MS system. Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA SW-846 Method 8270
Gas Chromatographic Determination of Semi-volatiles in Soil

Surrogates are added to a 10-gram soil sample that has been dried with sodium sulfate. The sample is then extracted using a soxtherm extractor. The extract is concentrated to 1 ml. Internal standards are added and the sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA SW-846 Method 8082
Gas Chromatographic Determination of PCB's in Soil

Surrogates are added to a 10-gram soil sample, which has been dried with sodium sulfate. The sample is then extracted using a soxtherm extractor. The extract is concentrated to 10 ml. Internal standards are added and the extract is injected into a GC/ECD system. PCB's are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA SW-846 Method 3051, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 1.0 to 5.0 grams is digested in 10 ml of concentrated nitric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) microvessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 100-ml volume and analyzed by ICP.

EPA SW-846 Method 6010B, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 3115B, 3rd Edition base manual with final Updates I, II, IIA, IIB and III: Digestion of TAL Metals

Milestone MLS 1200 MEGA
A representative sample of 45ml is digested in 4 ml of concentrated nitric acid and 1 ml concentrated hydrochloric acid for 10 minutes heating with a suitable laboratory microwave unit. The sample and acid are placed in a fluorocarbon (TFM) microvessel. This vessel is capped and heated in the microwave unit. After cooling the vessel contents are filtered and then diluted to a 50 ml volume and analyzed by ICP.

Standard Methods for the Examination of Water and Wastewater 18th Edition, Method 3120B: ICP TAL Metals

Perkin Elmer OPTIMA 3000 DV
The method measures element-emitted light by optical spectrometry. Samples are nebulized and the resulting aerosol is transported to the plasma torch. Radio-frequency inductively coupled plasma produces element-specific atomic-line emission spectra. The spectra are dispersed by a grating spectrometer and a Segmented-array Charged-coupled-device Detector (SCD) monitors the intensities of the lines. Background and interelemental correction is used for trace element determinations.

EPA SW-846 Method 7470A, 3rd Edition Base Manual with Final Updates I, II, IIA, IIB and III: Mercury

Varian SpectrAA-640, VGA-77
The flameless AA procedure is a physical method based on the absorption of radiation at 253.7 nm by mercury vapor. The mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an atomic absorption spectrometer. Absorbency (peak height) is measured as a function of mercury concentration and recorded in the usual manner.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10373 **Site:** Bldg. 482

	Date	Hold Time
Date Sampled	08/31/10	NA
Receipt/Refrigeration	08/31/10	NA

Analyses

1. Volatiles	09/03/10	14 Days
2. Semi-Volatiles	10/05/10*	14 Days
3. Pesticides	09/13/10*	14 Days
4. PCB's	10/25/10*	14 Days
5. PP Metals	09/14/10	6 Months
6. Arsenic	09/13/10	6 Months
7. Selenium	10/22/10	6 Months
8. Thallium	09/15/10	6 Months
9. Cyanide	09/04/10	14 Days

* Semi-Volatiles Extracted (09/03/10)
* Pesticides Extracted (09/03/10)
* PCB Extracted (09/03/10)

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

U: The compound was analyzed for but not detected.

B: Indicates that the compound was found in the associated method blank as well as in the sample.

J: Indicates an estimated value. This flag is used:

(1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the reporting limit but greater than the MDL.

(2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.

D: This flag is used to identify all compounds (target or TIC) that required a dilution.

E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.

N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	VA7368.D	Sample Name	MB09031001
Operator	ROBERTS	Field ID	METHOD 624 9/3/10
Date Acquired	3 Sep 2010 11:49 am	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	3.21 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	2	0.98 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	1.64 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.11 ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.17 ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.17 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not detected	nle	0.27 ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.22 ug/L	0.50 ug/L	
74-83-9	Bromomethane			not detected	10	0.37 ug/L	0.50 ug/L	
75-00-3	Chloroethane			not detected	nle	0.32 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.15 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.15 ug/L	0.50 ug/L	
67-64-1	Acetone			not detected	6000	0.32 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.12 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.26 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.14 ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not detected	50	0.12 ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	1.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.22 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.12 ug/L	0.50 ug/L	
67-66-3	Chloroform			not detected	70	0.35 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.12 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.12 ug/L	0.50 ug/L	
71-43-2	Benzene			not detected	1	0.12 ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.11 ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not detected	1	0.11 ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.12 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.24 ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.15 ug/L	0.50 ug/L	
108-88-3	Toluene			not detected	1000	0.12 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.14 ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.14 ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.17 ug/L	1.00 ug/L	
126-48-1	Dibromochloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.12 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.12 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not detected	1	0.13 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.30 ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.14 ug/L	0.50 ug/L	
100-42-5	Styrene			not detected	100	0.14 ug/L	0.50 ug/L	
75-25-2	Bromoform			not detected	4	0.14 ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.14 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.16 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.15 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.13 ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB09031001

Lab Name: FMETL NJDEP # 13461

Project: Case No.: MW Location: SDG No.: 10373

Matrix: (soil/water) WATER Lab Sample ID: MB09031001

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA7368.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: not dec. Date Analyzed: 9/3/2010

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	VA7376.D	Sample Name	1037301
Operator	ROBERTS	Field ID	482 TRIP BLANK
Date Acquired	3 Sep 2010 5:02 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	3.21 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	2	0.98 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	1.64 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.11 ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.17 ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.17 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not detected	nle	0.27 ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.22 ug/L	0.50 ug/L	
74-83-9	Bromomethane			not detected	10	0.37 ug/L	0.50 ug/L	
75-00-3	Chloroethane			not detected	nle	0.32 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.15 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.15 ug/L	0.50 ug/L	
67-64-1	Acetone			not detected	6000	0.32 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.12 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.26 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.14 ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not detected	50	0.12 ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	1.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.22 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.12 ug/L	0.50 ug/L	
67-66-3	Chloroform			not detected	70	0.35 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.12 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.12 ug/L	0.50 ug/L	
71-43-2	Benzene			not detected	1	0.12 ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.11 ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not detected	1	0.11 ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.12 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.24 ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.15 ug/L	0.50 ug/L	
108-88-3	Toluene			not detected	1000	0.12 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.14 ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.14 ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.17 ug/L	1.00 ug/L	
126-48-1	Dibromochloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.12 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.12 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not detected	1	0.13 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.30 ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.14 ug/L	0.50 ug/L	
100-42-5	Styrene			not detected	100	0.14 ug/L	0.50 ug/L	
75-25-2	Bromoform			not detected	4	0.14 ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.14 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.16 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.15 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.13 ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

TRIP BLANK

Lab Name: FMETL NJDEP # 13461

Project: Case No.: MW Location: SDG No.: 10373

Matrix: (soil/water) WATER Lab Sample ID: 1037301

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA7376.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: not dec. Date Analyzed: 9/3/2010

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	VA7377.D	Sample Name	1037302
Operator	ROBERTS	Field ID	482 FIELD BLANK
Date Acquired	3 Sep 2010 5:33 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	3.21 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	2	0.98 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	1.64 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.11 ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.17 ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.17 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not detected	nle	0.27 ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.22 ug/L	0.50 ug/L	
74-83-9	Bromomethane			not detected	10	0.37 ug/L	0.50 ug/L	
75-00-3	Chloroethane			not detected	nle	0.32 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.15 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.15 ug/L	0.50 ug/L	
67-64-1	Acetone			not detected	6000	0.32 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.12 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.26 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.14 ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not detected	50	0.12 ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	1.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.22 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.12 ug/L	0.50 ug/L	
67-66-3	Chloroform			not detected	70	0.35 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.12 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.12 ug/L	0.50 ug/L	
71-43-2	Benzene			not detected	1	0.12 ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.11 ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not detected	1	0.11 ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.12 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.24 ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.15 ug/L	0.50 ug/L	
108-88-3	Toluene			not detected	1000	0.12 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.14 ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.14 ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.17 ug/L	1.00 ug/L	
126-48-1	Dibromochloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.12 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.12 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not detected	1	0.13 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.30 ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.14 ug/L	0.50 ug/L	
100-42-5	Styrene			not detected	100	0.14 ug/L	0.50 ug/L	
75-25-2	Bromoform			not detected	4	0.14 ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.14 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.16 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.15 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.13 ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

FIELD BLANK

Lab Name: FMETL NJDEP # 13461

Project: Case No.: MW Location: SDG No.: 10373

Matrix: (soil/water) WATER Lab Sample ID: 1037302

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA7377.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: not dec. Date Analyzed: 9/3/2010

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	VA7378.D	Sample Name	1037303
Operator	ROBERTS	Field ID	482 TMP-1
Date Acquired	3 Sep 2010 6:04 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	3.21 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	2	0.98 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	1.64 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.11 ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.17 ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.17 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not detected	nle	0.27 ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.22 ug/L	0.50 ug/L	
74-83-9	Bromomethane			not detected	10	0.37 ug/L	0.50 ug/L	
75-00-3	Chloroethane			not detected	nle	0.32 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.15 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.15 ug/L	0.50 ug/L	
67-64-1	Acetone			not detected	6000	0.32 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.12 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.26 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.14 ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not detected	50	0.12 ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	1.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.22 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.12 ug/L	0.50 ug/L	
67-66-3	Chloroform			not detected	70	0.35 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.12 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.12 ug/L	0.50 ug/L	
71-43-2	Benzene			not detected	1	0.12 ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.11 ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not detected	1	0.11 ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.12 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.24 ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.15 ug/L	0.50 ug/L	
108-88-3	Toluene			not detected	1000	0.12 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.13 ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.14 ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.14 ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.17 ug/L	1.00 ug/L	
126-48-1	Dibromochloromethane			not detected	1	0.12 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.12 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.12 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not detected	1	0.13 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.30 ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.14 ug/L	0.50 ug/L	
100-42-5	Styrene			not detected	100	0.14 ug/L	0.50 ug/L	
75-25-2	Bromoform			not detected	4	0.14 ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.14 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.16 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.15 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.13 ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

482 TMP-1

Lab Name: FMETL NJDEP # 13461

Project: Case No.: MW Location: SDG No.: 10373

Matrix: (soil/water) WATER Lab Sample ID: 1037303

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA7378.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: not dec. Date Analyzed: 9/3/2010

GC Column: Rtx-VMS ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 15

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkane: Cyclic	10.16	19	J
2.	Alkane: Cyclic	11.72	15	J
3.	C4 alkyl benzene	20.56	15	J
4. 000496-11-7	Indane	20.71	71	JN
5.	C4 alkyl benzene	21.45	44	J
6.	1H-Indene-dihydro-methyl-	21.64	18	J
7.	1H-Indene-dihydro-methyl-	21.77	51	J
8.	C4 alkyl benzene	22.27	37	J
9.	1H-Indene-dihydro-methyl-	23.01	24	J
10.	C4 alkyl benzene	23.28	70	J
11.	1H-Indene-dihydro-methyl-	23.35	67	J
12.	1H-Indene-dihydro-dimethyl-	23.89	22	J
13.	1H-Indene-dihydro-dimethyl-	24.00	14	J
14.	1H-Indene-dihydro-dimethyl-	24.16	29	J
15.	unknown hydrocarbon	25.46	16	J

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E500.D	Misc Info	METHOD 8270 10/5/10
Operator	ROBERTS	Sample Multiplier	1
Date Acquired	5-Oct-10		
Sample Name	MB09021001		

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	2.75	5.00	ug/L	
108-95-2	Phenol			not	detected	0.81	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	3.23	5.00	ug/L	
95-57-8	2-chlorophenol			not	detected	1.80	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	2.92	5.00	ug/L	
95-48-7	2-methylphenol			not	detected	1.55	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	2.67	5.00	ug/L	
106-44-5	4-methylphenol			not	detected	1.64	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	2.93	5.00	ug/L	
88-75-5	2-nitrophenol			not	detected	2.06	5.00	ug/L	
105-67-9	2,4-dimethylphenol			not	detected	1.97	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	2.74	5.00	ug/L	
120-83-2	2,4-dichlorophenol			not	detected	2.11	5.00	ug/L	
65-85-0	Benzoic acid			not	detected	5.27	10.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	2.99	5.00	ug/L	
91-20-3	Naphthalene			not	detected	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	3.07	5.00	ug/L	
59-50-7	4-chloro-3-methylphenol			not	detected	2.36	5.00	ug/L	
91-57-6	2-methylnaphthalene			not	detected	3.35	5.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not	detected	2.07	5.00	ug/L	
88-06-2	2,4,6-trichlorophenol			not	detected	2.95	5.00	ug/L	
95-95-4	2,4,5-trichlorophenol			not	detected	3.36	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	3.58	5.00	ug/L	
51-28-5	2,4-dinitrophenol			not	detected	4.02	10.00	ug/L	
132-64-9	Dibenzofuran			not	detected	2.94	5.00	ug/L	
100-02-07	4-nitrophenol			not	detected	1.14	5.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E500.D**	Misc Info	**METHOD 8270 10/5/10**
Operator	**ROBERTS**	Sample Mutliplier	1
Date Acquired	**5-Oct-10**		
Sample Name	**MB09021001**		

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	3.54	5.00	ug/L	
86-73-7	Fluorene			not	detected	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	2.92	5.00	ug/L	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	2.22	10.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	3.73	5.00	ug/L	
87-86-5	Pentachlorophenol			not	detected	2.70	5.00	ug/L	
85-01-8	Phenanthrene			not	detected	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	3.08	5.00	ug/L	
92-87-5	Benzidine			not	detected	16.11	16.11	ug/L	
129-00-0	Pyrene			not	detected	2.59	5.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	3.16	5.00	ug/L	

* Higher of PQL's and Interim Criteria as per NJAC 7:9-6.9(c).

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.
J= Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB09021001**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: _____ Location: _____ SDG No.: 10373

Matrix: (soil/water) WATER Lab Sample ID: MB09021001

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E500.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: _____ decanted: (Y/N) N Date Extracted: 9/3/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 2 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.70	10	J
2.	extraction by-product	13.90	4	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name E502.D
Operator ROBERTS
Date Acquired 5-Oct-10
Sample Name 1037302

Misc Info FIELD BLANK
Sample Multiplier 1

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	2.75	5.00	ug/L	
108-95-2	Phenol			not	detected	0.81	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	3.23	5.00	ug/L	
95-57-8	2-chlorophenol			not	detected	1.80	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	2.92	5.00	ug/L	
95-48-7	2-methylphenol			not	detected	1.55	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	2.67	5.00	ug/L	
106-44-5	4-methylphenol			not	detected	1.64	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	2.93	5.00	ug/L	
88-75-5	2-nitrophenol			not	detected	2.06	5.00	ug/L	
105-67-9	2,4-dimethylphenol			not	detected	1.97	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	2.74	5.00	ug/L	
120-83-2	2,4-dichlorophenol			not	detected	2.11	5.00	ug/L	
65-85-0	Benzoic acid			not	detected	5.27	10.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	2.99	5.00	ug/L	
91-20-3	Naphthalene			not	detected	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	3.07	5.00	ug/L	
59-50-7	4-chloro-3-methylphenol			not	detected	2.36	5.00	ug/L	
91-57-6	2-methylnaphthalene			not	detected	3.35	5.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not	detected	2.07	5.00	ug/L	
88-06-2	2,4,6-trichlorophenol			not	detected	2.95	5.00	ug/L	
95-95-4	2,4,5-trichlorophenol			not	detected	3.36	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	3.58	5.00	ug/L	
51-28-5	2,4-dinitrophenol			not	detected	4.02	10.00	ug/L	
132-64-9	Dibenzofuran			not	detected	2.94	5.00	ug/L	
100-02-07	4-nitrophenol			not	detected	1.14	5.00	ug/L	

Semi-Volatile Analysis Report
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Data File Name	**E502.D**	Misc Info	**FIELD BLANK**
Operator	**ROBERTS**	Sample Mutliplier	**1**
Date Acquired	**5-Oct-10**		
Sample Name	**1037302**		

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	3.54	5.00	ug/L	
86-73-7	Fluorene			not	detected	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	2.92	5.00	ug/L	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	2.22	10.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	3.73	5.00	ug/L	
87-86-5	Pentachlorophenol			not	detected	2.70	5.00	ug/L	
85-01-8	Phenanthrene			not	detected	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	3.08	5.00	ug/L	
92-87-5	Benzidine			not	detected	16.11	16.11	ug/L	
129-00-0	Pyrene			not	detected	2.59	5.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	3.16	5.00	ug/L	

* Higher of PQL's and Interim Criteria as per NJAC 7:9-6.9(c).

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.
J= Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **FIELD BLANK**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: _____ Location: _____ SDG No.: 10373

Matrix: (soil/water) WATER Lab Sample ID: 1037302

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E502.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: _____ decanted: (Y/N) N Date Extracted: 9/3/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.70	6	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E503.D	Misc Info	482 TMP-1
Operator	ROBERTS	Sample Multiplier	1
Date Acquired	5-Oct-10		
Sample Name	1037303		

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	2.75	5.00	ug/L	
108-95-2	Phenol			not	detected	0.81	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	3.23	5.00	ug/L	
95-57-8	2-chlorophenol			not	detected	1.80	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	2.92	5.00	ug/L	
95-48-7	2-methylphenol			not	detected	1.55	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	2.67	5.00	ug/L	
106-44-5	4-methylphenol			not	detected	1.64	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	2.93	5.00	ug/L	
88-75-5	2-nitrophenol			not	detected	2.06	5.00	ug/L	
105-67-9	2,4-dimethylphenol			not	detected	1.97	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	2.74	5.00	ug/L	
120-83-2	2,4-dichlorophenol			not	detected	2.11	5.00	ug/L	
65-85-0	Benzoic acid			not	detected	5.27	10.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	2.99	5.00	ug/L	
91-20-3	Naphthalene			not	detected	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	3.07	5.00	ug/L	
59-50-7	4-chloro-3-methylphenol			not	detected	2.36	5.00	ug/L	
91-57-6	2-methylnaphthalene	11.80	1305852	8.00	detected	3.35	5.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not	detected	2.07	5.00	ug/L	
88-06-2	2,4,6-trichlorophenol			not	detected	2.95	5.00	ug/L	
95-95-4	2,4,5-trichlorophenol			not	detected	3.36	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	3.58	5.00	ug/L	
51-28-5	2,4-dinitrophenol			not	detected	4.02	10.00	ug/L	
132-64-9	Dibenzofuran			not	detected	2.94	5.00	ug/L	
100-02-07	4-nitrophenol			not	detected	1.14	5.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E503.D**	Misc Info	**482 TMP-1**
Operator	**ROBERTS**	Sample Mutliplier	**1**
Date Acquired	**5-Oct-10**		
Sample Name	**1037303**		

CAS#	Name	R.T.	Response	Result		MDL	RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	3.54	5.00	ug/L	
86-73-7	Fluorene			not	detected	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	2.92	5.00	ug/L	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	2.22	10.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	3.73	5.00	ug/L	
87-86-5	Pentachlorophenol			not	detected	2.70	5.00	ug/L	
85-01-8	Phenanthrene			not	detected	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	3.08	5.00	ug/L	
92-87-5	Benzidine			not	detected	16.11	16.11	ug/L	
129-00-0	Pyrene			not	detected	2.59	5.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	3.16	5.00	ug/L	

* Higher of PQL's and Interim Criteria as per NJAC 7:9-6.9(c).

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.
J= Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **482 TMP-1**

Lab Name: FMETL Lab Code 13461

Project: Case No.: Location: SDG No.: 10373

Matrix: (soil/water) WATER Lab Sample ID: 1037303

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E503.D

Level: (low/med) LOW Date Received: 8/31/2010

% Moisture: decanted: (Y/N) N Date Extracted: 9/3/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/5/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 25 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.70	7	J
2.	C4 alkyl benzene	10.40	5	J
3. 000090-12-0	Naphthalene, 1-methyl-	11.94	10	JN
4.	Naphthalene, ethyl-	12.61	5	J
5.	Naphthalene, dimethyl-	12.71	7	J
6.	Naphthalene, dimethyl-	12.81	8	J
7.	Naphthalene, dimethyl-	12.85	4	J
8.	Alkane: Branched	12.90	7	J
9.	Naphthalene, dimethyl-	12.99	5	J
10.	Naphthalene, dimethyl-	13.11	5	J
11.	Naphthalene, trimethyl-	13.61	5	J
12.	Naphthalene, trimethyl-	13.90	7	J
13.	unknown hydrocarbon	14.03	4	J
14.	unknown hydrocarbon	14.11	6	J
15.	Alkane: Branched	14.25	8	J
16.	Alkane: Branched	14.64	13	J
17.	9H-Fluorene, methyl-	14.96	5	J
18.	Alkane: Branched	15.32	9	J
19.	Alkane: Branched	15.83	7	J
20.	unknown carboxylic acid	16.24	23	J
21.	Alkane: Branched	16.36	5	J
22.	unknown hydrocarbon	16.59	4	J
23.	unknown carboxylic acid	17.38	14	J
24.	unknown hydrocarbon	18.48	4	J
25.	unknown hydrocarbon	20.56	7	J

PESTICIDES/PCB's

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDSEP Certification # 13461

MB09011001

Matrix: Aqueous
Date Extracted: 9/1/2010
Ext. Batch: PP09011001
Filename: 09131004.D
Date Analysed: 9/13/2010

Analyst: CR

CAS #	COMPOUNDS	RESULTS (ug/L)	MDL (ug/L)
319-84-6	alpha-BHC	ND	0.0071
319-85-7	beta-BHC	ND	0.0098
58-89-9	gamma-BHC	ND	0.0077
319-86-8	delta-BHC	ND	0.007
76-44-8	Heptachlor	ND	0.0081
309-00-2	Aldrin	ND	0.009
1024-57-3	Heptachlor epoxide	ND	0.0078
5103-71-9	gamma-Chlordane	ND	0.0087
5103-74-2	alpha-Chlordane	ND	0.0077
959-98-8	Endosulfan I	ND	0.0137
72-55-9	4,4'-DDE	ND	0.0078
60-57-1	Dieldrin	ND	0.0066
72-20-8	Endrin	ND	0.0092
33213-65-9	Endosulfan II	ND	0.0081
72-54-8	4,4'-DDD	ND	0.0105
7421-93-4	Endrin aldehyde	ND	0.007
50-29-3	4,4'-DDT	ND	0.0093
1031-07-8	Endosulfan sulfate	ND	0.0088
53494-70-5	Endrin ketone	ND	0.008
72-43-5	Methoxychlor	ND	0.0158
8001-35-2	Toxaphene	ND	0.0157
57-74-9	Chlordane	ND	0.071

MDL = METHOD DETECTION LIMIT
ND =NOT DETECTED, BELOW MDL

Initial vol. (ml): 1000.00
Final vol. (ml): 10

U.S. Army, Ft. Monmouth
Environmental Laboratory
173 Riverside Ave., NJ 07703

Client:	U.S. ARMY	Location:	Bldg 482
Project Name:	Bldg 482	MATRIX:	Aqueous
Field ID:	Field Blank	Ext. Batch:	PP09011001
Lab ID:	10373-02	Date Extracted:	9/1/2010
Filename:	09131006.D	Date Analyzed:	9/13/2010
Lab Project :	10373	Dilution:	1
		Analyst:	CR

CAS #	COMPOUNDS	RESULTS	Reporting Limit	Regulatory Level	Qualifier	MDL
		(ug/L)	(ug/L)	(ug/L)		(ug/L)
319-84-6	alpha-BHC	ND	0.02	0.02		0.003
319-85-7	beta-BHC	ND	0.02	0.04		0.008
58-89-9	gamma-BHC	ND	0.02	0.03		0.004
319-86-8	delta-BHC	ND	0.02	NLE		0.006
76-44-8	Heptachlor	ND	0.02	0.05		0.005
309-00-2	Aldrin	ND	0.02	0.04		0.005
1024-57-3	Heptachlor epoxide	ND	0.02	0.2		0.005
5103-71-9	gamma-Chlordane	ND	0.02	NLE		0.007
5103-74-2	alpha-Chlordane	ND	0.02	NLE		0.006
959-98-8	Endosulfan I	ND	0.02	40		0.006
72-55-9	4,4'-DDE	ND	0.02	0.1		0.008
60-57-1	Dieldrin	ND	0.02	0.03		0.006
72-20-8	Endrin	ND	0.02	2		0.008
33213-65-9	Endosulfan II	ND	0.02	40		0.007
72-54-8	4,4'-DDD	ND	0.02	0.1		0.008
7421-93-4	Endrin aldehyde	ND	0.02	NLE		0.007
50-29-3	4,4'-DDT	ND	0.02	0.1		0.009
1031-07-8	Endosulfan sulfate	ND	0.02	40		0.007
53494-70-5	Endrin ketone	ND	0.02	NLE		0.007
72-43-5	Methoxychlor	ND	0.02	40		0.008
8001-35-2	Toxaphene	ND	0.5	2		0.090
57-74-9	Chlordane	ND	0.5	0.5		0.071

MDL = Method Detection Limit.
ND =Not Detected / Below MDL.
B = Present in the associated Blank.
E = Exceeded Calibration Range, Dilution to follow.
D = Dilution.
NLE = No Limit Established.
RL = Reporting Limit.

Initial Vol.(ml)	1000
Final Vol.(ml)	10

*Higher of PQLs and ground water criteria as per NJAC 7:9-6
*Results between MDL and RL are estimated.
Column-Primary: Rtx-CLPesticides 30m/.32mm ID/.25um.
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.5um.

U.S. Army, Ft. Monmouth
Environmental Laboratory
173 Riverside Ave., NJ 07703

Client:	U.S. ARMY	Location:	Bldg 482
Project Name:	Bldg 482	MATRIX:	Aqueous
Field ID:	482-TMP-1	Ext. Batch:	PP09011001
Lab ID:	10373-03	Date Extracted:	9/1/2010
Filename:	09131007.D	Date Analyzed:	9/13/2010
Lab Project :	10373	Dilution:	1
		Analyst:	CR

CAS #	COMPOUNDS	RESULTS	Reporting Limit	Regulatory Level	Qualifier	MDL
		(ug/L)	(ug/L)	(ug/L)		(ug/L)
319-84-6	alpha-BHC	ND	0.02	0.02		0.003
319-85-7	beta-BHC	ND	0.02	0.04		0.008
58-89-9	gamma-BHC	ND	0.02	0.03		0.004
319-86-8	delta-BHC	ND	0.02	NLE		0.006
76-44-8	Heptachlor	ND	0.02	0.05		0.005
309-00-2	Aldrin	ND	0.02	0.04		0.005
1024-57-3	Heptachlor epoxide	ND	0.02	0.2		0.005
5103-71-9	gamma-Chlordane	ND	0.02	NLE		0.007
5103-74-2	alpha-Chlordane	ND	0.02	NLE		0.006
959-98-8	Endosulfan I	ND	0.02	40		0.006
72-55-9	4,4'-DDE	ND	0.02	0.1		0.008
60-57-1	Dieldrin	ND	0.02	0.03		0.006
72-20-8	Endrin	ND	0.02	2		0.008
33213-65-9	Endosulfan II	ND	0.02	40		0.007
72-54-8	4,4'-DDD	ND	0.02	0.1		0.008
7421-93-4	Endrin aldehyde	ND	0.02	NLE		0.007
50-29-3	4,4'-DDT	ND	0.02	0.1		0.009
1031-07-8	Endosulfan sulfate	ND	0.02	40		0.007
53494-70-5	Endrin ketone	ND	0.02	NLE		0.007
72-43-5	Methoxychlor	ND	0.02	40		0.008
8001-35-2	Toxaphene	ND	0.5	2		0.090
57-74-9	Chlordane	ND	0.5	0.5		0.071

MDL = Method Detection Limit.
ND =Not Detected / Below MDL.
B = Present in the associated Blank.
E = Exceeded Calibration Range, Dilution to follow.
D = Dilution.
NLE = No Limit Established.
RL = Reporting Limit.

Initial Vol.(ml)	1000
Final Vol.(ml)	10

*Higher of PQLs and ground water criteria as per NJAC 7:9-6
*Results between MDL and RL are estimated.
Column-Primary: Rtx-CLPesticides 30m/.32mm ID/.25um.
Column-Confirmation: Rtx-CLPesticides2 30m/.32mm ID/.5um.

U.S. Army, Ft. Monmouth Environmental Laboratory

Report of Analysis
NJDEP Certification # 13461
Method 8082

Client: US Army
Location: Bldg 482
Client ID: Method Blank
Lab ID: MB09011001
Filename: 10051012.D
Lab Project No: 10373

MATRIX: Aqueous
Date Extracted: 9/1/2010
Ext. Batch: PP09011001
Date Analyzed: 10/5/2010
DILUTION: 1

Analyst: CR

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIER	MDL (ug/L)
12674-11-2	AROCLOR 1016	ND		0.060
11104-28-2	AROCLOR 1221	ND		0.290
11141-16-5	AROCLOR 1232	ND		0.110
53469-21-9	AROCLOR 1242	ND		0.110
12672-29-6	AROCLOR 1248	ND		0.050
11097-69-1	AROCLOR 1254	ND		0.040
11096-82-5	AROCLOR 1260	ND		0.160

*RESULTS BETWEEN MDL AND RL ARE ESTIMATED.
MDL = METHOD DETECTION LIMIT
ND =UNDETECTED BELOW THE MDL
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION

Initial Vol (ml) 1000.00
Final Vol.(ml) 10.00

U.S. Army, Ft. Monmouth Environmental Laboratory

Report of Analysis
NJDEP Certification # 13461
Method 8082

Client: US Army
Location: Bldg 482
Client ID: Field Blank
Lab ID: 10373-02
Filename: 10051014.D
Lab Project No: 10373

MATRIX: Aqueous
Date Extracted: 9/1/2010
Ext. Batch: PP09011001
Date Analyzed: 10/25/2010
DILUTION: 1

Analyst: CR

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIER	MDL (ug/L)
12674-11-2	AROCLOR 1016	ND		0.060
11104-28-2	AROCLOR 1221	ND		0.290
11141-16-5	AROCLOR 1232	ND		0.110
53469-21-9	AROCLOR 1242	ND		0.110
12672-29-6	AROCLOR 1248	ND		0.050
11097-69-1	AROCLOR 1254	ND		0.040
11096-82-5	AROCLOR 1260	ND		0.160

*RESULTS BETWEEN MDL AND RL ARE ESTIMATED.
MDL = METHOD DETECTION LIMIT
ND =UNDETECTED BELOW THE MDL
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION

Initial Vol (ml) 1000.00
Final Vol.(ml) 10.00

U.S. Army, Ft. Monmouth Environmental Laboratory

Report of Analysis
NJDEP Certification # 13461
Method 8082

Client: US Army
Location: Bldg 482
Client ID: 482-TMP-1
Lab ID: 10373-03
Filename: 10051015.D
Lab Project No: 10373

MATRIX: Aqueous
Date Extracted: 9/1/2010
Ext. Batch: PP09011001
Date Analyzed: 10/25/2010
DILUTION: 1

Analyst: CR

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIER	MDL (ug/L)
12674-11-2	AROCLOR 1016	ND		0.060
11104-28-2	AROCLOR 1221	ND		0.290
11141-16-5	AROCLOR 1232	ND		0.110
53469-21-9	AROCLOR 1242	ND		0.110
12672-29-6	AROCLOR 1248	ND		0.050
11097-69-1	AROCLOR 1254	ND		0.040
11096-82-5	AROCLOR 1260	ND		0.160

*RESULTS BETWEEN MDL AND RL ARE ESTIMATED.
MDL = METHOD DETECTION LIMIT
ND =UNDETECTED BELOW THE MDL
B = PRESENT IN THE ASSOCIATED BLANK
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
D = DILUTION

Initial Vol (ml) 1000.00
Final Vol.(ml) 10.00

PP
METALS

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 10373
Sample Received: N/A
Sample Matrix: Aqueous
Sample Prepared: 09/09/10

Site: Bldg. 482

Field ID#: Method Blank

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B
EPA Method 279.2

PP-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	R.L. (ug/L)	MDL (ug/L)
Antimony	09/14/10	ND	6	10.00	4.80
Arsenic	09/13/10	ND	3	5.00	0.62
Beryllium	09/14/10	ND	1	0.500	0.04
Cadmium	09/14/10	ND	4	2.00	0.500
Chromium	09/14/10	ND	70	5.00	1.00
Copper	09/14/10	ND	1300	5.00	1.00
Lead	09/14/10	ND	5	5.00	2.40
Mercury	09/14/10	ND	2	0.500	0.050
Nickel	09/14/10	ND	100	5.00	0.400
Selenium	10/22/10	ND	40	5.00	1.36
Silver	09/14/10	0.971	40	5.00	0.500
Thallium	09/15/10	ND	2	5.00	0.53
Zinc	09/14/10	1.60	2000	50.00	1.20

ND = Not Detected NLE = No Limit Established, MDL = Method Detection Limit
* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05
R.L. = Reporting limit, Estimated results between MDL and R.L.

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 1037302
Sample Received: 08/31/10
Sample Matrix: Aqueous

Site: Bldg. 482

Field ID#: Field Blank

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B
EPA Method 279.2

PP-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	R.L. (ug/L)	MDL (ug/L)
Antimony	09/14/10	ND	6	10.00	4.80
Arsenic	09/13/10	ND	3	5.00	0.62
Beryllium	09/14/10	ND	1	0.500	0.04
Cadmium	09/14/10	ND	4	2.00	0.500
Chromium	09/14/10	ND	70	5.00	1.00
Copper	09/14/10	ND	1300	5.00	1.00
Lead	09/14/10	ND	5	5.00	2.40
Mercury	09/14/10	ND	2	0.500	0.050
Nickel	09/14/10	1.00	100	5.00	0.400
Selenium	10/22/10	ND	40	5.00	1.36
Silver	09/14/10	1.00	40	5.00	0.500
Thallium	09/15/10	ND	2	5.00	0.53
Zinc	09/14/10	3.00	2000	50.00	1.20

ND = Not Detected NLE = No Limit Established, MDL = Method Detection Limit
* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05
R.L. = Reporting limit, Estimated results between MDL and R.L.

Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 173
Ft. Monmouth, NJ 07703

Lab ID #: 1037303
Sample Received: 08/31/10
Sample Matrix: Aqueous

Site: Bldg. 482

Field ID#: 482/TMP-1

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B
EPA Method 279.2

PP-METALS RESULTS SUMMARY (ug/L)

Element	Date of Analysis	Result (ug/L)	Regulatory Level (ug/L)*	R.L. (ug/L)	MDL (ug/L)
Antimony	09/14/10	11.5	6	10.00	4.80
Arsenic	09/13/10	85.63	3	5.00	0.62
Beryllium	09/14/10	0.043	1	0.500	0.04
Cadmium	09/14/10	1.63	4	2.00	0.500
Chromium	09/14/10	3.52	70	5.00	1.00
Copper	09/14/10	2.71	1300	5.00	1.00
Lead	09/14/10	6.17	5	5.00	2.40
Mercury	09/14/10	ND	2	0.500	0.050
Nickel	09/14/10	2.79	100	5.00	0.400
Selenium	10/22/10	ND	40	5.00	1.36
Silver	09/14/10	7.48	40	5.00	0.500
Thallium	09/15/10	ND	2	5.00	0.53
Zinc	09/14/10	ND	2000	50.00	1.20

ND = Not Detected NLE = No Limit Established, MDL = Method Detection Limit
* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05
R.L. = Reporting limit, Estimated results between MDL and R.L.

WET CHEMISTRY

Report of Analysis

1037302

Client Sample ID:	1037202-FIELD BLANK		
Lab Sample ID:	JA55318-1	Date Sampled:	08/31/10
Matrix:	AQ - Equipment Blank	Date Received:	09/01/10
		Percent Solids:	n/a
Project:	Building 482		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.010	0.010	mg/l	1	09/07/10 11:07	NP	EPA 335.4/LACHAT

RL = Reporting Limit

Report of Analysis

3.2

Client Sample ID:	~~1037203~~ 1037303 TMP-1		
Lab Sample ID:	JA55318-2	Date Sampled:	08/31/10
Matrix:	AQ - Ground Water	Date Received:	09/01/10
		Percent Solids:	n/a
Project:	Building 482		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Cyanide	< 0.010	0.010	mg/l	1	09/07/10 11:08	NP	EPA 335.4/LACHAT

RL = Reporting Limit

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables Checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete data packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1.	Cover Page, Title Page listing Lab Certification #, facility name and address, & date of report submitted.	✓
2.	Table of Contents submitted.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	✓
4.	Document paginated and legible.	✓
5.	Chain of Custody submitted.	✓
6.	Samples submitted to lab within 48 hours of sample collection.	✓
7.	Methodology Summary submitted.	✓
8.	Laboratory Chronicle and Holding Time Check submitted.	✓
9.	Results submitted on a dry weight basis.	✓
10.	Method Detection Limits submitted.	✓
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	✓

Laboratory Manager or Environmental Consultant's Signature Jean Tarcher
Date: 10/29/10

Laboratory Certification # 13461

*Refer to NJAC 7:26E – Appendix A, Section IV – Reduced Data Deliverables – Non-USEPA/CLP Methods for further guidance.

Laboratory Authentication Statement

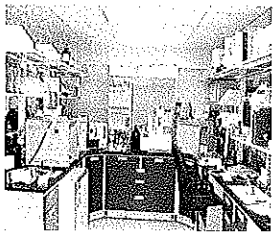
I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Dean Tardiff

Dean Tardiff 10/29/10
Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 FAX: (732) 532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
CERTIFICATIONS: NJDEP #13461



ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: 11-124969

Bldg. 482/UST

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
482-GW-2	1126401	Aqueous	25-Jun-11 09:30	06/27/11
482-GW2-DUP.	1126402	Aqueous	25-Jun-11 09:30	06/27/11
482-GW2-Field Blank	1126403	Aqueous	25-Jun-11 09:00	06/27/11
Trip Blank	1126404	Aqueous	25-Jun-11	06/27/11

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15

ACCUTEST LABORATORIES
TOTAL LEAD

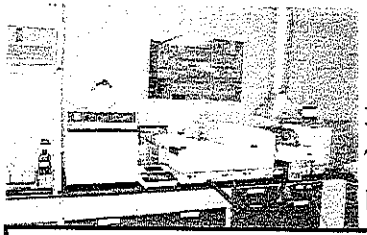
Dean Tardiff/Date: 7/5/11
Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: JOE FALLON | Project No: 11-124169
Phone #: X26223 | Location: BLDG 482
( )DERA ( )OMA (X)Other: BRC
Samplers Name / Company: FRANK ACCORSI

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	VOA's	PP						Comments: Remarks / Preservation Method
11264.01	482-GW 2	6-25-11	0930	AQ	3	X	X						ICE
.02	482 GW2-DUPLICATE		0930		3	X	X						
.03	482 GW2- FIELD BLANK		0900		3	X	X						
.04	TRIP BLANK		—		2	X							

Analysis Parameters: VOA's (8260B), PP (8270C)

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	6-25-11 1615	6-27-11 8:00			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: ( )Standard 3 wks, (X)Rush 1 Wk., ( )ASAP Verbal ____Hrs.

Comments: Field Blank VOA shared w/ 11265

print legibly

COC .xls5/11/2011

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SAMPLE RECEIPT FORM

Date Received: 6-27-11 Work Order ID#: 11264

Site/Proj. Name: B. 482 Cooler Temp (°C): 4°

Received By: Shannon Burk Sign: S R
(Print name)

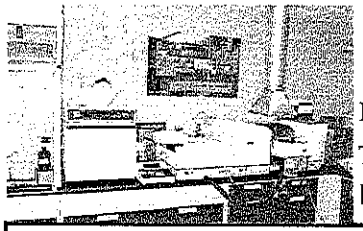
Check the appropriate box

1. Did the samples come in a cooler?	yes	no	n/a
2. Were samples rec'd in good condition?	yes	no	
3. Was the chain of custody filled out correctly and legibly?	yes	no	
4. Was the chain of custody signed in the appropriate place?	yes	no	
5. Did the labels agree with the chain of custody?	yes	no	
6. Were the correct containers/preservatives used?	yes	no	
7. Was a sufficient amount of sample supplied?	yes	no	
8. Were air bubbles present in VOA vials?	yes	no	n/a
9. Were samples received on ice?	yes	no	
10. Were analyze-immediately tests perform within 15 minutes	yes	no	n/a

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
11264.01-.04	NA	HCl			
11264.01-.03	<2	HNO_3			

Comments: _____



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Dean Tardiff
Phone #: (732)532-6352
( )DERA ( )OMA ( )Other:_____

Project No:
Location: Bldg. 482

Samplers Name / Company:

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: LEAD								Comments: Remarks / Preservation Method
1126401	482-GW-2	06/25/411	9:30	AQ	X	X								
1126402	482GW2-DUP.	06/25/411	9:30	AQ	X	X								
1126403	482GW2-Field Blank	06/25/411	9:00	AQ	X	X								

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	6/28/11 1310	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (_)Standard 2 wks, (X)Rush Wk., _(_)ASAP Verbal ____Hrs.

Comments: PO C09-20650/(1 WK TAT)

001004

print legibly

Bldg. 482 11264.xls6/28/2011

GPS POINTS

U.S. ARMY-FT. MONMOUTH, NJ

SITE 482

SOIL SAMPLING GPS POSITIONS & COORDINATES

US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
482-GW-2	541786.083	623621.5368

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 11264

Site: Bldg. 482

The Field Duplicate was performed on 482-GW-2 (1126401).

CONFORMANCE/ NON-CONFORMANCE SUMMARY

11264 VOA

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate Yes, No, N/A

1. Chromatograms labeled/Compounds identified (Field samples and method blanks) — Yes

2. Retention times for chromatograms provided — Yes

3. GC/MS Tune Specifications

   a. BFB Meet Criteria — Yes
   b. DFTPP Meet Criteria — N/A

4. GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series — Yes

5. GC/MS Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — Yes

6. GC/MS Calibration requirements

   a. Calibration Check Compounds Meet Criteria — Yes
   b. System Performance Check Compounds Meet Criteria — Yes

7. Blank Contamination – If yes, List compounds and concentrations in each blank: — No

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

8. Surrogate Recoveries Meet Criteria — Yes

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:

   a. VOA Fraction_____
   b. B/N Fraction_____
   c. Acid Fraction_____

   If not met, were the calculations checked and the results qualified as "estimated"? _____

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — No

   a. VOA Fraction See MS/MSD report for notes
   b. B/N Fraction_____
   c. Acid Fraction_____

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria — Yes
(If not met, list those compounds, which fall outside the acceptable range)

a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction _____

11. Extraction Holding Time Met — N/A

If not met, list the number of days exceeded for each sample: _____

12. Analysis Holding Time Met — Yes

If not met, list the number of days exceeded for each sample: _____

Additional Comments:

Laboratory Manager: [signature] Date: 6/30/11

[signature] 7/6/11

ACCUTEST LABORATORIES

2

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Fort Monmouth Environmental Testing Lab.	**Job No**	JA79588
Site:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, F	**Report Date**	7/7/2011 4:03:51 PM

On 06/28/2011, 2 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 4 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA79588 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B

Matrix: AQ **Batch ID:** MP58959

- All samples were digested within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA79662-1MS, JA79662-1MSD, JA79662-1SDL were used as the QC samples for metals.
- JA79588-2 for Lead: Elevated detection limit due to dilution required for high interfering element.
- JA79588-1 for Lead: Elevated detection limit due to dilution required for high interfering element.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 11264 **Site:** Bldg. 482

	Date	Hold Time
Date Sampled	06/25/11	NA
Receipt/Refrigeration	06/25/11	NA

Analyses

1. Volatiles	06/27/11	14 Days
2. Lead (Accutest)	07/01,02/11	6 Months

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

U: The compound was analyzed for but not detected.

B: Indicates that the compound was found in the associated method blank as well as in the sample.

J: Indicates an estimated value. This flag is used:
(1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the reporting limit but greater than the MDL.
(2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.

D: This flag is used to identify all compounds (target or TIC) that required a dilution.

E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.

N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VA10098.D**	Sample Name	**MB06271101**
Operator	**ROBERTS**	Field ID	**METHOD 624 6/27/11**
Date Acquired	**27 Jun 2011 2:19 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result		MDL		RL	Qualifiers
107028	Acrolein			not	detected	3.21	ug/L	5.00 ug/L	
107131	Acrylonitrile			not	detected	0.98	ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	1.64	ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	0.11	ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	0.17	ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	0.17	ug/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected	0.27	ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not	detected	0.22	ug/L	0.50 ug/L	
74-83-9	Bromomethane			not	detected	0.37	ug/L	0.50 ug/L	
75-00-3	Chloroethane			not	detected	0.32	ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	0.15	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	0.15	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	0.32	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	0.12	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	0.26	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	0.14	ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	0.20	ug/L	0.50 ug/L	
78-93-3	2-Butanone			not	detected	0.22	ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not	detected	0.12	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected	0.35	ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	0.12	ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	0.12	ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	0.11	ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not	detected	0.11	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not	detected	0.12	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected	0.12	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	0.24	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	0.15	ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	0.12	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not	detected	0.14	ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	0.14	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	0.17	ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	0.12	ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not	detected	0.12	ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not	detected	0.12	ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	0.13	ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	0.30	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	0.14	ug/L	0.50 ug/L	
100-42-5	Styrene			not	detected	0.14	ug/L	0.50 ug/L	
75-25-2	Bromoform			not	detected	0.14	ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	0.14	ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	detected	0.16	ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	detected	0.15	ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not	detected	0.13	ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB06271101**

Lab Name: FMETL NJDEP# 13461

Project: Case No: Location: 482 SDG No.: 11264

Matrix: (soil/water) WATER Lab Sample ID: MB06271101

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA10098.D

Level: (low/med) LOW Date Received: 6/25/2011

% Moisture: not dec. Date Analyzed: 6/27/2011

GC Column: RTX-VM ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	VA10104.D	Sample Name	1126401
Operator	ROBERTS	Field ID	482-GW2
Date Acquired	27 Jun 2011 5:38 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result		MDL		RL	Qualifiers
107028	Acrolein			not	detected	3.21	ug/L	5.00 ug/L	
107131	Acrylonitrile			not	detected	0.98	ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	1.64	ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	0.11	ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	0.17	ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	0.17	ug/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected	0.27	ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not	detected	0.22	ug/L	0.50 ug/L	
74-83-9	Bromomethane			not	detected	0.37	ug/L	0.50 ug/L	
75-00-3	Chloroethane			not	detected	0.32	ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	0.15	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	0.15	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	0.32	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	0.12	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	0.26	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	0.14	ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	0.20	ug/L	0.50 ug/L	
78-93-3	2-Butanone			not	detected	0.22	ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not	detected	0.12	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected	0.35	ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	0.12	ug/L	0.50 ug/L	
71-43-2	Benzene	10.60	5423	0.17	ug/L	0.12	ug/L	0.50 ug/L	J
107-06-2	1,2-Dichloroethane			not	detected	0.11	ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not	detected	0.11	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not	detected	0.12	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected	0.12	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	0.24	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	0.15	ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	0.12	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not	detected	0.14	ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	0.14	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	0.17	ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	0.12	ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not	detected	0.12	ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not	detected	0.12	ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	0.13	ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	0.30	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	0.14	ug/L	0.50 ug/L	
100-42-5	Styrene			not	detected	0.14	ug/L	0.50 ug/L	
75-25-2	Bromoform			not	detected	0.14	ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	0.14	ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	detected	0.16	ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	detected	0.15	ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not	detected	0.13	ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **482 GW2**

Lab Name: FMETL NJDEP# 13461

Project: Case No: Location: 482 SDG No.: 11264

Matrix: (soil/water) WATER Lab Sample ID: 1126401

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA10104.D

Level: (low/med) LOW Date Received: 6/25/2011

% Moisture: not dec. Date Analyzed: 6/27/2011

GC Column: RTX-VM ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 15

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkane: Cyclic	10.16	36	J
2.	Alkane: Cyclic	11.71	29	J
3. 000103-65-1	Benzene, propyl-	18.36	17	JN
4.	C4 alkyl benzene	20.53	17	J
5. 000496-11-7	Indane	20.68	67	JN
6.	C4 alkyl benzene	21.34	49	J
7.	1H-Indene-dihydro-methyl-	21.49	19	J
8.	1H-Indene-dihydro-methyl-	21.59	46	J
9.	C4 alkyl benzene	21.96	39	J
10.	1H-Indene-dihydro-methyl-	22.49	34	J
11.	C4 alkyl benzene	22.69	80	J
12.	1H-Indene-dihydro-methyl-	22.74	74	J
13.	1H-Indene-dihydro-dimethyl-	23.18	28	J
14.	1H-Indene-dihydro-dimethyl-	23.27	21	J
15.	1H-Indene-dihydro-dimethyl-	23.42	46	J

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VA10105.D**	Sample Name	**1126402**
Operator	**ROBERTS**	Field ID	**482-GW2 DUPLICATE**
Date Acquired	**27 Jun 2011 6:18 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result		MDL		RL	Qualifiers
107028	Acrolein			not	detected	3.21	ug/L	5.00 ug/L	
107131	Acrylonitrile			not	detected	0.98	ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	1.64	ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	0.11	ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	0.17	ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	0.17	ug/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected	0.27	ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not	detected	0.22	ug/L	0.50 ug/L	
74-83-9	Bromomethane			not	detected	0.37	ug/L	0.50 ug/L	
75-00-3	Chloroethane			not	detected	0.32	ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	0.15	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	0.15	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	0.32	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	0.12	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	0.26	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	0.14	ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	0.20	ug/L	0.50 ug/L	
78-93-3	2-Butanone			not	detected	0.22	ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not	detected	0.12	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected	0.35	ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	0.12	ug/L	0.50 ug/L	
71-43-2	Benzene	10.60	7805	0.23	ug/L	0.12	ug/L	0.50 ug/L	J
107-06-2	1,2-Dichloroethane			not	detected	0.11	ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not	detected	0.11	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not	detected	0.12	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected	0.12	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	0.24	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	0.15	ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	0.12	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not	detected	0.14	ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	0.14	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	0.17	ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	0.12	ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not	detected	0.12	ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not	detected	0.12	ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	0.13	ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	0.30	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	0.14	ug/L	0.50 ug/L	
100-42-5	Styrene			not	detected	0.14	ug/L	0.50 ug/L	
75-25-2	Bromoform			not	detected	0.14	ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	0.14	ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	detected	0.16	ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	detected	0.15	ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not	detected	0.13	ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **482 GW2 DUP**

Lab Name: FMETL NJDEP# 13461

Project: Case No: Location: 482 SDG No.: 11264

Matrix: (soil/water) WATER Lab Sample ID: 1126402

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA10105.D

Level: (low/med) LOW Date Received: 6/25/2011

% Moisture: not dec. Date Analyzed: 6/27/2011

GC Column: RTX-VM ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 15

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkane: Cyclic	10.16	46	J
2.	Alkane: Cyclic	11.72	35	J
3. 000103-65-1	Benzene, propyl-	18.36	18	JN
4.	C4 alkyl benzene	20.53	19	J
5. 000496-11-7	Indane	20.69	76	JN
6.	C4 alkyl benzene	21.33	56	J
7.	1H-Indene-dihydro-methyl-	21.48	21	J
8.	1H-Indene-dihydro-methyl-	21.59	58	J
9.	C4 alkyl benzene	21.96	48	J
10.	1H-Indene-dihydro-methyl-	22.49	36	J
11.	C4 alkyl benzene	22.69	95	J
12.	1H-Indene-dihydro-methyl-	22.75	78	J
13.	1H-Indene-dihydro-dimethyl-	23.18	33	J
14.	1H-Indene-dihydro-dimethyl-	23.28	23	J
15.	1H-Indene-dihydro-dimethyl-	23.43	50	J

Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File	**VA10102.D**	Sample Name	**1126404**
Operator	**ROBERTS**	Field ID	**TRIP BLANK**
Date Acquired	**27 Jun 2011 4:40 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result		MDL		RL	Qualifiers
107028	Acrolein			not	detected	3.21	ug/L	5.00 ug/L	
107131	Acrylonitrile			not	detected	0.98	ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	1.64	ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	0.11	ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	0.17	ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	0.17	ug/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected	0.27	ug/L	0.50 ug/L	
75-01-4	Vinyl Chloride			not	detected	0.22	ug/L	0.50 ug/L	
74-83-9	Bromomethane			not	detected	0.37	ug/L	0.50 ug/L	
75-00-3	Chloroethane			not	detected	0.32	ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	0.15	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	0.15	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	0.32	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	0.12	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	0.26	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	0.14	ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	0.20	ug/L	0.50 ug/L	
78-93-3	2-Butanone			not	detected	0.22	ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not	detected	0.12	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected	0.35	ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not	detected	0.12	ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	0.12	ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	0.12	ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	0.11	ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not	detected	0.11	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not	detected	0.12	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected	0.12	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	0.24	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	0.15	ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	0.12	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	0.13	ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not	detected	0.14	ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	0.14	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	0.17	ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	0.12	ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not	detected	0.12	ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not	detected	0.12	ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	0.13	ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	0.30	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	0.14	ug/L	0.50 ug/L	
100-42-5	Styrene			not	detected	0.14	ug/L	0.50 ug/L	
75-25-2	Bromoform			not	detected	0.14	ug/L	0.50 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	0.14	ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	detected	0.16	ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	detected	0.15	ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not	detected	0.13	ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank
E = Value above linear range
D = Value from dilution
PQL = Practical Quantitation Limit
J= Estimated concentration, value falls between R.L. and M.D.L.

MDL = Method Detection Limit
NLE = No Limit Established
R.T. = Retention Time
R.L. = Reporting Limit

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **TRIP BLANK**

Lab Name: FMETL NJDEP# 13461

Project: Case No: Location: 482 SDG No.: 11264

Matrix: (soil/water) WATER Lab Sample ID: 1126404

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA10102.D

Level: (low/med) LOW Date Received: 6/25/2011

% Moisture: not dec. Date Analyzed: 6/27/2011

GC Column: RTX-VM ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

TOTAL LEAD

(ACCUTEST)

Report of Analysis

Client Sample ID:	1126401 482-GW-2		
Lab Sample ID:	JA79588-1	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
		Percent Solids:	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead [a]	80.6	12	ug/l	2	06/30/11	07/02/11 VC	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA26653
(2) Prep QC Batch: MP58959

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1126402 482GW2-DUP		
Lab Sample ID:	JA79588-2	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
		Percent Solids:	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead [a]	79.0	12	ug/l	2	06/30/11	07/02/11 VC	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA26653
(2) Prep QC Batch: MP58959

(a) Elevated detection limit due to dilution required for high interfering element.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	1126403 482GW2-FIELD BLANK		
Lab Sample ID:	JA79588-3	**Date Sampled:**	06/25/11
Matrix:	AQ - Field Blank Water	**Date Received:**	06/28/11
		Percent Solids:	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Lead	<3.0	3.0	ug/l	1	06/30/11	07/01/11 VC	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA26643
(2) Prep QC Batch: MP58959

RL = Reporting Limit

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables Checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete data packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1.	Cover Page, Title Page listing Lab Certification #, facility name and address, & date of report submitted.	✓
2.	Table of Contents submitted.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	✓
4.	Document paginated and legible.	✓
5.	Chain of Custody submitted.	✓
6.	Samples submitted to lab within 48 hours of sample collection.	✓
7.	Methodology Summary submitted.	✓
8.	Laboratory Chronicle and Holding Time Check submitted.	✓
9.	Results submitted on a dry weight basis.	✓
10.	Method Detection Limits submitted.	✓
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	✓

Laboratory Manager or Environmental Consultant's Signature

Date: 6/30/11

Laboratory Certification # 13461

*Refer to NJAC 7:26E – Appendix A, Section IV – Reduced Data Deliverables – Non-USEPA/CLP Methods for further guidance.

Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

Dean Tardiff 6/30/11
Laboratory Manager

ATTACHMENT P

UST 483 File Review and Analyses

Contents:

- Bldg. 483 Underground Storage Tank File Review
- Enclosure 1 – Fort Monmouth 2010 Work Order Report
- Enclosure 2 –Analytical Data Report (10196)

ATTACHMENT P, Enclosure 1

UST 483 - Fort Monmouth 2010 Work Order Report

The following table summarizes the sample media and proposed analysis:

TABLE 1 Summary of Sampling Strategy			
Sample media	Frequency	Analysis	Data quality objective
groundwater	2	VOA +10/B/N+15	Impact to groundwater for VOC/base neutral compounds.

Data Review and Interpretation

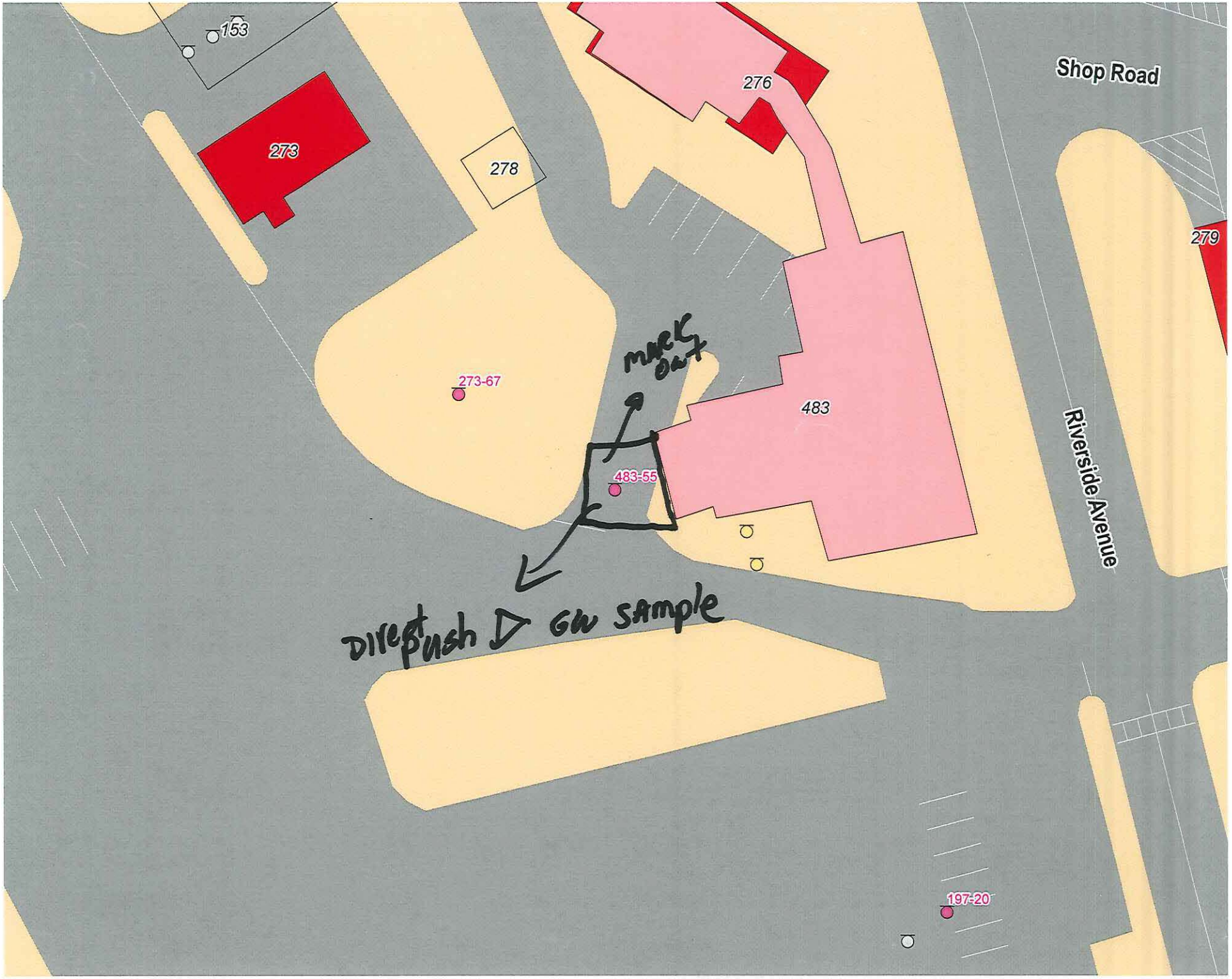
Upon receipt of the analytical reports for the field activities, the US Army Directorate of Public Works (DPW), US Army Garrison, Ft. Monmouth, will evaluate the data against current ground water quality standards to determine if any exceedances have occurred. The data will be summarized and tabulated. The data will also be presented visually to allow for spatial interpretation. Based on the analytical data, any additional field work will be focused on the identified Area(s) of Concern (AOC).

Based on the analytical results, DPW will submit actions to further delineate and/or remediate the AOCs identified. The submission will come in the form of a Site Investigation Report.

Bldg 483 (former) 5/19/10

0-9" Top soil
9"-8' yellow sands
4' water
Temp @ 1" PVC
0-3 casing
3-8 screen .10 slot

	ph	cond	turb	DO	Temp	DEP	SAL	TDS	sf	ORP
0930	6.4	67	270	2.8	14.9	-1	0.0	.42	0	-116
0950	6.5	74	-5.0	4.6	15.4	-1	0.0	.47	0	-70


153
273
278
276
Shop Road
279
273-67
483
483-55
Riverside Avenue
197-20
mark out
Direct push D GW sample

Boyce, George T CTR USA SO 10-127253

From: Syvarth, Howard M CTR US USA
Sent: Tuesday, April 13, 2010 2:56 PM
To: Boyce, George T CTR USA; Tardiff, Dean J CTR US USA
Subject: next task
Attachments: Scope of Work for Bldg 483.doc

Attached please find a scope of work for groundwater sampling to be performed at the former bldg. 483. I will provide George a copy of a site map indicating where the mark out should be performed. We will be sampling via direct push for VOC+10 and B/N+15. Previous sample results indicated that the TICs at this location were in excess of GWQS.

I can call the service order in first or I can do it after the mark out has been called. Let me know your preference.

Site	Comment	Northing	Easting
116	B-1	541358.427	623150.716
116	B-2	541369.536	623144.698
116	B-3	541354.015	623139.801
116	B-4	541347.443	623128.340
116	B-5	541362.290	623122.112
116	TMP-1	541361.880	623140.908
483	GW-1	541628.493	623340.280
1104	GW-1	538688.350	618125.429

ATTACHMENT P, Enclosure 2

UST 483 – Analytical Data Report (10196)

New Jersey ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

06/07/10

Technical Report for

Fort Monmouth Environmental Testing Lab.

Building 483

PO C09-20650 NJDEP Certification #13461

Accutest Job Number: JA47191

Sampling Date: 05/19/10

Report to:

Judith.vergura1@us.army.mil

ATTN: Distribution1

Total number of pages in report: 14

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

David N. Speis
VP Ops, Laboratory Director

Client Service contact: Tony Esposito 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Test results relate only to samples analyzed.

ACCUTEST LABORATORIES 50 YEARS 1956-2006

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3.2: JA47191-2: 1019603 GW1 9
Section 4: Misc. Forms **12**
4.1: Chain of Custody 13

Sample Summary

Fort Monmouth Environmental Testing Lab.

Job No: JA47191

Building 483
Project No: PO C09-20650 NJDEP Certification #13461

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
JA47191-1	05/19/10	09:25	JV	05/21/10	AQ	Field Blank Water	1019602 FIELD BLANK
JA47191-2	05/19/10	09:45	JV	05/21/10	AQ	Ground Water	1019603 GW1

ACCUTEST Laboratories

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CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Fort Monmouth Environmental Testing Lab. **Job No** JA47191

Site: Building 483 **Report Date** 6/7/2010 4:32:08 PM

On 05/21/2010, 1 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.6 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA47191 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Extractables by GCMS By Method SW846 8270C

Matrix AQ **Batch ID:** OP43735

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA47064-12MS, JA47064-12MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for bis(2-Chloroethyl)ether are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for bis(2-Chloroethyl)ether are outside control limits. Probable cause due to matrix interference.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix AQ **Batch ID:** OP43735A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA47064-12MS, JA47064-12MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Acenaphthene, Anthracene, Fluorene, Phenanthrene are outside control limits.
- OP43735A-BS12 for Phenanthrene: Outside of in house control limits.
- OP43735A-BS12 for Fluorene: Outside of in house control limits.
- OP43735A-BS12 for Anthracene: Outside of in house control limits.
- OP43735A-BS12 for Acenaphthene: Outside of in house control limits.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	1019602 FIELD BLANK		
Lab Sample ID:	JA47191-1	Date Sampled:	05/19/10
Matrix:	AQ - Field Blank Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 483		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55760.D	1	06/01/10	LP	05/24/10	OP43735	EZ2074
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-86-2	Acetophenone	ND	2.0	0.40	ug/l	
1912-24-9	Atrazine	ND	5.0	0.39	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.40	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.35	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.25	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.42	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.42	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/l	
86-74-8	Carbazole	ND	1.0	0.17	ug/l	
105-60-2	Caprolactam	ND	2.0	0.20	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.25	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.35	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	2.0	0.22	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	2.0	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.30	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.40	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.17	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.23	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.13	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	20	0.24	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.21	ug/l	
78-59-1	Isophorone	ND	2.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.66	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.24	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.29	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.18	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1019602 FIELD BLANK		
Lab Sample ID:	JA47191-1	Date Sampled:	05/19/10
Matrix:	AQ - Field Blank Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 483		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		25-112%
321-60-8	2-Fluorobiphenyl	82%		31-106%
1718-51-0	Terphenyl-d14	68%		14-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1019602 FIELD BLANK		
Lab Sample ID:	JA47191-1	Date Sampled:	05/19/10
Matrix:	AQ - Field Blank Water	Date Received:	05/21/10
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	Building 483		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R80661.D	1	06/01/10	JSE	05/24/10	OP43735A	ER2996
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.029	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.039	ug/l	
120-12-7	Anthracene	ND	0.10	0.026	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.028	ug/l	
218-01-9	Chrysene	ND	0.10	0.022	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.024	ug/l	
86-73-7	Fluorene	ND	0.10	0.027	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.0099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.029	ug/l	
91-20-3	Naphthalene	ND	0.10	0.019	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.036	ug/l	
129-00-0	Pyrene	ND	0.10	0.022	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	105%		18-119%
321-60-8	2-Fluorobiphenyl	65%		18-104%
1718-51-0	Terphenyl-d14	66%		13-109%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1019603 GW1		
Lab Sample ID:	JA47191-2	Date Sampled:	05/19/10
Matrix:	AQ - Ground Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 483		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z55767.D	1	06/02/10	LP	05/24/10	OP43735	EZ2074
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
98-86-2	Acetophenone	ND	2.0	0.40	ug/l	
1912-24-9	Atrazine	ND	5.0	0.39	ug/l	
100-52-7	Benzaldehyde	ND	5.0	0.40	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.35	ug/l	
85-68-7	Butyl benzyl phthalate	ND	2.0	0.25	ug/l	
92-52-4	1,1'-Biphenyl	ND	1.0	0.42	ug/l	
91-58-7	2-Chloronaphthalene	ND	2.0	0.42	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/l	
86-74-8	Carbazole	ND	1.0	0.17	ug/l	
105-60-2	Caprolactam	ND	2.0	0.20	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.25	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	2.0	0.39	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.35	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	2.0	0.22	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	2.0	0.33	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.30	ug/l	
132-64-9	Dibenzofuran	ND	5.0	0.30	ug/l	
84-74-2	Di-n-butyl phthalate	ND	2.0	0.19	ug/l	
117-84-0	Di-n-octyl phthalate	ND	2.0	0.40	ug/l	
84-66-2	Diethyl phthalate	ND	2.0	0.17	ug/l	
131-11-3	Dimethyl phthalate	ND	2.0	0.23	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33	ug/l	
87-68-3	Hexachlorobutadiene	ND	1.0	0.13	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	20	0.24	ug/l	
67-72-1	Hexachloroethane	ND	2.0	0.21	ug/l	
78-59-1	Isophorone	ND	2.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.66	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	0.24	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	0.29	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	0.18	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.25	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1019603 GW1		
Lab Sample ID:	JA47191-2	Date Sampled:	05/19/10
Matrix:	AQ - Ground Water	Date Received:	05/21/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 483		

BN TCL42 List

CAS No.	Compound	Result	RL	MDL	Units	Q
621-64-7	N-Nitroso-di-n-propylamine	ND	2.0	0.44	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	76%		25-112%
321-60-8	2-Fluorobiphenyl	78%		31-106%
1718-51-0	Terphenyl-d14	61%		14-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	1019603 GW1		
Lab Sample ID:	JA47191-2	Date Sampled:	05/19/10
Matrix:	AQ - Ground Water	Date Received:	05/21/10
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	Building 483		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R80669.D	1	06/01/10	JSE	05/24/10	OP43735A	ER2996
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.029	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.039	ug/l	
120-12-7	Anthracene	ND	0.10	0.026	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.031	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.036	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.029	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.028	ug/l	
218-01-9	Chrysene	ND	0.10	0.022	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.024	ug/l	
86-73-7	Fluorene	ND	0.10	0.027	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.0099	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.029	ug/l	
91-20-3	Naphthalene	ND	0.10	0.019	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.036	ug/l	
129-00-0	Pyrene	ND	0.10	0.022	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	80%		18-119%
321-60-8	2-Fluorobiphenyl	51%		18-104%
1718-51-0	Terphenyl-d14	42%		13-109%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FB, SW



Fort Monmouth Environmental Testing Laboratory

JA47191

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:dean.tardiff@us.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Dean Tardiff	Project No:	Analysis Parameters								Comments:
Phone #: (732)532-6352	Location: Bldg. 483									
( )DERA ( )OMA ( )Other:_____										
Samplers Name / Company:		BN+15	SIMS							
LIMS/Work Order # / Sample Location / Date / Time / Sample Type / # bottles										Remarks / Preservation Method
1019602	Field Blank 5/19/2010 9:25 AQ 1	X	X		-1					
1019603	GW1 5/19/2010 9:45 AQ 1	X	X		-2					EB67
										* NAG 950 RECD 5.21.10

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	5-21-10 1600			5/21/10 1830	
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified, (_)EDD
Turnaround time: (X)Standard 3 wks, (_)Rush Wk., (_)ASAP Verbal ___Hrs.

Comments: P.O. C09-20650

ZA print legibly No Seal

3.6°C FR

10196 BLDG. 483.xls5/20/2010

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JA47191: Chain of Custody
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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: JA47191 Client: Immediate Client Services Action Required: No

Date / Time Received: 5/21/2010 Delivery Method: Client Service Action Required at Login: No

Project: No. Coolers: 1 Airbill #'s:

Cooler Security	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	Infared gun
3. Cooler media:	Ice (bag)

Quality Control Preservatio	Y or N	N/A
1. Trip Blank present / cooler:	☐ ☐	☑
2. Trip Blank listed on COC:	☐ ☐	☑
3. Samples preserved properly:	☑ ☐	
4. VOCs headspace free:	☐ ☐	☑

Sample Integrity - Documentation	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition	Y or N
1. Sample recvd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions	Y or N	N/A
1. Analysis requested is clear:	☑ ☐	
2. Bottles received for unspecified tests	☐ ☑	
3. Sufficient volume recvd for analysis:	☑ ☐	
4. Compositing instructions clear:	☐ ☐	☑
5. Filtering instructions clear:	☐ ☐	☑

Comments

4.1

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JA47191: Chain of Custody
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