DEPARTMENT OF THE ARMY

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

April 22, 2015

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

Re: Underground Storage Tanks within Parcel 79
Fort Monmouth, NJ

Attachments:

A. Correspondence
B. Summary Table of Parcel 79 Underground Storage Tanks
C. Site Layout Drawings of Parcel 79 (Recent and Historical)
D. No Further Action Letters from NJDEP
E. Areas 74 and 75 ASTs File Review and Analyses
F. UST 29 File Review
G. UST 142A Report
H. UST 142B Report
I. Bldgs. 168, 169, 170 and 171 File Review
J. UST 202A File Review
K. UST 202B File Review
L. USTs 202C and 202D File Reviews and Report
M. UST 401 Report
N. UST 416 Report
O. UST 430B Report
P. UST 435 Notes
Q. UST 437 File Review and Analyses
R. UST 440 File Review and Analyses
S. UST 441 File Review and Analyses
T. UST 443 Report
U. UST 444 File Review and Analyses
V. UST 445 File Review and Analyses
W. UST 448 File Review and Analyses
X. UST 449 File Review and Analyses
Y. UST 450 File Review and Analyses
Z. UST 451 File Review and Analyses
AA. Bldg. 456 Analyses
BB. UST 474 File Review and Analyses
CC. UST 490 File Review, Report and Analyses

DD. Geophysical Survey Report

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*.
2. Army letter to NJDEP dated January 31, 2013, re: *NJDEP's Response to Army Correspondence (Dated March 16, 2012).*
3. NJDEP letter to the Army dated May 30, 2013, re: *Army's January 31, 2013 Correspondence – Miscellaneous USTs.*

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 79. One purpose of this review was to provide a comprehensive response to NJDEP's previous comments on Parcel 79 (Correspondence 1); these responses (Attachment A) supplement the information previously provided in Correspondence (2) and (3). In addition, this submittal provides comprehensive documentation of the location and closure status of all USTs identified within this parcel, which we believe will be useful for the future Phase II property transfer.

Responses to NJDEP's comments concerning Parcel 79 in Correspondence (1) are provided in Attachment A, as well as the previous correspondence concerning Parcel 79 (Correspondence 1 through 3). The majority of the removed and potential USTs were used for residential heating oil, or 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). A summary table of UHOTs identified within Parcel 79 is provided as Attachment B, and the locations of these UHOTs within Parcel 79 are presented in Attachment C. All but one of the UHOTs that have been positively identified within Parcel 79 have been removed; the exception is UST 446, which was left in place as described further below. Additional "potential" UHOTs associated with former barracks (as shown on historical drawings; see Attachment C) are also described in this summary that have not been located. The table of UHOTs in Attachment B describes which UHOTs were identified by each of the relevant sources of information, including the Addendum ECP UHOT Report (Parsons, 2014), the 1956 fuel storage tanks map (presented in Attachment C; also previously provided as Appendix O of the 2007 ECP Report, and within Appendix G of the ECP Site Investigation Report), and NJDEP's July 10, 2012 letter (Correspondence 1).

Multiple UHOTs within Parcel 79 have been identified that were previously approved for No Further Action (NFA) by NJDEP; documentation of this approval is provided in Attachment D, and referenced below for specific UHOTs. 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 B table, the term "Case Closed" has been used (consistent with previous FTMM procedures) to indicate the Army determined that no further sampling or remedial actions were warranted for a specific UST site. "Case Open" indicates the Army determined that

ongoing monitoring, reporting or possibly even remedial action was warranted. In contrast, "No Further Action" has been reserved for NJDEP approval that no further sampling or remedial actions are warranted. “Case Open” sites previously identified within Parcel 79 in Attachment B can now be considered as “Closed” by this submittal.

The Parcel 79 area generally includes that portion of Fort Monmouth bounded by Parker Creek to the northwest, Oceanport Avenue to the southwest, Oceanport Creek to the southeast, and Burns Avenue (and its southerly extension) to the northeast (see Attachment C). Several discrete areas that are designated as Installation Restoration Program (IRP) sites or as separate ECP parcels are also located within the same general area as Parcel 79, but are excluded from this submittal. These excluded sites are shown on Attachment C and include:

- FTMM-15 Water Tank, also known as Parcel 78.
- FTMM-16 Former Pesticide Storage Area (Bldg. 498), also known as Parcel 81.
- Parcel 80 Former Bldgs. 105 and 106.
- Parcel 82 Residential Communities Initiative (RCI) 400 Area.
- Parcel 95 PCB Transformer Leak near Bldgs. 454 and 456.

These excluded IRP sites and ECP Parcels will be addressed under separate cover as needed.

Bulk fuel oil aboveground storage tanks (ASTs) were previously located in the northeastern portion of Parcel 79 (see the current layout drawing in Attachment C). The two 210,000 gallon fuel oil ASTs were removed in 1995, and associated piping was removed in 1997. Soil samples were collected both for the AST site (designated as Area 75) and the associated piping (designated as Area 74), as well as groundwater samples for Area 74. A file review summary and the results of the investigations are presented in Attachment E. Based upon the results of the analyses, we request No Further Action for this Area 74 and 75 AST site.

Regarding the multiple USTs that were previously removed from Parcel 79, we are submitting the following documentation, and we request a No Further Action determination for each site (site that have been previously approved by NJDEP are highlighted in green):

- UST 29 File Review summary and analyses is presented in Attachment F.
- UST 104 NFA was approved by NJDEP on 1/10/2003 (Attachment D).
- UST 142A investigation report is presented in Attachment G.
- UST 142B investigation report is presented in Attachment H.
- Bldgs. 168, 169, 170 and 171 File Review is presented in Attachment I; these are demolished buildings where USTs are not likely to be present.
- UST 197-2 NFA was approved by NJDEP on 2/24/2000 (Attachment D).
- UST 202A File Review is presented in Attachment J.
- UST 202B File Review is presented in Attachment K.
- UST 202C File Review and Report are presented in Attachment L.
- UST 202D File Review summary, report and additional analyses are presented in Attachment L. NFA for soils at this site is warranted. Benzene and 2-methylnaphthalene in groundwater exceeded the NJDEP Ground Water Quality Criteria.
- UST 400 NFA was approved by NJDEP on 2/24/2000 (Attachment D).
- UST 401 investigation report is presented in Attachment M.
- Bldg. 407 is a demolished building where there were no geophysical survey indications of an underground storage tank found.

- Bldg. 408 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- UST 410 NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 411 NFA was approved by NJDEP on 5/30/2013 (Attachment D).
- UST 412 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 413 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 414 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- Bldg. 415 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- UST 416 investigation report is presented in Attachment N.
- UST 417 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 418 NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 419 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 420 NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 421 NFA was approved by NJDEP on 5/30/2013 (Attachment D).
- UST 422 NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 423 NFA was approved by NJDEP on 5/30/2013 (Attachment D).
- Bldg. 424 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 425 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- UST 426 NFA was approved by NJDEP on 1/10/2003 (Attachment D).
- UST 427 NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 428 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 429 NFA was approved by NJDEP on 10/23/2000 (Attachment D).
- UST 430A NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 430B investigation report is presented in Attachment O.
- UST 430C NFA was approved by NJDEP on 2/24/2000 (Attachment D).
- Bldg. 433 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- UST 434 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- Bldg. 435 is a demolished building where there were no geophysical survey indications of an underground storage tank found; test trenching was performed as described in Attachment P; no tank was found.
- Bldg. 436 is a demolished building where there were no geophysical survey indications of an underground storage tank found; field studies were performed that discovered USTs at other locations in this general area, but no tank was found at this location.
- UST 437 File Review and Analyses is presented in Attachment Q.
- Bldg. 438 is a demolished building where there were no geophysical survey indications of an underground storage tank found; field studies were performed that discovered USTs at other locations in this general area, but no tank was found at this location.
- UST 439 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 440 File Review and Analyses is presented in Attachment R.
- UST 441 File Review and Analyses is presented in Attachment S.

- Bldg. 442 is a demolished building where there were no geophysical survey indications of an underground storage tank found; field studies were performed that discovered USTs at other locations in this general area, but no tank was found at this location.
- UST 443 investigation report is presented in Attachment T.
- UST 444 File Review and Analyses is presented in Attachment U.
- UST 445 File Review and Analyses is presented in Attachment V.
- UST 446 is a steel 1000 gallon fuel oil tank that was partially excavated in 2010, but was left in place because it was partially covered by the existing Bldg. 451 foundation, and therefore could not be removed without damaging the overlying structure.
- UST 447 NFA was approved by NJDEP on 8/29/2000 (Attachment D).
- UST 448 File Review and Analyses is presented in Attachment W.
- UST 449 File Review and Analyses is presented in Attachment X.
- UST 450 File Review and Analyses is presented in Attachment Y.
- UST 451 File Review and Analyses is presented in Attachment Z.
- UST 453 NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- UST 454 NFA was approved by NJDEP on 7/10/1998 (Attachment D).
- Bldg. 455 is a demolished building where there were no geophysical survey indications of an underground storage tank found. Note that this is a different location than existing Bldg. 455.
- Bldg. 456 is a demolished building where there were no geophysical survey indications of an underground storage tank found. Note that existing Bldg. 456 partially overlies this former Bldg. 456. A single soil sample was collected at Bldg. 456 as presented in Attachment AA.
- Bldg. 457 is a demolished building where there were no geophysical survey indications of an underground storage tank found. Note that existing Bldg. 455 partially overlies this former Bldg. 457.
- Bldg. 458 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 459 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Former Bldg. 460 is a demolished building where there were no geophysical survey indications of an underground storage tank found. Note that existing Bldg. 456 partially overlies this former Bldg. 460.
- Bldg. 460 is an existing building where there were no geophysical survey indications of an underground storage tank found.
- Former Bldg. 461 is a demolished building where there were no geophysical survey indications of an underground storage tank found. Note that existing Bldg. 457 overlies this former Bldg. 461.
- Former Bldg. 462 is a demolished building where there were no geophysical survey indications of an underground storage tank found. Note that existing Bldg. 457 partially overlies this former Bldg. 462.
- Bldg. 463 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 464 is a demolished building where there were no geophysical survey indications of an underground storage tank found.

- Bldg. 465 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 466 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 467 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 468 is a demolished building where there were no geophysical survey indications of an underground storage tank found. Further, there is no tank shown on the 1956 fuel storage drawing (Attachment C).
- Bldg. 469 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 470 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 471 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 472 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 473 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- UST 474 File Review and Analyses is presented in Attachment BB.
- UST 475 NFA was approved by NJDEP on 10/23/2000 (Attachment D).
- Bldg. 476 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 488 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- Bldg. 489 is a demolished building where there were no geophysical survey indications of an underground storage tank found.
- UST 490 File Review, Report and Analyses is presented in Attachment CC. NFA for soils at this site is warranted. 2-Methylnaphthalene in groundwater exceeded the NJDEP Ground Water Quality Criteria.
- UST 491 NFA was approved by NJDEP on 1/10/2003 (Attachment D).
- UST 492 NFA was approved by NJDEP on 8/29/2000 (Attachment D).

Many of the Parcel 79 UHOTs were steel fuel oil tanks associated with former barracks that have been demolished. Geophysical surveys were performed to locate potential USTs that may have remained after the buildings were removed, as described in Attachment DD. A combination of the geophysical surveys as well as the historical maps and metal detectors were used to locate multiple UHOTs within the Parcel 79 area, which were subsequently removed in 2010. However, for multiple building numbers listed in the Attachment B summary table (for example, 407, 408, etc.), there were no geophysical anomalies identified that were potentially related to underground tanks, and consequently no tanks were found at multiple locations.

Groundwater samples were collected from multiple petroleum tank sites during site investigation activities, including the Area 74 bulk fuel oil AST piping area, and USTs 29, 401, 416, and 430B. Groundwater VOC and SVOC analytes from these sites were either non-detected or detected at concentrations below the NJDEP Ground Water Quality Criteria. Groundwater samples were also collected from 8 locations within Parcel 79 during the ECP Site

Investigation (SI; Shaw, 2008); all VOC and SVOC analytes from these samples were also either non-detected or detected at concentrations below the NJDEP Ground Water Quality Criteria. An oily sheen on groundwater was observed within the tank excavations at USTs 441, 444, and 448 during 2010 removal activities; soil remediation was completed at each of these sites, which eliminated the source of the oily sheen. At UST 202D, benzene (1.61 µg/L) and 2-methylnaphthalene (233 µg/L) were present in groundwater at concentrations that exceeded the NJDEP interim Ground Water Quality Criteria (1 and 30 µg/L, respectively). At UST 490, 2-methylnaphthalene was present in groundwater at concentrations up to 115 µg/L, which exceeded the NJDEP interim Ground Water Quality Criteria of 30 µg/L. In summary, the results of previous investigations do not indicate the presence of widespread groundwater contamination at Parcel 79, although two localized areas with exceedance of NJDEP Ground Water Quality Criteria have been identified at USTs 202D and 490.

This information supports the conclusion that UST contamination issues identified within Parcel 79 have been adequately addressed by previous environmental activities. Numerous UHOT sites were identified within this Parcel and were addressed under the FTMM tank removal and assessment program over the past approximately 20 years. Three unresolved issues remain:

- One fuel oil UHOT was partially uncovered and then left in place at former Bldg. 446 due to structural concerns with the overlying Bldg. 451 foundation.
- Groundwater at UST 202D exceeded the NJDEP Ground Water Quality Criteria for benzene and 2-methylnaphthalene.
- Groundwater at UST 490 exceeded the NJDEP Ground Water Quality Criteria for 2-methylnaphthalene.

In summary, we submit that the Army has provided adequate due diligence with regards to the environmental condition of this Parcel, and we request that NJDEP approve No Further Action for Parcel 79, with the exception of the UHOT remaining at Bldg. 446, and groundwater at UST 202D and UST 490. Should you have any questions or require additional information, please contact me at (732) 380-7064 or by email at wanda.s.green2.civ@mail.mil.

Sincerely,

Wanda Green

Wanda Green
BRAC Environmental Coordinator

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

ATTACHMENT A

Correspondence

Contents:

- Response to NJDEP Comments on Parcel 79, Fort Monmouth, NJ
- NJDEP letter to the Army dated July 10, 2012, re: *March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008*.
- Army letter to NJDEP dated January 31, 2013, re: *NJDEP's Response to Army Correspondence (Dated March 16, 2012)*.
- NJDEP letter to the Army dated May 30, 2013, re: *Army's January 31, 2013 Correspondence – Miscellaneous USTs.*

RESPONSE TO NJDEP COMMENTS ON PARCEL 79, FORT MONMOUTH, NJ

Document: Letter to US Army Ft Monmouth, Re: March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008, Ft. Monmouth, NJ, PI G000000032
Document Date: 10 July 2012
Response Date: 4 March 2015

No.	Ref. Page / Para.	COMMENTS	Disposition
Reviewer: Linda Range, NJDEP (Re: Parcel 79 – 400 Area Former Barracks)			
1.	Parcel 79	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.	Additional investigation results is summarized and presented within this submittal; see Attachments Q through S, and U though Z. Groundwater samples were collected at select areas within Parcel 79 as summarized in the letter entitled "Underground Storage Tanks within Parcel 79."
2.	Parcel 79	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.	Please see the specific assessment for each UST location provided within this submittal entitled "Underground Storage Tanks within Parcel 79."
3.	Parcel 79	*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 - 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	401-26: NFA requested; see Attachment M. 411-28: NFA was approved 5/30/2013; see Attachment D. 416-32: NFA requested; see Attachment N. 421-37: NFA was approved 5/30/2013; see Attachment D. 423-39: NFA was approved 5/30/2013; see Attachment D.
4.	Parcel 79	*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	430-45: NFA requested; see Attachment O. 447: NFA was approved 8/29/2000; see Attachment D.

RESPONSE TO NJDEP COMMENTS ON PARCEL 79, FORT MONMOUTH, NJ

Document: Letter to US Army Ft Monmouth, Re: March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008, Ft. Monmouth, NJ, PI G000000032
Document Date: 10 July 2012
Response Date: 4 March 2015

No.	Ref. Page / Para.	COMMENTS	Disposition
5.	Parcel 79	*South of Leonard Avenue* UST-454-51 – Report 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	454-51: NFA was approved 7/10/1998; see Attachment D. 142-73: NFA requested; see Attachment H. 142-13: NFA requested; see Attachment G. 29-1: NFA requested; see Attachment F. 490-58: NFA for soils requested; see Attachment CC. 492-59: NFA was approved 8/29/2000; see Attachment D. 202A: NFA requested; see Attachment J. 202B: NFA requested; see Attachment K. 202-21: same as 202A above. 202-22: same as 202B above.
6.	Parcel 79	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.	See response to comments 3, 4, and 5 above; either additional documentation or a record of previous NFA approval has been provided for each requested UST.
7.	Parcel 79	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.	Unregulated heating oil tanks (UHOTs) may remain within this area. Geophysical surveys have not been successful with identifying UHOT locations, possibly due to subsurface interferences.
8.	Parcel 79	Finally, please indicate what investigation, if any, has taken place at the two former and one current ASTs located north of Hazen Drive.	Previous investigations were performed; see Attachment E.

State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
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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

Underground Storage Tanks

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

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

January 31, 2013

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: NJDEP's Response to Army Correspondence (Dated March 16, 2012)

Attachments:

A. NJDEP Closure Approval for UST # 2539-28.
B. NJDEP Closure Approval for UST # 2539-64.
C. Letters from NJDEP, regarding UST Closure Approval/NFA, dated August 29, 2000 for USTs #492-59, and #2531-21.
D. UST Closure Report, Bldg 2525, Parcel 28.
E. UST Closure and Site Investigation Report Building 293-67.
F. Letters from NJDEP, regarding UST Closure Approval/NFA, dated February 24, 2000 for USTs #283B-59, and #695-111.
G. UST 635 Status Summary Report.
H. UST 637 Status Summary Report.
I. UST 642 Soil Analysis Report.
J. UST 643 Soil Analysis Report.
K. Fort Monmouth Memorandum to File for buildings 642 to 654 regarding UST removals.
L. Letter from NJDEP, regarding UST Closure Approval/NFA, dated July 10, 1998 for USTs #501-76.
M. UST 261 Status Summary Report.
N. UST 261B Status Summary Report and Soil Analysis Report.
O. NJDEP Site Assessment Compliance Statement and the Army letter regarding UST removal procedure for #401-26.
P. UST Closure and Site Investigation Report Building 411-28.
Q. NJDEP Site Assessment Compliance Statement and the Army letter regarding UST removal procedure for #416-32.
R. UST Closure and Site Investigation Report Building 421-37.
S. UST Closure and Site Investigation Report Building 423-39.
T. Correspondence Letter from NJDEP dated July 10, 2012.

Dear Ms. Range:

The U.S. Army Fort Monmouth has reviewed the subject comments as submitted by the NJDEP on July 10, 2012 (see Attachment T), in regards to the request for various UST related reports. While we are continuing to research the requested documents, I am submitting the following requested data, for your review:

Parcel 28 Former Eatontown Laboratory

A. NJDEP Closure Approval for UST # 2539-28.
B. NJDEP Closure Approval for UST # 2539-64.
C. Letters from NJDEP, regarding UST Closure Approval/NFA, dated August 29, 2000 for USTs #492-59, and #2531-21.
D. UST Closure Report, Bldg 2525, Parcel 28.

Parcel 49 – Former Squier Laboratory Complex

E. UST Closure and Site Investigation Report Building 293-67.
F. Letters from NJDEP, regarding UST Closure Approval/NFA, dated February 24, 2000 for USTs #283B-59, and #695-111.

Parcel 51 – 750 Area, 500 Area, 600 Area, 1100 Area – Former Buildings

G. UST 635 Status Summary Report.
H. UST 637 Status Summary Report.
I. UST 642 Soil Analysis Report.
J. UST 643 Soil Analysis Report.
K. Fort Monmouth Memorandum to File for buildings 642 to 654 regarding UST removals.
L. Letter from NJDEP, regarding UST Closure Approval/NFA, dated July 10, 1998 for USTs #501-76.

Parcel 76 – 200 Area, 300 Area – Former Barracks

M. UST 261 Status Summary Report.
N. UST 261B Status Summary Report and Soil Analysis Report.
O. NJDEP Site Assessment Compliance Statement and the Army letter regarding UST removal procedure for #401-26.
P. UST Closure and Site Investigation Report Building 411-28.
Q. NJDEP Site Assessment Compliance Statement and the Army letter regarding UST removal procedure for #416-32.
R. UST Closure and Site Investigation Report Building 421-37.
S. UST Closure and Site Investigation Report Building 423-39.

Electrical Substations

T. Correspondence Letter from NJDEP dated July 10, 2012.

Should you have any questions or require additional information, please contact me at (732)380-7064 or by email at wanda.s.green2.civ@mail.mil.

Sincerely,

Wanda Green
BRAC Environmental Coordinator

State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

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BOB MARTIN
Commissioner

May 30, 2013

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

Re: Army's January 31, 2013 Correspondence – Miscellaneous USTs
Main Post & Charles Wood Area
Fort Monmouth, New Jersey
PI G000000032

Dear Ms. Green:

The New Jersey Department of Environmental Protection (Department) has completed review of the referenced correspondence (and associated Attachments A through T), submitted to address several of the unresolved underground storage tank (UST) issues noted in this office's letter of July 10, 2012. As indicated in the referenced submittal, additional information regarding the various USTs will be forthcoming. The following comments are offered.

Parcel 28 – Former Eatontown Laboratory
As has been discussed, it is agreed no additional action is necessary for UST 2539-28, UST 2539-64, UST 2531-21, and two of the three USTs previously located between Building 2525 and Heliport Drive. Documentation as to the adequate evaluation of tanks UST 2542-29, UST 2564-32 and the UST at Building 2544 (T-7) has not yet been submitted.

Parcel 49 – Former Squier Laboratory Complex
Upon review of the documentation included in the submittal, it is agreed no further action is necessary for the UST at Building 293-67, or UST 283B-59.

Parcel 51 – 750 Area, 500 Area, 600 Area, 1100 Area – Former Buildings
Upon review of the documentation included in the submittal, it is agreed no further action is necessary for UST 695-111, UST 635, UST 642, UST 643 and 501-76.

As no sampling was apparently performed at UST 637, this office cannot concur there has been no discharge associated with the UST. As regarding Appendix K, and USTs at Buildings 644 through 654, evidently no sampling was performed; again, without same, this office cannot concur there has been no discharge.

Parcel 76 – 200 Area, 300 Area – Former Barracks
Review of the documentation included in the submittal indicates no additional action is necessary for UST 261 and UST 261B.

Parcel 79 – 400 Area Former Barracks
Review of the documentation included in the submittal, as well as that included in the files, indicates no further action is necessary for UST 411-28, UST 421-37, UST 423-39

As no sampling was evidently performed at UST 401-26 or UST 416-32, this office cannot concur there has been no discharge associated with the USTs.

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

Sincerely,

Linda S. Range
Bureau of Case Management

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

ATTACHMENT B

Summary Table of Parcel 79 Underground Storage Tanks

ATTACHMENT B

Summary Table of Parcel 79 USTs

UST/Bldg. No.	UST removed (Addendum ECP UHOT Report)	Potential UST (Addendum ECP UHOT Report)	Specific Comment in NJDEP's 7/10/2012 letter	Tank present in 1956 Fuel Storage Map	Registration ID	DICAR	Tank Size and Type	Product	Army Case Status	Comments on Current or Requested NJDEP Status
29	x	x	x	x	90010-1		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit review summary and data; request NFA
104	x	x		x	90010-75		3000 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 1/10/2003 NJDEP letter
142A	x		x		90010-13		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit Smith report, request NFA
142B	x		x		90010-73	94-07-21-1561-45	550 gal. steel	#2 FUEL OIL	Case Closed	Submit Smith report, request NFA
168		x		x	No geophysical survey indications of an underground tank found; or in test trench					March 1997 field investigation concluded no USTs present; request NFA
169		x		x	No geophysical survey indications of an underground tank found; or in test trench					March 1997 field investigation concluded no USTs present; request NFA
170		x			No geophysical survey indications of an underground tank found; or in test trench					March 1997 field investigation concluded no USTs present; request NFA
171		x			No geophysical survey indications of an underground tank found; or in test trench					March 1997 field investigation concluded no USTs present; request NFA
197-2		x			90010-20	94-07-05-1150-54	550 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 2/24/2000 NJDEP letter
202A	x	x	x	x	90010-21		1000 gal. fiberglass	#2 FUEL OIL	Case Closed	Submit review summary and data; request NFA
202B			x		90010-22		1000 gal. fiberglass	#2 FUEL OIL	Case Closed	Submit review summary and data; request NFA
202C			x		-		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit TVS report for 202C & D; request NFA
202D			x		-	050523-1621-46	500 gal. steel	#2 FUEL OIL	Case Open	Submit TVS report for 202C & D; request NFA for soils
400	x				90010-70		275 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 2/24/2000 NJDEP letter
401	x	NFA	x		90010-26		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit TVS report, request NFA
407		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
408		x			No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
410	x	NFA		x	90010-27		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
411	x	NFA	x	x	90010-28		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 5/30/2013 NJDEP letter
412	x	NFA		x	90010-29	97-1-7-0842-13	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter
413	x	NFA		x	90010-30	96-11-20-1000-58	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter
414	x	NFA		x	90010-31		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter
415		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found

ATTACHMENT B

Summary Table of Parcel 79 USTs

UST/Bldg. No.	UST removed (Addendum ECP UHOT Report)	Potential UST (Addendum ECP UHOT Report)	Specific Comment in NJDEP's 7/10/2012 letter	Tank present in 1956 Fuel Storage Map	Registration ID	DICAR	Tank Size and Type	Product	Army Case Status	Comments on Current or Requested NJDEP Status
416	x	NFA	x	x	90010-32		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit TVS report for 416, request NFA
417	x	NFA		x	90010-33	96-11-14-0922-14	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter
418	x	NFA		x	90010-34		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
419	x	NFA		x	90010-35	96-10-18-0855-14	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 (2) NJDEP letter
420	x	NFA		x	90010-36		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
421	x	NFA	x	x	90010-37	94-07-22-1039-26	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 5/30/2013 NJDEP letter
422	x	NFA		x	90010-38		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
423	x	NFA	x	x	90010-39		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 5/30/2013 NJDEP letter
424		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
425		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
426	x	NFA		x	90010-40	97-05-01-1403-18	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 1/10/2003 NJDEP letter
427	x	NFA		x	90010-41		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
428	x	NFA		x	90010-42	97-01-21-1014-14	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter
429	x	NFA		x	90010-43	96-12-13-0925-56	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 10/23/2000 NJDEP letter
430A	x	NFA		x	90010-44		550 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
430B	x		x		90010-45	94-0727-1344-00	550 gal. fiberglass	#2 FUEL OIL	Case Closed	Submit Smith report for 430B, request NFA
430C	x	NFA			90010-46		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 2/24/2000 (2) NJDEP letter
433		NFA			No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
434	x	NFA			90010-47		2000 gal. fiberglass	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter
435		NFA		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
436		x			No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
437	x	NFA	x	x	-	10-02-16-1626-01	1000 gal. steel	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA
438		NFA		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
439	x	NFA		x	90010-48	96-12-18-1650-22	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 (2) NJDEP letter
440	x	NFA	x	x	-	10-01-29-1721-30	1000 gal. steel	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA

ATTACHMENT B

Summary Table of Parcel 79 USTs

UST/Bldg. No.	UST removed (Addendum ECP UHOT Report)	Potential UST (Addendum ECP UHOT Report)	Specific Comment in NJDEP's 7/10/2012 letter	Tank present in 1956 Fuel Storage Map	Registration ID	DICAR	Tank Size and Type	Product	Army Case Status	Comments on Current or Requested NJDEP Status
441	x	NFA	x	x	-	10-02-22-1636-01	1000 gal. steel	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA
442		NFA		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
443	x	NFA		x	90010-49		1080 gal. steel	#2 FUEL OIL	Case Closed	Submit Smith report for 443, request NFA
444	x	NFA	x	x	-	10-01-27-1916-11	1000 gal. steel	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA
445	x	NFA	x	x	-		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit review summary and data; request NFA
446		NFA		x			1000 gal. steel	#2 FUEL OIL		Steel UST uncovered and left in place at this location, beneath existing Bldg. 451 foundation
447		x	x	x	-		Not reported	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter
448	x	NFA	x	x	-	10-01-28-1005-30	1000 gal. steel	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA
449		NFA	x	x	-	10-06-04-1447-41	No tank found	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA
450	x	NFA	x	x	-	10-07-30-1106-23	1000 gal. steel	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA. Not the same as the gasoline AST at existing Bldg. 450 (Marina area).
451	x	NFA		x	-	10-04-16-1504-47	1000 gal. steel	#2 FUEL OIL	Case Open	Submit review summary and data; request NFA
453	x	NFA		x	90010-50		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
454	x	NFA	x	x	90010-51		1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 7/10/1998 NJDEP letter
455		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found. Not the same as existing Bldg. 455
456		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found. Not the same as existing Bldg. 456
457		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found. Not the same as existing Bldg. 457
458		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
459		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
460		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
460		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
461		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
462		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
463		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
464		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
465		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
466		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
467		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found

ATTACHMENT B

Summary Table of Parcel 79 USTs

UST/Bldg. No.	UST removed (Addendum ECP UHOT Report)	Potential UST (Addendum ECP UHOT Report)	Specific Comment in NJDEP's 7/10/2012 letter	Tank present in 1956 Fuel Storage Map	Registration ID	DICAR	Tank Size and Type	Product	Army Case Status	Comments on Current or Requested NJDEP Status
468		x			No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
469		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
470		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
471		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
472		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
473		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
474	x	NFA		x	-		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit review summary and data; request NFA
475	x	NFA	x	x	90010-52	97-02-19-1352-57	1080 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 10/23/2000 NJDEP letter
476		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
488		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
489		x		x	No geophysical survey indications of an underground storage tank found					Demolished building; no tank found
490	x		x		90010-58		1000 gal. steel	#2 FUEL OIL	Case Closed	Submit TVS Report, 2010 data and review summary; request NFA for soils
491					90010-71	94-0727-1804-20	275 gal. steel	DIESEL	Case Closed	NFA approved per 1/10/2003 NJDEP letter
492	x	NFA	x	x	90010-59	97-5-15-1350-20	1000 gal. steel	#2 FUEL OIL	Case Closed	NFA approved per 8/29/2000 NJDEP letter

ATTACHMENT C

Site Layout Drawings of Parcel 79

(Recent and Historical)

Attachment C1 - Current Site Layout of Parcel 79

Parcel 78 / FTMM-15

Parcel 79

Former Bulk Fuel Oil ASTs

Parcel 95

Parcel 82

Parcel 80

Parcel 81 / FTMM-16

Apex Avenue
Oceanport Avenue
Fisher Avenue
Cesar Avenue
Burns Avenue
Hazen Drive
Leonard Avenue
Riverside Avenue
Barton Avenue
Carty Avenue
Frazer Avenue
Selfridge Avenue
Evans Avenue
Wade Avenue
Tilly Avenue
Pigeon Coop Lane
Marina Way
Sanger Avenue
Wallington Avenue
Hildreth Avenue
Barker Circle
First Avenue

Attachment C2 - Historical Site Layout of Parcel 79 (1956 Drawing)

Parcel 79

ATTACHMENT D

No Further Action Letters from NJDEP

State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Case Management
401 East State Street
P.O. Box 420/Mail Code 401-05F
Trenton, NJ 08625-0028
Phone #: 609-633-1455
Fax #: 609-633-1439

BOB MARTIN
Commissioner

May 30, 2013

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

Re: Army's January 31, 2013 Correspondence – Miscellaneous USTs
Main Post & Charles Wood Area
Fort Monmouth, New Jersey
PI G000000032

Dear Ms. Green:

The New Jersey Department of Environmental Protection (Department) has completed review of the referenced correspondence (and associated Attachments A through T), submitted to address several of the unresolved underground storage tank (UST) issues noted in this office's letter of July 10, 2012. As indicated in the referenced submittal, additional information regarding the various USTs will be forthcoming. The following comments are offered.

Parcel 28 – Former Eatontown Laboratory
As has been discussed, it is agreed no additional action is necessary for UST 2539-28, UST 2539-64, UST 2531-21, and two of the three USTs previously located between Building 2525 and Heliport Drive. Documentation as to the adequate evaluation of tanks UST 2542-29, UST 2564-32 and the UST at Building 2544 (T-7) has not yet been submitted.

Parcel 49 – Former Squier Laboratory Complex
Upon review of the documentation included in the submittal, it is agreed no further action is necessary for the UST at Building 293-67, or UST 283B-59.

Parcel 51 – 750 Area, 500 Area, 600 Area, 1100 Area – Former Buildings
Upon review of the documentation included in the submittal, it is agreed no further action is necessary for UST 695-111, UST 635, UST 642, UST 643 and 501-76.

As no sampling was apparently performed at UST 637, this office cannot concur there has been no discharge associated with the UST. As regarding Appendix K, and USTs at Buildings 644 through 654, evidently no sampling was performed; again, without same, this office cannot concur there has been no discharge.

Parcel 76 – 200 Area, 300 Area – Former Barracks
Review of the documentation included in the submittal indicates no additional action is necessary for UST 261 and UST 261B.

Parcel 79 – 400 Area Former Barracks
Review of the documentation included in the submittal, as well as that included in the files, indicates no further action is necessary for UST 411-28, UST 421-37, UST 423-39

As no sampling was evidently performed at UST 401-26 or UST 416-32, this office cannot concur there has been no discharge associated with the USTs.

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

Sincerely,

Linda S. Range
Bureau of Case Management

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

State of New Jersey
Department of Environmental Protection

James E. McGreevey
Governor

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

FTMMTH116IRC.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

FTMMTH71IRC.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

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. 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\ICURC.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 Reg. #	Bldg. #	NJDEP Reg. #	Bldg. #
0081533-59	283B	*0081533-135	828
0090010-46	430C	0081533-136	864A
0081533-111	695	0081533-137	866
0081533-117	739	*0081533-231	907
0081533-118	744	0081533-154	916
0081533-121	747	0081533-156	918
0081533-124	787	0081533-170	1110
0081533-125	788	0081533-172	1123
0081533-128	801A	0081533-207	1150
0081533-133	812		

* No product lines were found during the excavation of the UST due to the fact the buildings were removed prior to the USTs. Based on a review of available maps and drawings, the product lines were less than 15 feet in length at each of the locations. Thus, no additional sampling was required.

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

FTMMTH062IRC.DOC

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
90010-8	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

ATTACHMENT E

Areas 74 and 75 Aboveground Storage Tanks

File Review and Analyses

Contents:

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

Date: *February 23, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***74 and 75*** Registration ID: *None*

Recommended Status of Site: ***No Further Action***

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

NJDEP Release No. or DICAR (If applicable): *None*

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

(NFA was approved for the Area 74 piping excavation, but not the Area 75 tank area)

Tank Description: [X] Steel [ ] Fiberglass Size: 210,000 gals. Contents: Heating Oil

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: May 1995

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

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

Brief Narrative

This site consisted of two large above-ground storage tanks and associated distribution piping used for bulk storage of No. 2 fuel oil for Fort Monmouth. A brief summary of the overall operation was provided in the 2007 ECP Report, and the tank demolition and closure was described in the 2006 version of the Fort Monmouth Spill Prevention, Control and Countermeasure Plan (SPCC). Excerpts from both reports are provided in Enclosure A.

The tank area was called Area 75 due to the nearby Building 75 Scale House, which is still located south of Hazen Drive in this vicinity. The tanks were 210,000 gallon capacity each, and were each located within a bermed area (see aerial photograph in Enclosure A). The 2006 SPCC indicates that the tanks were cleaned and dismantled in May 1995, and sold for metal scrap. Samples were collected from the tank area and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH); results are presented in Enclosure B. The soil sample results were non-detected (ND) to 3480 mg/kg for TPH. The results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. Although a sample location map has not been found, it is inferred from the sample identifications that surface soils were sampled from 8 or 9 locations, and that subsurface soils were sampled at select areas from depths ranging from 2 ft to 6 ft below ground surface (bgs). The highest TPH result of 3480 mg/kg was collected from 5 ft bgs, although TPH of 513 mg/kg was measured in soil below this location at 6 ft bgs.

Removal of piping, the fuel oil loading/offloading areas, and contaminated soil was completed in 1997; this area was referred to as Area 74 in the investigation report (provided in Enclosure C). The investigation of the piping and loading/unloading areas was generally better documented than the tank removal; however, the report text erroneously states that the removed tanks were 125 gallon capacity, and the report figures indicate that they were 125,000 gallon tanks.

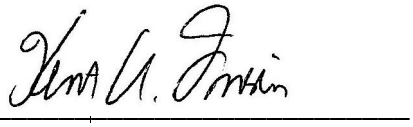
Field screening using a photoionization detector (PID) was used for Area 74 to identify petroleum contaminated soils; a total of 750 cubic yard of contaminated soil were removed from the excavation. The vertical extent of soil removed ranged from 3 ft to 8 ft bgs. Groundwater was encountered at 5 ft bgs. Soil samples were collected from the piping excavations and analyzed by the Fort Monmouth Environmental Laboratory for TPH. The initial soil sample results were ND to 1230 mg/kg for TPH. Additional contaminated soil was removed, and final soil samples results were ND to 628 mg/kg. The final results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion.

Five groundwater samples were collected from December 1998 through February 1999 at Area 74, and analyzed for VOCs and SVOCs. Fluoranthene, pyrene, and chrysene were detected in multiple samples, but at concentrations well below the then-current Ground Water Protection Standards (GWPS), as well as below current Ground Water Quality Criterion for Class IIA groundwater. The common laboratory contaminant bis(2-ethylhexylphthalate) was detected in groundwater samples, but was also detected in a field blank and therefore is not considered site related.

The Area 74 investigation report was submitted to the NJDEP in 2000, and No Further Action was approved by the NJDEP for the piping and loading/unloading station area in a letter dated August 29, 2000 (provided in Enclosure D). There is no record of data submittal or No Further Action approval of the bulk storage tank area that was decommissioned in 1995.

In conclusion, the analytical results support No Further Action for both the Site 74 and 75 bulk storage tank areas.

Recommendations (if any): _Request NFA from NJDEP_____
_____

Signed: 

Kent A. Friesen, Parsons

ENCLOSURE 1 of Attachment E

Site Background

from 2007 ECP Report

The Final RA Report for the 800, 700, and 400 Areas concluded that all objectives of the SI, RI and RA were met. Soils with concentrations that exceeded the applicable criteria for each area were removed as verified by post-excavation samples and all known USTs were removed and remediated. Therefore, the Army requested that NJDEP issue an NFA letter for the three areas.

The results of these environmental investigations were utilized to evaluate the potential for environmental conditions at FTMM. See **Section 5.2.4** for additional details.

1.2.5 Hazardous Substances

Fort Monmouth has a long history of R&D activity. The majority of this activity has been related to communications and electronic equipment. For the completion of these research activities, FTMM has operated and continues to operate a variety of laboratories. Additionally, FTMM has a significant history of training and housing troops. In support of these activities FTMM has had a full complement of support activities including vehicle maintenance, warehousing, medical and dental services, photo processing and printing. Hazardous substances and radioactive materials (RAM) related to these activities were identified. Fort Monmouth has no operational history of manufacturing chemicals, munitions, or MC. Therefore, no hazardous substances related to those operations were identified.

On the MP, 22 individual parcels were identified that had a history of use/storage of hazardous substances or currently used/stored hazardous substances. These activities were predominantly associated with laboratory operations, vehicle maintenance, hazardous waste storage/disposal, and range activity. At the CWA, nine individual parcels were identified that had a history of use/storage of hazardous substances or currently used/stored hazardous substances. These parcels were predominantly associated with laboratory operations, hazardous waste storage, battery research, and vehicle maintenance. There are a total of 38 FTMM parcels (nine on CWA and 29 on MP) where the potential for a release or a documented release of hazardous substances has occurred. **Section 5.3** includes a full discussion of hazardous substances on FTMM.

1.2.6 USTs/ASTs

The primary fuels used throughout the history of FTMM have been coal, fuel oil, diesel, and gasoline. Until the early 1990s, the primary method of heating for FTMM had been through the use of heating oil. The majority of structures at FTMM were heated by oil burners fired by oil stored in USTs for that individual building. From the 1940s through the 1980s, FTMM utilized USTs/ASTs as the primary fuel storage method. Fuels were brought in by rail and staged in very large ASTs prior to being transported to the individual USTs. The large ASTs used to stage the fuel were two 210,000-gallon ASTs at Building 75 and one 250,000-gallon AST at Building 886. In the early 1990s, the FTMM DPW developed a UST program for managing approximately 474 USTs throughout the FTMM installation (MP and CWA). This program was created to work toward replacing the use of heating oil as a major energy source and to convert to

7. **DETAILED INFORMATION ON POTENTIAL SPILL SITES:**

a. Site Number 1, Building 75 - Tank Farm (Main Post)

(1) **POC: Environmental Coordinator - 532-6223**

(2) **Description of Facility:** This facility was a former aboveground bulk fuel storage tank farm consisting of two 210,000 gallon tanks and a tank truck unloading rack. Both tanks were of steel construction and stored # 2 heating oil. The tanks were originally installed to provide Fort Monmouth with a 30 day backup supply of fuel oil.

(3) **Containment:** Earthen dikes provided secondary containment for each storage tank. The total capacity for each containment area was approximately 250,000 gallons. Secondary containment was not provided for the area where fuel was dispensed to the bulk storage tanks or at the tank truck unloading rack.

(4) **Site Drainage:** Drainage from each containment area was controlled by a gate valve which was always kept locked when not in use. The gate valve for Tank # 1 was located outside of the containment area and the gate valve for Tank # 2 was located within the containment area. Rainwater that accumulated inside the containment areas was visually inspected for an oily sheen prior to being released to Parkers Creek. Both tanks were approximately 100 feet south of Parkers Creek. Drainage at the tank truck unloading rack was generally northwest and a storm drain is situated 90 feet from the site.

(5) **Bulk Storage Tanks:** In the Spring of 1995, all remaining fuel oil stored within the tanks was removed and transported to the main boiler plants (Bldgs. 1220 and 2700) for further use. In May of that year, both tanks were properly cleaned using a combination of hand and power washing techniques. During the tank cleaning process, all product lines were blown back into the tanks in order to remove any fuel oil which may have been present. Within two weeks of the tank cleaning, a local metal recycler dismantled both tanks and recovered the associated scrap metal. Commencing on March 10, 1997, all product lines and piping were removed from the site. A remedial investigation and subsequent cleanup action was conducted at the site. Site cleanup was completed on April 16, 1997. All remedial activities conformed to the requirements as specified in the Technical Requirements for Site Remediation regulations (N.J.A.C. 7:26E).

(6) **Tank Car/Truck Loading/Unloading Procedures:** Tank unloading procedures involved dispensing fuel to tank trucks which had a nominal capacity of 1,200 gallons. All product transfers were accomplished under the supervision of the former POC for this site.

(7) **Inspection and Records:** All releases of rainwater from the containment areas were inspected prior to being released as discussed in paragraph 3(a)(1) of this section. Records of all inspections were maintained by the former POC as listed in appendix G. The three year regulatory requirement for maintaining these records has expired.

from 1999 Site/RI Report

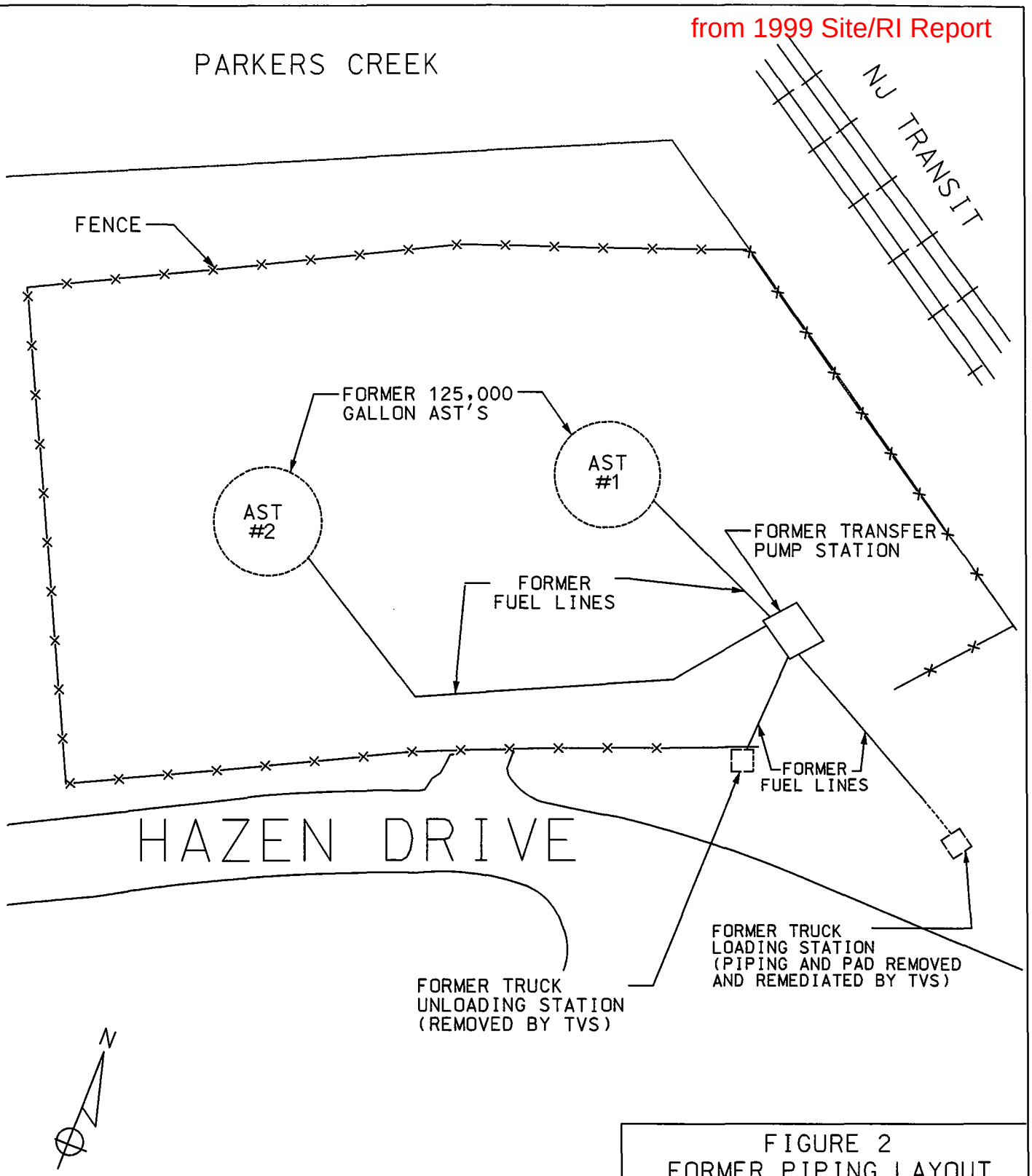


FIGURE 2
FORMER PIPING LAYOUT
AREA 74
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=50'

DATE: MARCH1997

74 2429 FIG2

Tues. 2429 3/11/97 (10)

Diagram

Parkers Creek

Building 171
Building 170

Former B-169

Former B-168

Former AST #2

Former AST #1

Fence

N

sewer cover

Storm Drain

Transfer Pump Area

Area 74

concrete Pad

Job Trailer

4" steel product pipe

Previous Excavation

Excavation #1

Pipe Already Removed

concrete Pad Already Removed

TDA Truck Tranfer Area

Fire Hydrant

Road

Gas Line Marker

High Speed Rail Tracks

(Area 74)

Tues: 2429 3/11/97 (11)

Parkers Creek

ENCLOSURE 2 of Attachment E

1995 Soil Analyses for Area 75 (Tanks)

1995 AST closure sample data

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 #: 1924.1-.32
Sample Rec'd: 08/25/95
Analysis Start: 09/03/95
Analysis Comp: 09/07/95

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Meth: 3540A

NJDEP UST Reg.#:
Closure #:
DICAR #:
Location #: **AST Farm**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1924.1	AST-A-S-1	96	323.	16.
1924.2	AST-A-S-2	99	104.	16.
1924.3	AST-A-S-3	95	242.	16.
1924.4	AST-A-S-4	96	200.	16.
1924.5	AST-A-S-5	97	175.	16.
1924.6	AST-A-S-6	96	316.	16.
1924.7	AST-A-S-7	95	289.	16.
1924.8	AST-A-S-8	96	218.	16.
1924.9	AST-A-S-9	95	326.	16.
1924.10	AST-A-North Center 2'D	88	218.	16.
1924.11	AST-A-Center 2'D	95	ND	16.
1924.12	AST-A-South Center - 5	95	215.	16.
1924.13	AST-A-South Center 2 D	88	100.	16.

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1924.8S=106%,1924.8SD=100%,RPD= 6.3%,1924.8Dup=110% Check=109%
QC Limits: Recovery = 60% to 140% and RPD = 14.9% at 2 Std. Dev.

Brian K. McKee
Laboratory Director

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 #: 1924.1-.32
Sample Rec'd: 08/25/95
Analysis Start: 09/03/95
Analysis Comp: 09/07/95

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Meth: 3540A

NJDEP UST Reg.#:
Closure #:
DICAR #:
Location #: **AST Farm**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1924.14	AST-B-S-1	94	520.	16.
1924.15	AST-B-S-2	93	1210.	16.
1924.16	AST-B-S-3	92	851.	16.
1924.17	AST-B-S-4	95	686.	16.
1924.18	AST-B-S-5	91	701.	16.
1924.19	AST-B-S-6	96	835.	16.
1924.20	AST-B-S-7	97	294.	16.
1924.21	AST-B-S-8	96	1030.	16.
1924.22	AST-B-Center South	91	965.	16.
1924.23	AST-B-Center 2'D	92	1096.	16.
1924.24	AST-B-Center 4'D	88	246.	16.
1924.25	AST-B-North Center - 5	91	1960.	16.
1924.26	AST-B-North Center 2'D	82	730.	16.

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1924.16S=103%,1924.16SD=108%,RPD= 4.7%,1924.16Dup= 99% Check=106%
1924.24S=128%,1924.24SD=111%,RPD=13.7%,1924.24Dup=100% Check=110%
QC Limits: Recovery = 60% to 140% and RPD = 14.9% at 2 Std. Dev.

Brian K. McKee
Laboratory Director

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 #: 1924.1-.32
Sample Rec'd: 08/25/95
Analysis Start: 09/03/95
Analysis Comp: 09/07/95

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Meth: 3540A

NJDEP UST Reg.#:
Closure #:
DICAR #:
Location #: **AST Farm**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1924.27	AST-B-South Center 5'	96	3480.	16.
1924.28	AST-B-South Center 6'D	86	513.	16.
1924.29	C-5	97	315.	16.
1924.30	C-3' D	94	488.	16.
1924.31	D-5	95	393.	16.
1924.32	E-5	97	312.	16.
M. Bl.	Method Blank 09/04/95	100	ND	3.3
M. Bl.	Method Blank 09/05/95	100	ND	3.3
M. Bl.	Method Blank 09/06/95	100	ND	3.3
M. Bl.	Method Blank 09/07/95	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1924.32S=108%,1924.32SD=110%,RPD= 1.7%,1924.32Dup=146% Check=112%
QC Limits: Recovery = 60% to 140% and RPD = 14.9% at 2 Std. Dev.

Brian K. McKee
Laboratory Director

U.S. ARMY FORT MONMOUTH

P.O. #: PWS-007 / SAI

Chain of Custody

Project #:	Sampler: Joe Fallon	Date / Time 8-25-95	Analysis Parameters	Start:
Customer: Joe Fallon SELFM-PW-EV	Site Name: AST Farm,			Finish:
Phone: X26223				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	%/o Solid	PID	Remarks
1924.1	8/25/95 2:50	AST-A-S-1	Soil	1	X	X	ND	
.2	3:00	AST-A-S-2						
.3	3:10	AST-A-S-3						
.4	3:15	AST-A-S-4						
.5	3:22	AST-A-S-5						
.6	3:26	AST-A-S-6						
.7	3:32	AST-A-S-7						
.8	3:35	AST-A-S-8						
.9	3:38	AST-A-S-9						
.10	3:55	AST-A - North Center 2'D						
.11	3:57	AST-A - Center 2'D						

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Joe Fallon	8/25/95 8:30		Hand
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		Sarah J. Hubbard	8/28/95 0800

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. Not Attached,

Enviornmental Laboratory

Certification Number 13461

U.S. ARMY FORT MONMOUTH

P.O. #: PW5-007 / SAI

Chain of Custody

Project #:	Sampler: J. Fallon	Date / Time 8/05/95	Analysis Parameters	Start:
Customer: J. Fallon SELFM-PW-EV	Site Name: AST FARM			Finish:
Phone: X26223				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solid	PID	Remarks
1924.12	8-05-95 3:25	AST-A-South Center	S Soil	1	X	X	ND	
.13	4:40	AST-A-South Center 2D						
.14	5:00	AST-B-S-1						
.15	5:05	AST-B-S-2						
.16	5:06	AST-B-S-3						
.17	5:07	AST-B-S-4						
.18	5:11	AST-B-S-5						
.19	5:33	AST-B-S-6						
.20	5:23	AST-B-S-7						
.21	5:28	AST-B-S-8						
.22	5:11	AST-B-Center-5						

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Joe Fallon	8/05/95 8:30		Hand
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		Sarah J. Hubbard	8/28/95 0800

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. NOT ATTACHED.

Enviornmental Laboratory

Certification Number 13461

U.S. ARMY FORT MONMOUTH

P.O. #: PW5-007 / SAI

Chain of Custody

Project #:	Sampler: J. Fallon	Date / Time 8/25/95	Analysis Parameters	Start:
Customer: J. Fallon SECFm-PW-EW	Site Name: AST Farm			Finish:
Phone: X26223				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solids	PID	Remarks
1924.23	8/25/95 5:12	AST-B-Center 2'D	Soil	1	X	X	ND	Samples Kept
.24	6:25	AST-B-Center 4'D						less than 4°C
.25	6:25	AST-B-North Center-5						
.26	6:40	AST-B-North Center-2'D						
.27	5:30	AST-B-South Center-5						
.28	610	AST-B-South Center-6'D						
.29	6:57	C-5						
.30	7:03	C-3'D						
.31	7:07	D-5						
.32	7:10	E-5						

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Joe Fallon	8/25/95 1630		Hand
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
		Sarah D. Hubbard	8/28/95 0800

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. Not Attached

Enviornmental Laboratory

Certification Number 13461

ENCLOSURE 3 of Attachment E

Site/Remedial Investigation Report, Former Building 74, Main Post – East Area

United States Army

Fort Monmouth, New Jersey

Site/Remedial Investigation Report

Former Building 74
Main Post-East Area

July 1999

SITE/REMEDIAL INVESTIGATION REPORT

FORMER BUILDING 74

MAIN POST-EAST AREA

JULY 1999

PREPARED FOR:

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

PREPARED BY:

SMC ENVIRONMENTAL SERVICES GROUP
1900 FROST ROAD
SUITE 110
BRISTOL, PA 19007

PROJECT NO. 2429-308

74.DOC

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EXECUTIVE SUMMARY

Site/Remedial Investigation and Post-Excavation Soil Sampling

SMC was retained by the U.S. Army DPW to implement a site/remedial investigation adjacent to underground piping associated with two former 125-gallon ASTs. The former ASTs contained No. 2 fuel oil and were associated with former Building 74 at the Main Post-East area of the U.S. Army Fort Monmouth Base. The objective of the site/remedial investigation activities was to remove all potentially impacted soil resulting from the past operation of the underground piping. The site/remedial investigation was performed by SMC personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual.*

Visibly stained soils and soils exhibiting elevated PID levels (greater than 5 ppm) of VOCs were excavated. Excavation activities continued until potentially impacted soil had been removed. To confirm PID readings and verify the effectiveness of soil excavation activities, 57 post-excavation soil samples were collected from within the piping excavations, between March 12 and April 14, 1997. All samples were analyzed for TPHC and total solids. The post-excavation soil samples collected from the excavation contained concentrations of TPHC below the NJDEP soil cleanup criteria.

Management of Excavated Soils

A total of approximately 750 cubic yards of contaminated soil was excavated from around the former underground piping and placed on and covered with tarps. All contaminated soil characterization and disposal was handled directly by the U.S. Army Fort Monmouth DPW.

Site Restoration

Upon receiving analytical results and confirming the effectiveness of the excavation activities completed at the site, the excavation was backfilled to grade with certified clean crushed stone, sand and clean overburden soil removed from the excavation.

Conclusions and Recommendations

All post excavation soil samples collected from the piping excavation at Building 74 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994).

In response to the observation of potentially contaminated soil near the water table, five (5) groundwater samples were collected at Building 74. On December 18, 1998, January 25, 1999, and February 5, 1999, Building 74 was sampled for volatile organic

compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's). All groundwater analytical results were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

No further action is proposed in regard to the closure and site assessment at Building 74.

1.0 BACKGROUND INFORMATION

1.1 OVERVIEW

SMC Environmental Services Group (SMC) was retained by the United States Army Directorate of Public Works (DPW) to implement a site/remedial investigation adjacent to underground piping associated with two former 125-gallon aboveground storage tanks (ASTs). The former ASTs contained No. 2 fuel oil and were associated with former Building 74 at the Main Post-East area of the U.S. Army Fort Monmouth Base, Fort Monmouth, New Jersey. Refer to the site location map in Figure 1.

This report describes the results of the site/remedial investigation activities completed at the site. The objective of the site/remedial investigation activities was to remove all potentially impacted soil resulting from the past operation of the former underground piping.

This report outlines background information, the site/remedial investigation activities, results of these activities, and conclusions and recommendations drawn from these results.

1.2 SITE DESCRIPTION

Former Building 74 was located in the Main Post-East area of the Fort Monmouth Army Base. The former ASTs and associated underground piping were located west of former Building 74. A map showing the layout of the former ASTs and associated underground piping is provided in Figure 2.

1.3 GEOLOGICAL/HYDROGEOLOGICAL SETTING

The following is a description of the geological/hydrogeological setting of the area surrounding former Building 74. 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 thickness 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 (i.e., streams, lakes)

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

Former Building 74 was located approximately 200 feet south of Parkers Creek, the nearest water body. Based on Main Post topography, groundwater flow in the area of former Building 74 is anticipated to be to the north.

1.4 HEALTH AND SAFETY

During all site/remedial investigation activities, hazards at the work site, which may have posed a threat to the Health and Safety of personnel, 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 safe, as defined by the Occupational Safety & Health Administration (OSHA).

2.0 SITE/REMEDIAL INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site/Remedial Investigation was managed and carried out by SMC personnel. All analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory, an 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.* Sampling frequency and parameters analyzed complied with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E).

The following Parties participated in Site/Remedial Investigation Activities:

- Subsurface Evaluator: David H. Daniels
  Employer: SMC Environmental Services Group
  Phone Number: (215) 788-7844
  NJDEP Certification No.: 10279

- Project Manager: Charles Appleby
  Employer: DPW U.S. Army, Fort Monmouth
  Phone Number: (732) 532-6224
  NJDEP Certification No.: 2056

- Analytical Laboratory: U.S. Army Fort Monmouth Environmental Laboratory
  Contact Person: Daniel K. Wright
  Phone Number: (732) 532-4359
  NJDEP Company Certification No.: 13461

2.2 FIELD SCREENING/MONITORING

Field screening and visual observations to identify potentially contaminated material was performed by a NJDEP Certified Sub-Surface Evaluator. During the excavation activities, all soil removed was screened with a photoionization detector (PID) to check for the presence of elevated volatile organic concentrations (VOCs).

Soils that displayed elevated PID readings (i.e., above 5 ppm) were stockpiled separately from those soils that did not display elevated PID readings (i.e., less than 5 ppm). The ground surface in the areas used to stockpile contaminated soils was covered with tarps. All stockpiled contaminated soil was covered with tarps at the completion of each day of excavation.

2.3 MANAGEMENT OF EXCAVATED SOILS

A total of approximately 950 cubic yards of material was excavated during the remediation activities. Of this amount, approximately 200 cubic yards of clean overburden soil (soil displaying PID readings below 5 ppm) was removed and stockpiled separately from the contaminated soil. The clean soil pile was later used as backfill. There was approximately 750 cubic yards of contaminated soil (soil displaying PID readings above 5 ppm) excavated, and placed on and covered with tarps.

All contaminated soil characterization and disposal was handled directly by the U.S. Army Fort Monmouth Directorate of Public Works.

2.4 POST-EXCAVATION SOIL SAMPLING AND RESULTS

The excavation of the impacted soil proceeded laterally in all directions from the former underground piping locations until non-detectable field screening readings (i.e., less than 5 ppm) were obtained with the PID. The vertical extent of the piping excavations ranged from a depth of 3 feet below ground surface (bgs) to a depth of 8 feet bgs. Groundwater was encountered at a depth of approximately 5 feet bgs. The area excavated is shown in Figure 3.

To confirm the PID readings and verify the effectiveness of soil excavation activities, 57 post-excavation soil samples were collected from within the underground piping excavations between March 12 and April 14, 1997. The locations of the 57 post excavation soil samples are shown in Figure 4.

SMC personnel, in accordance with the NJDEP Technical Requirements and the NJDEP Field Sampling Procedures Manual, performed the post-excavation soil sampling activities. A summary of sampling activities, including parameters analyzed, is provided in Table 1. Following soil sampling activities, the samples were chilled and delivered to the U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis.

All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids. 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. The analytical data package is provided in Appendix A.

All post-excavation soil samples collected from the excavation contained concentrations of TPHC below the NJDEP soil cleanup criteria. The sample results ranged from non-detectable to 628.91 mg/kg.

Upon receiving analytical results and confirming the effectiveness of the excavation activities completed at the site, the excavation was backfilled to grade with certified clean crushed stones and sand. Samples were collected from the overburden material

and analyzed for TPHC. The clean stockpile soil samples (TDA-SP1 and AST2-SP2R) revealed TPHC levels of 265.15 and 117.73, respectively. Therefore, the soil was used as backfill material. Appendix C provides photographs of the site/remedial investigations.

2.5 GROUNDWATER SAMPLING

On December 18, 1998, January 25, 1999, and February 5, 1999, Building 74 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOC's), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOC's). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation.* Refer to Appendix B for the field sampling documentation.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

SMC was retained by the U.S. Army DPW to implement a site/remedial investigation adjacent to underground piping associated with two former 125-gallon ASTs. The former ASTs contained No. 2 fuel oil and were associated with former Building 74 at the Main Post-East area of the U.S. Army Fort Monmouth Base. The objective of the site/remedial investigation activities was to remove all potentially impacted soil resulting from the past operation of the former underground piping.

Visibly stained soils and soils exhibiting elevated PID levels (greater than 5 ppm) of VOCs were excavated. Excavation activities continued until potentially impacted soil had been removed. In all, a total of approximately 750 cubic yards of contaminated soil was excavated from around the former underground piping locations. All contaminated soil characterization and disposal was handled directly by the U.S. Army Fort Monmouth DPW.

To confirm the PID readings and verify the effectiveness of the soil excavation activities, 57 post-excavation soil samples were collected from within the excavation between March 12 and April 14, 1997. All samples were analyzed for TPHC and total solids. The post-excavation soil samples collected from the piping excavations contained concentrations of TPHC below the NJDEP soil cleanup criteria.

Upon receiving analytical results and confirming the effectiveness of the excavation activities completed at the site, the excavations were backfilled to grade with certified clean crushed stone, sand and clean overburden material.

3.2 GROUNDWATER SAMPLING RESULTS

Groundwater samples collected on December 18, 1998, January 25, 1999, and February 5, 1999, were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

A summary of the analytical results and comparison to the NJDEP groundwater cleanup criteria is provided in Table 3. The analytical data package is provided in Appendix B. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the piping excavation at Building 74 were below the NJDEP soil cleanup criteria for total organic contaminants.

Based on the post-excavation sampling results, soil 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 piping.

Based on the analytical results of the groundwater samples collected at Building 74 on December 18, 1998, January 25, 1999, and February 5, 1999, groundwater quality at Building 74 was either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC).

No further action is proposed in regard to the closure and site assessment at Building 74.

TABLES

TABLE 1

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
TDA -B	3/12/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
TDA – SW -N	3/12/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
TDA – SW -W	3/12/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
TDA – SW -E	3/12/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
P -1	3/13/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
P - 2	3/13/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
P - 3	3/13/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
P - 4	3/13/97	3/15/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
AST2 - N	3/17/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 - E	3/17/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 - W	3/17/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 - B	3/17/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
**AST2 – P1	3/17/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – T1	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – T2	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – T3	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P2	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P3	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P4	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P5	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – 55	3/18/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons
** The area around sample location AST2-P1 was further remediated and resampled

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
TDA – SP1	3/18/97	3/20/97	Soil	Stock Pile	TPHC	OQA-QAM-025
**AST2 – SP2	3/18/97	3/20/97	Soil	Stock Pile	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons
** The overburden soil stockpile was resampled

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
P - 5	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 - WC	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 - BC	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 - EC	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – SW	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – SB	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – SE	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – S	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P6	3/19/97	3/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
AST - E1	3/20/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E2	3/20/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E3	3/20/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E4	3/20/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E5	3/20/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E6	3/20/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E7	3/20/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E8	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E9	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E10	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E11	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E12	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E13	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E14	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E15	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E16	3/21/97	3/25/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
AST - E17	3/24/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E18	3/24/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST - E19	3/24/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 - SW	3/24/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
FP - 1	3/24/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
FP - 2	3/24/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
AST2 - SP2R	3/25/97	3/28/97	Soil	Stock Pile	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
AST2 – P1R	3/25/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P1N	3/25/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P1E	3/25/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
AST2 – P1W	3/25/97	3/28/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
74 - B	4/14/97	4/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
74 - N	4/14/97	4/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
74 – N2	4/14/97	4/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
74 - E	4/14/97	4/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
74 – S	4/14/97	4/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025
74 - W	4/14/97	4/19/97	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Sampling Method**
4148.01	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.02	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.03	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.04	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.05	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.06	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.07	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.08	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.09	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.10	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.11	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.12	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4148.13	12/18/98	12/28/98	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4210.01	1/25/99	1/26/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4210.02	1/25/99	1/26/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4210.03	1/25/99	1/26/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4210.04	1/25/99	1/26/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4210.05	1/25/99	1/26/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4252.01	2/5/99	2/10/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4252.02	2/5/99	2/10/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4252.03	2/5/99	2/10/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP
4252.04	2/5/99	2/10/99	Aqueous	Groundwater	VOCs, SVOCs	PPNDP

Note:
*VOCs: Volatile Organic Compounds plus 15 tentatively identified compounds
*SVOCs: Semivolatile organic compounds plus 15 tentatively identified compounds
**PPNDP: Passively Placed Narrow Diameter Point

TABLE 2

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
TDA-B =	2388.01	3/12/97	3/15/97	Total Solid	--	--	76.46	--	--
				TPHC	204	Yes	264.18	10,000	No
TDA-SW-N =	2388.02	3/12/97	3/15/97	Total Solid	--	--	82.39	--	--
				TPHC	185	Yes	ND	10,000	No
TDA-SW-W =	2388.03	3/12/97	3/15/97	Total Solid	--	--	85.32	--	--
				TPHC	179	Yes	191.06	10,000	No
TDA-SW-E =	2388.04	3/12/97	3/15/97	Total Solid	--	--	76.80	--	--
				TPHC	188	Yes	198.39	10,000	No
P-1 =	2388.05	3/13/97	3/15/97	Total Solid	--	--	79.78	--	--
				TPHC	194	Yes	ND	10,000	No
P-2 =	2388.06	3/13/97	3/15/97	Total Solid	--	--	82.77	--	--
				TPHC	184	Yes	299.21	10,000	No
P-3 =	2388.07	3/13/97	3/15/97	Total Solid	--	--	74.78	--	--
				TPHC	210	Yes	218.18	10,000	No
P-4 =	2388.08	3/13/97	3/15/97	Total Solid	--	--	77.94	--	--
				TPHC	201	Yes	202.66	10,000	No

Note:
* Total Solid results are expressed as a percentage.
** NJDEP Residential Direct Contact soil cleanup criteria for total organics
-- Not detected above stated sample quantitation limit
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AST2-N=	2394.01	3/17/97	3/19/97	Total Solid	--	--	84.42	--	--
				TPHC	185	Yes	250.68	10,000	No
AST2-E=	2394.02	3/17/97	3/19/97	Total Solid	--	--	80.11	--	--
				TPHC	195	Yes	ND	10,000	No
AST2-W=	2394.03	3/17/97	3/19/97	Total Solid	--	--	76.94	--	--
				TPHC	200	Yes	227.31	10,000	No
AST2-B=	2394.04	3/17/97	3/19/97	Total Solid	--	--	84.18	--	--
				TPHC	185	Yes	ND	10,000	No
*** AST2-P1=	2394.05	3/17/97	3/19/97	Total Solid	--	--	83.36	--	--
				TPHC	182	Yes	1230.49	10,000	No

Note:

* Total Solid results are expressed as a percentage.

** NJDEP Residential Direct Contact soil cleanup criteria for total organics

*** The area around sample location AST2-P1 was further remediated and resampled. See page 10 of 11 for the resampling of this area.

-- Not detected above stated sample quantitation limit

TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AST2-T1=	2394.06	3/18/97	3/19/97	Total Solid	--	--	83.95	--	--
				TPHC	184	Yes	ND	10,000	No
AST2-T2=	2394.07	3/18/97	3/19/97	Total Solid	--	--	80.63	--	--
				TPHC	192	Yes	199.28	10,000	No
AST2-T3=	2394.08	3/18/97	3/19/97	Total Solid	--	--	86.64	--	--
				TPHC	177	Yes	386.08	10,000	No
AST2-P2=	2394.09	3/18/97	3/19/97	Total Solid	--	--	88.89	--	--
				TPHC	173	Yes	ND	10,000	No
AST2-P3=	2394.10	3/18/97	3/19/97	Total Solid	--	--	86.27	--	--
				TPHC	182	Yes	ND	10,000	No
AST2-P4=	2394.11	3/18/97	3/19/97	Total Solid	--	--	84.42	--	--
				TPHC	188	Yes	ND	10,000	No
AST2-P5=	2394.12	3/18/97	3/19/97	Total Solid	--	--	80.40	--	--
				TPHC	189	Yes	ND	10,000	No
AST2-55=	2394.13	3/18/97	3/19/97	Total Solid	--	--	77.57	--	--
				TPHC	196	Yes	ND	10,000	No

Note:
* Total Solid results are expressed as a percentage.
** NJDEP Residential Direct Contact soil cleanup criteria for total organics
-- Not detected above stated sample quantitation limit
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
TDA-SP1=	2395.01	3/18/97	3/20/97	Total Solid	--	--	79.14	--	--
				TPHC	197	Yes	265.15	10,000	No
***AST2-SP2=	2395.02	3/18/97	3/20/97	Total Solid	--	--	91.57	--	--
				TPHC	172	Yes	1226.03	10,000	No

Note:

* Total Solid results are expressed as a percentage.

** NJDEP Residential Direct Contact soil cleanup criteria for total organics

*** The clean (less than 5ppm with PID) overburden soil stockpile was resampled. See page 9 of 11 for the reults of AST2-SP2R.

-- Not detected above stated sample quantitation limit

TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
P-5=	2398.01	3/19/97	3/24/97	Total Solid	--	--	78.12	--	--
				TPHC	196	Yes	ND	10,000	No
AST2-WC=	2398.02	3/19/97	3/24/97	Total Solid	--	--	82.12	--	--
				TPHC	182	Yes	ND	10,000	No
AST2-BC=	2398.03	3/19/97	3/24/97	Total Solid	--	--	82.44	--	--
				TPHC	187	Yes	ND	10,000	No
AST2-EC=	2398.04	3/19/97	3/24/97	Total Solid	--	--	80.41	--	--
				TPHC	188	Yes	ND	10,000	No
AST2-SW=	2398.05	3/19/97	3/24/97	Total Solid	--	--	86.05	--	--
				TPHC	178	Yes	628.91	10,000	No
AST2-SB=	2398.06	3/19/97	3/24/97	Total Solid	--	--	82.04	--	--
				TPHC	185	Yes	ND	10,000	No
AST2-SE=	2398.07	3/19/97	3/24/97	Total Solid	--	--	79.28	--	--
				TPHC	196	Yes	ND	10,000	No
AST2-S=	2398.08	3/19/97	3/24/97	Total Solid	--	--	88.11	--	--
				TPHC	169	Yes	536.86	10,000	No
AST2-P6=	2398.09	3/19/97	3/24/97	Total Solid	--	--	82.74	--	--
				TPHC	178	Yes	ND	10,000	No

Note:
* Total Solid results are expressed as a percentage.
** NJDEP Residential Direct Contact soil cleanup criteria for total organics
-- Not detected above stated sample quantitation limit
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AST-E1=	2401.01	3/20/97	3/25/97	Total Solid	--	--	52.90	--	--
				TPHC	294	Yes	ND	10,000	No
AST-E2=	2401.02	3/20/97	3/25/97	Total Solid	--	--	78.82	--	--
				TPHC	192	Yes	265.67	10,000	No
AST-E3=	2401.03	3/20/97	3/25/97	Total Solid	--	--	78.54	--	--
				TPHC	197	Yes	ND	10,000	No
AST-E4=	2401.04	3/20/97	3/25/97	Total Solid	--	--	53.69	--	--
				TPHC	285	Yes	282.85	10,000	No
AST-E5=	2401.05	3/20/97	3/25/97	Total Solid	--	--	78.61	--	--
				TPHC	190	Yes	ND	10,000	No
AST-E6=	2401.06	3/20/97	3/25/97	Total Solid	--	--	77.73	--	--
				TPHC	199	Yes	190.19	10,000	No
AST-E7=	2401.07	3/20/97	3/25/97	Total Solid	--	--	77.42	--	--
				TPHC	199	Yes	ND	10,000	No

Note:
* Total Solid results are expressed as a percentage.
** NJDEP Residential Direct Contact soil cleanup criteria for total organics
-- Not detected above stated sample quantitation limit
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AST-E8=	2401.08	3/21/97	3/25/97	Total Solid	--	--	84.03	--	--
				TPHC	186	Yes	560.05	10,000	No
AST-E9=	2401.09	3/21/97	3/25/97	Total Solid	--	--	81.82	--	--
				TPHC	181	Yes	ND	10,000	No
AST-E10=	2401.10	3/21/97	3/25/97	Total Solid	--	--	81.65	--	--
				TPHC	188	Yes	ND	10,000	No
AST-E11=	2401.11	3/21/97	3/25/97	Total Solid	--	--	88.58	--	--
				TPHC	173	Yes	166.83	10,000	No
AST-E12=	2401.12	3/21/97	3/25/97	Total Solid	--	--	81.48	--	--
				TPHC	183	Yes	ND	10,000	No
AST-E13=	2401.13	3/21/97	3/25/97	Total Solid	--	--	83.50	--	--
				TPHC	186	Yes	ND	10,000	No
AST-E14=	2401.14	3/21/97	3/25/97	Total Solid	--	--	81.81	--	--
				TPHC	192	Yes	284.65	10,000	No
AST-E15=	2401.15	3/21/97	3/25/97	Total Solid	--	--	77.58	--	--
				TPHC	193	Yes	187.80	10,000	No
AST-E16=	2401.16	3/21/97	3/25/97	Total Solid	--	--	77.98	--	--
				TPHC	201	Yes	188.38	10,000	No

Note:
* Total Solid results are expressed as a percentage.
** NJDEP Residential Direct Contact soil cleanup criteria for total organics
-- Not detected above stated sample quantitation limit
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AST-E17=	2404.01	3/24/97	3/28/97	Total Solid	--	--	77.83	--	--
				TPHC	193	Yes	ND	10,000	No
AST-E18=	2404.02	3/24/97	3/28/97	Total Solid	--	--	86.39	--	--
				TPHC	173	Yes	ND	10,000	No
AST-E19=	2404.03	3/24/97	3/28/97	Total Solid	--	--	81.77	--	--
				TPHC	188	Yes	ND	10,000	No
FP-1=	2404.04	3/24/97	3/28/97	Total Solid	--	--	84.95	--	--
				TPHC	174	Yes	ND	10,000	No
FP-2=	2404.05	3/24/97	3/28/97	Total Solid	--	--	87.46	--	--
				TPHC	170	Yes	ND	10,000	No

Note:

* Total Solid results are expressed as a percentage.

** NJDEP Residential Direct Contact soil cleanup criteria for total organics

-- Not detected above stated sample quantitation limit

TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AST2-SP2R=	2405.01	3/25/97	3/28/97	Total Solid	--	--	87.58	--	--
				TPHC	177	Yes	117.73	10,000	No

Note:

*	Total Solid results are expressed as a percentage.
**	NJDEP Residential Direct Contact soil cleanup criteria for total organics
--	Not detected above stated sample quantitation limit
TPHC	Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
AST2-P1R=	2406.01	3/25/97	3/28/97	Total Solid	--	--	87.23	--	--
				TPHC	175	Yes	137.79	10,000	No
AST2-P1N=	2406.02	3/25/97	3/28/97	Total Solid	--	--	89.47	--	--
				TPHC	175	Yes	ND	10,000	No
AST2-P1E=	2406.03	3/25/97	3/28/97	Total Solid	--	--	91.02	--	--
				TPHC	165	Yes	ND	10,000	No
AST2-P1W=	2406.04	3/25/97	3/28/97	Total Solid	--	--	88.96	--	--
				TPHC	171	Yes	ND	10,000	No

Note:
* Total Solid results are expressed as a percentage.
** NJDEP Residential Direct Contact soil cleanup criteria for total organics
-- Not detected above stated sample quantitation limit
TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
AREA 74, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
74-B=	2452.01	4/14/97	4/16/97	Total Solid	--	--	71.32	--	--
				TPHC	205	Yes	ND	10,000	No
74-N=	2452.02	4/14/97	4/16/97	Total Solid	--	--	79.23	--	--
				TPHC	183	Yes	ND	10,000	No
74-N2=	2452.03	4/14/97	4/16/97	Total Solid	--	--	80.42	--	--
				TPHC	181	Yes	186.07	10,000	No
74-E=	2452.04	4/14/97	4/16/97	Total Solid	--	--	81.46	--	--
				TPHC	181	Yes	ND	10,000	No
74-S=	2452.05	4/14/97	4/16/97	Total Solid	--	--	82.64	--	--
				TPHC	168	Yes	ND	10,000	No
74-W=	2452.06	4/14/97	4/16/97	Total Solid	--	--	81.75	--	--
				TPHC	188	Yes	ND	10,000	No

Note:
* Total Solid results are expressed as a percentage.
** NJDEP Residential Direct Contact soil cleanup criteria for total organics
-- Not detected above stated sample quantitation limit
TPHC Total Petroleum Hydrocarbons

TABLE 3

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.01(Trip Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.01(Trip Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.13(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.13(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-1 Lab Sample ID: 4148.02(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-1 Lab Sample ID: 4148.02(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-2 Lab Sample ID: 4148.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	6.43 ug/L	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-2 Lab Sample ID: 4148.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-3 Lab Sample ID: 4148.06(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	7.64 ug/L	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-3 Lab Sample ID: 4148.06(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-4 Lab Sample ID: 4148.08(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-4 Lab Sample ID: 4148.08(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-5 Lab Sample ID: 4148.10(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-5 Lab Sample ID: 4148.10(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.12(DUP 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.12(DUP 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.13(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.13(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	Not Detected	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	27.53 ug/L	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-1 Lab Sample ID: 4148.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-1 Lab Sample ID: 4148.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	Not Detected	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-2 Lab Sample ID: 4148.05(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-2 Lab Sample ID: 4148.05(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	Not Detected	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-3 Lab Sample ID: 4148.07(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-3 Lab Sample ID: 4148.07(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	2.67 ug/L	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	2.02 ug/L	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-4 Lab Sample ID: 4148.09(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-4 Lab Sample ID: 4148.09(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	Not Detected	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-5 Lab Sample ID: 4148.11(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74-5 Lab Sample ID: 4148.11(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	2.49 ug/L	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	1.87 ug/L	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.12(DUP 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	2.52	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	2.64	Not Detected	--	20	no
62-53-3	Aniline	2.90	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	2.45	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	2.65	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	2.50	Not Detected	--	75	no
100-51-6	Benzyl alcohol	2.09	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	2.44	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	2.96	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	2.22	Not Detected	--	20	no
67-72-1	Hexachloroethane	2.59	Not Detected	--	10	no
98-95-3	Nitrobenzene	2.45	Not Detected	--	10	no
78-59-1	Isophorone	2.31	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	2.54	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	2.58	Not Detected	--	9	no
91-20-3	Naphthalene	3.03	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	2.55	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.64	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	2.49	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.59	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	2.15	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	1.62	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	2.74	Not Detected	--	7000	no
208-96-8	Acenaphthylene	2.35	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 12/18/98 Location: 74 Lab Sample ID: 4148.12(DUP 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	1.54	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	1.62	Not Detected	--	nle	no
83-32-9	Acenaphthene	1.98	Not Detected	--	400	no
132-64-9	Dibenzofuran	2.13	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	1.22	Not Detected	--	10	no
84-66-2	Diethylphthalate	1.68	Not Detected	--	5000	no
86-73-7	Fluorene	1.93	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	1.53	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	2.70	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	1.73	Not Detected	--	20	no
103-33-3	Azobenzene	1.92	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	1.54	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	1.88	Not Detected	--	10	no
85-01-8	Phenanthrene	1.67	Not Detected	--	nle	no
120-12-7	Anthracene	1.79	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	1.83	Not Detected	--	900	no
206-44-0	Fluoranthene	1.85	Not Detected	--	300	no
92-87-5	Benzidine	4.11	Not Detected	--	50	no
129-00-0	Pyrene	1.02	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	1.15	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	1.57	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	2.28	Not Detected	--	60	no
218-01-9	Chrysene	2.32	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	1.29	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	1.30	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	1.31	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	1.57	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	1.36	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	1.22	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	3.12	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	1.13	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74 Lab Sample ID: 4210.01(Trip Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74 Lab Sample ID: 4210.01(Trip Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74 Lab Sample ID: 4210.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74 Lab Sample ID: 4210.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-4 Lab Sample ID: 4210.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-4 Lab Sample ID: 4210.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-5 Lab Sample ID: 4210.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-5 Lab Sample ID: 4210.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-3 Lab Sample ID: 4210.05(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-3 Lab Sample ID: 4210.05(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74 Lab Sample ID: 4210.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	5.00	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.94	Not Detected	--	20	no
62-53-3	Aniline	0.15	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.48	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.23	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.23	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.18	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.16	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.61	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.33	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.46	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.35	Not Detected	--	10	no
78-59-1	Isophorone	0.46	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.26	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.25	Not Detected	--	9	no
91-20-3	Naphthalene	0.25	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	0.19	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.38	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.16	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.50	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.32	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.21	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	0.18	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.19	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74 Lab Sample ID: 4210.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.31	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.26	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.26	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.32	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.36	Not Detected	--	10	no
84-66-2	Diethylphthalate	0.82	Not Detected	--	5000	no
86-73-7	Fluorene	0.29	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.31	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	0.90	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	0.23	Not Detected	--	20	no
103-33-3	Azobenzene	0.80	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.55	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.82	Not Detected	--	10	no
85-01-8	Phenanthrene	0.18	Not Detected	--	nle	no
120-12-7	Anthracene	0.19	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	0.23	Not Detected	--	900	no
206-44-0	Fluoranthene	0.41	Not Detected	--	300	no
92-87-5	Benzidine	1.45	Not Detected	--	50	no
129-00-0	Pyrene	0.32	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	0.47	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	0.22	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	0.46	Not Detected	--	60	no
218-01-9	Chrysene	0.20	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	0.51	1.26 ug/L	--	30	no
117-84-0	Di-n-octylphthalate	0.82	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	0.37	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	0.32	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	0.31	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.79	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.28	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.40	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-4 Lab Sample ID: 4210.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	5.55	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	1.04	Not Detected	--	20	no
62-53-3	Aniline	0.17	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.53	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.23	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.26	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.20	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.18	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.68	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.37	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.37	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.51	Not Detected	--	10	no
78-59-1	Isophorone	0.39	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.51	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.28	Not Detected	--	9	no
91-20-3	Naphthalene	0.28	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	0.21	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.42	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.18	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.67	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.36	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.23	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	0.20	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.21	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-4 Lab Sample ID: 4210.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.34	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.29	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.29	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.36	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.40	Not Detected	--	10	no
84-66-2	Diethylphthalate	0.91	Not Detected	--	5000	no
86-73-7	Fluorene	0.32	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.34	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	1.00	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	0.26	Not Detected	--	20	no
103-33-3	Azobenzene	0.89	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.61	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.91	Not Detected	--	10	no
85-01-8	Phenanthrene	0.20	Not Detected	--	nle	no
120-12-7	Anthracene	0.21	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	0.26	Not Detected	--	900	no
206-44-0	Fluoranthene	0.46	Not Detected	--	300	no
92-87-5	Benzidine	1.61	Not Detected	--	50	no
129-00-0	Pyrene	0.36	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	0.52	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	0.24	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	0.51	Not Detected	--	60	no
218-01-9	Chrysene	0.22	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	0.57	1.48 ug/L	--	30	no
117-84-0	Di-n-octylphthalate	0.91	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	0.41	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	0.36	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	0.34	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.88	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.31	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.44	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-5 Lab Sample ID: 4210.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	5.20	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.98	Not Detected	--	20	no
62-53-3	Aniline	0.16	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.50	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.23	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.24	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.19	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.17	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.63	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.37	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.34	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.48	Not Detected	--	10	no
78-59-1	Isophorone	0.36	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.48	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.26	Not Detected	--	9	no
91-20-3	Naphthalene	0.26	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	0.20	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.40	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.17	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.56	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.33	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.22	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	0.19	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.20	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-5 Lab Sample ID: 4210.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.32	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.27	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.27	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.33	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.37	Not Detected	--	10	no
84-66-2	Diethylphthalate	0.85	Not Detected	--	5000	no
86-73-7	Fluorene	0.30	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.32	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	0.94	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	0.24	Not Detected	--	20	no
103-33-3	Azobenzene	0.83	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.57	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.85	Not Detected	--	10	no
85-01-8	Phenanthrene	0.19	Not Detected	--	nle	no
120-12-7	Anthracene	0.20	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	0.24	Not Detected	--	900	no
206-44-0	Fluoranthene	0.43	Not Detected	--	300	no
92-87-5	Benzidine	1.51	Not Detected	--	50	no
129-00-0	Pyrene	0.33	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	0.49	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	0.23	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	0.48	Not Detected	--	60	no
218-01-9	Chrysene	0.21	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	0.53	1.44 ug/L	--	30	no
117-84-0	Di-n-octylphthalate	0.85	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	0.38	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	0.33	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	0.32	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.82	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.29	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.42	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-3 Lab Sample ID: 4210.05(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	5.45	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	1.02	Not Detected	--	20	no
62-53-3	Aniline	0.16	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.52	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.23	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.25	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.20	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.17	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.66	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.37	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.36	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.50	Not Detected	--	10	no
78-59-1	Isophorone	0.38	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.50	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.27	Not Detected	--	9	no
91-20-3	Naphthalene	0.27	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	0.21	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.41	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.17	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.64	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.35	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.23	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	0.20	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.21	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 1/25/99 Location: 74-3 Lab Sample ID: 4210.05(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.34	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.28	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.28	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.35	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.39	Not Detected	--	10	no
84-66-2	Diethylphthalate	0.89	Not Detected	--	5000	no
86-73-7	Fluorene	0.32	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.34	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	0.98	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	0.25	Not Detected	--	20	no
103-33-3	Azobenzene	0.87	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.60	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.89	Not Detected	--	10	no
85-01-8	Phenanthrene	0.20	Not Detected	--	nle	no
120-12-7	Anthracene	0.21	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	0.25	Not Detected	--	900	no
206-44-0	Fluoranthene	0.45	Not Detected	--	300	no
92-87-5	Benzidine	1.58	Not Detected	--	50	no
129-00-0	Pyrene	0.35	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	0.51	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	0.24	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	0.50	Not Detected	--	60	no
218-01-9	Chrysene	0.22	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	0.56	1.61 ug/L	--	30	no
117-84-0	Di-n-octylphthalate	0.89	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	0.40	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	0.35	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	0.34	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.86	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.31	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.44	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74 Lab Sample ID: 4252.01(Trip Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	*Methylene Chloride	0.24	7.39 ug/L	--	2	yes
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Note:
* Compound exceeds criteria due to laboratory contamination

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74 Lab Sample ID: 4252.01(Trip Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74 Lab Sample ID: 4252.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74 Lab Sample ID: 4252.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-2 Lab Sample ID: 4252.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	6.51 ug/L	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-2 Lab Sample ID: 4252.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-1 Lab Sample ID: 4252.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
107028	Acrolein	1.85	Not Detected	--	50	no
107131	Acrylonitrile	2.78	Not Detected	--	50	no
75650	tert-Butyl alcohol	8.52	Not Detected	--	nle	no
1634044	Methyl-tert-Butyl ether	0.16	Not Detected	--	nle	no
108203	Di-isopropyl ether	0.25	Not Detected	--	nle	no
	Dichlorodifluoromethane	1.68	Not Detected	--	nle	no
74-87-3	Chloromethane	1.16	Not Detected	--	30	no
75-01-4	Vinyl Chloride	1.06	Not Detected	--	5	no
74-83-9	Bromomethane	1.10	Not Detected	--	10	no
75-00-3	Chloroethane	1.01	Not Detected	--	nle	no
75-69-4	Trichlorofluoromethane	0.50	Not Detected	--	nle	no
75-35-4	1, 1-Dichloroethene	0.24	Not Detected	--	2	no
67-64-1	Acetone	1.36	Not Detected	--	700	no
75-15-0	Carbon Disulfide	0.46	Not Detected	--	nle	no
75-09-2	Methylene Chloride	0.24	Not Detected	--	2	no
156-60-5	trans-1,2-Dichloroethene	0.16	Not Detected	--	100	no
75-35-3	1,1-Dichloroethane	0.12	Not Detected	--	70	no
108-05-4	Vinyl Acetate	0.78	Not Detected	--	nle	no
78-93-3	2-Butanone	0.62	Not Detected	--	300	no
156-59-2	cis-1,2-Dichloroethene	0.17	Not Detected	--	10	no
67-66-3	Chloroform	0.30	Not Detected	--	6	no
75-55-6	1,1,1-Trichloroethane	0.23	Not Detected	--	30	no
56-23-5	Carbon Tetrachloride	0.47	Not Detected	--	2	no
71-43-2	Benzeze	0.23	Not Detected	--	1	no
107-06-2	1,2-Dichloroethane	0.18	Not Detected	--	2	no
79-01-6	Trichloroethene	0.23	Not Detected	--	1	no
78-87-5	1, 2-Dichloropropane	0.40	Not Detected	--	1	no
75-27-4	Bromodichloromethane	0.55	Not Detected	--	1	no
110-75-8	2-Chloroethyl vinyl ether	0.65	Not Detected	--	nle	no
10061-01-5	cis-1,3-Dichloropropene	0.69	Not Detected	--	nle	no

Table 3
VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-1 Lab Sample ID: 4252.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
108-10-1	4-Methyl-2-Pentanone	0.59	Not Detected	--	400	no
108-88-3	Toluene	0.37	Not Detected	--	1000	no
10061-02-6	trans-1,3-Dichloropropene	0.87	Not Detected	--	nle	no
79-00-5	1,1,2-Trichloroethane	0.48	Not Detected	--	3	no
127-18-4	Tetrachloroethene	0.32	Not Detected	--	1	no
591-78-6	2-Hexanone	0.71	Not Detected	--	nle	no
126-48-1	Dibromochloromethane	0.86	Not Detected	--	10	no
108-90-7	Chlorobenzene	0.39	Not Detected	--	4	no
100-41-4	Ethylbenzene	0.65	Not Detected	--	700	no
1330-20-7	m+p-Xylenes	1.14	Not Detected	--	nle	no
1330-20-7	o-Xylene	0.62	Not Detected	--	nle	no
100-42-5	Styrene	0.56	Not Detected	--	100	no
75-25-2	Bromoform	0.70	Not Detected	--	4	no
79-34-5	1,1,2,2-Tetrachloroethane	0.47	Not Detected	--	2	no
541-73-1	1,3-Dichlorobenzene	0.55	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.57	Not Detected	--	75	no
95-50-1	1,2-Dichlorobenzene	0.64	Not Detected	--	600	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74 Lab Sample ID: 4252.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	5.00	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.94	Not Detected	--	20	no
62-53-3	Aniline	0.15	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.48	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.23	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.23	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.18	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.16	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.61	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.33	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.46	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.35	Not Detected	--	10	no
78-59-1	Isophorone	0.46	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.26	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.25	Not Detected	--	9	no
91-20-3	Naphthalene	0.25	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	0.19	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.38	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.16	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.50	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.32	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.21	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	0.18	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.19	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74 Lab Sample ID: 4252.02(Field Blank)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.31	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.26	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.26	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.32	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.36	Not Detected	--	10	no
84-66-2	Diethylphthalate	0.82	Not Detected	--	5000	no
86-73-7	Fluorene	0.29	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.31	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	0.90	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	0.23	Not Detected	--	20	no
103-33-3	Azobenzene	0.80	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.55	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.82	Not Detected	--	10	no
85-01-8	Phenanthrene	0.18	Not Detected	--	nle	no
120-12-7	Anthracene	0.19	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	0.23	Not Detected	--	900	no
206-44-0	Fluoranthene	0.41	Not Detected	--	300	no
92-87-5	Benzidine	1.45	Not Detected	--	50	no
129-00-0	Pyrene	0.32	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	0.47	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	0.22	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	0.46	Not Detected	--	60	no
218-01-9	Chrysene	0.20	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	0.51	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	0.82	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	0.37	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	0.32	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	0.31	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.79	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.28	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.40	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-2 Lab Sample ID: 4252.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	5.00	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.94	Not Detected	--	20	no
62-53-3	Aniline	0.15	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.48	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.23	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.23	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.18	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.16	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.61	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.33	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.46	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.35	Not Detected	--	10	no
78-59-1	Isophorone	0.46	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.26	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.25	Not Detected	--	9	no
91-20-3	Naphthalene	0.25	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	0.19	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.38	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.16	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.50	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.32	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.21	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	0.18	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.19	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-2 Lab Sample ID: 4252.03(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.31	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.26	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.26	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.32	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.36	Not Detected	--	10	no
84-66-2	Diethylphthalate	0.82	Not Detected	--	5000	no
86-73-7	Fluorene	0.29	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.31	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	0.90	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	0.23	Not Detected	--	20	no
103-33-3	Azobenzene	0.80	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.55	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.82	Not Detected	--	10	no
85-01-8	Phenanthrene	0.18	Not Detected	--	nle	no
120-12-7	Anthracene	0.19	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	0.23	Not Detected	--	900	no
206-44-0	Fluoranthene	0.41	2.43 ug/L	--	300	no
92-87-5	Benzidine	1.45	Not Detected	--	50	no
129-00-0	Pyrene	0.32	1.67 ug/L	--	200	no
85-68-7	Butylbenzylphthalate	0.47	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	0.22	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	0.46	Not Detected	--	60	no
218-01-9	Chrysene	0.20	1.47 ug/L	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	0.51	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	0.82	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	0.37	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	0.32	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	0.31	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.79	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.28	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.40	Not Detected	--	nle	no

Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-1 Lab Sample ID: 4252.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
110-86-1	Pyridine	5.00	Not Detected	--	nle	no
62-75-9	N-nitroso-dimethylamine	0.94	Not Detected	--	20	no
62-53-3	Aniline	0.15	Not Detected	--	nle	no
111-44-4	bis(2-Chloroethyl)ether	0.48	Not Detected	--	10	no
541-73-1	1,3-Dichlorobenzene	0.23	Not Detected	--	600	no
106-46-7	1,4-Dichlorobenzene	0.23	Not Detected	--	75	no
100-51-6	Benzyl alcohol	0.18	Not Detected	--	nle	no
95-50-1	1,2-Dichlorobenzene	0.16	Not Detected	--	600	no
108-60-1	bis(2-chloroisopropyl)ether	0.61	Not Detected	--	300	no
621-64-7	n-Nitroso-di-n-propylamine	0.33	Not Detected	--	20	no
67-72-1	Hexachloroethane	0.46	Not Detected	--	10	no
98-95-3	Nitrobenzene	0.35	Not Detected	--	10	no
78-59-1	Isophorone	0.46	Not Detected	--	100	no
111-91-1	bis(2-Chloroethoxy)methane	0.26	Not Detected	--	nle	no
120-82-1	1,2,4-Trichlorobenzene	0.25	Not Detected	--	9	no
91-20-3	Naphthalene	0.25	Not Detected	--	nle	no
106-47-8	4-Chloroaniline	0.19	Not Detected	--	nle	no
87-68-3	Hexachlorobutadiene	0.38	Not Detected	--	1	no
91-57-6	2-Methylnaphthalene	0.16	Not Detected	--	nle	no
77-47-4	Hexachlorocyclopentadiene	1.50	Not Detected	--	50	no
91-58-7	2-Chloronaphthalene	0.32	Not Detected	--	nle	no
88-74-4	2-Nitroaniline	0.21	Not Detected	--	nle	no
131-11-3	Dimethylphthalate	0.18	Not Detected	--	7000	no
208-96-8	Acenaphthylene	0.19	Not Detected	--	nle	no

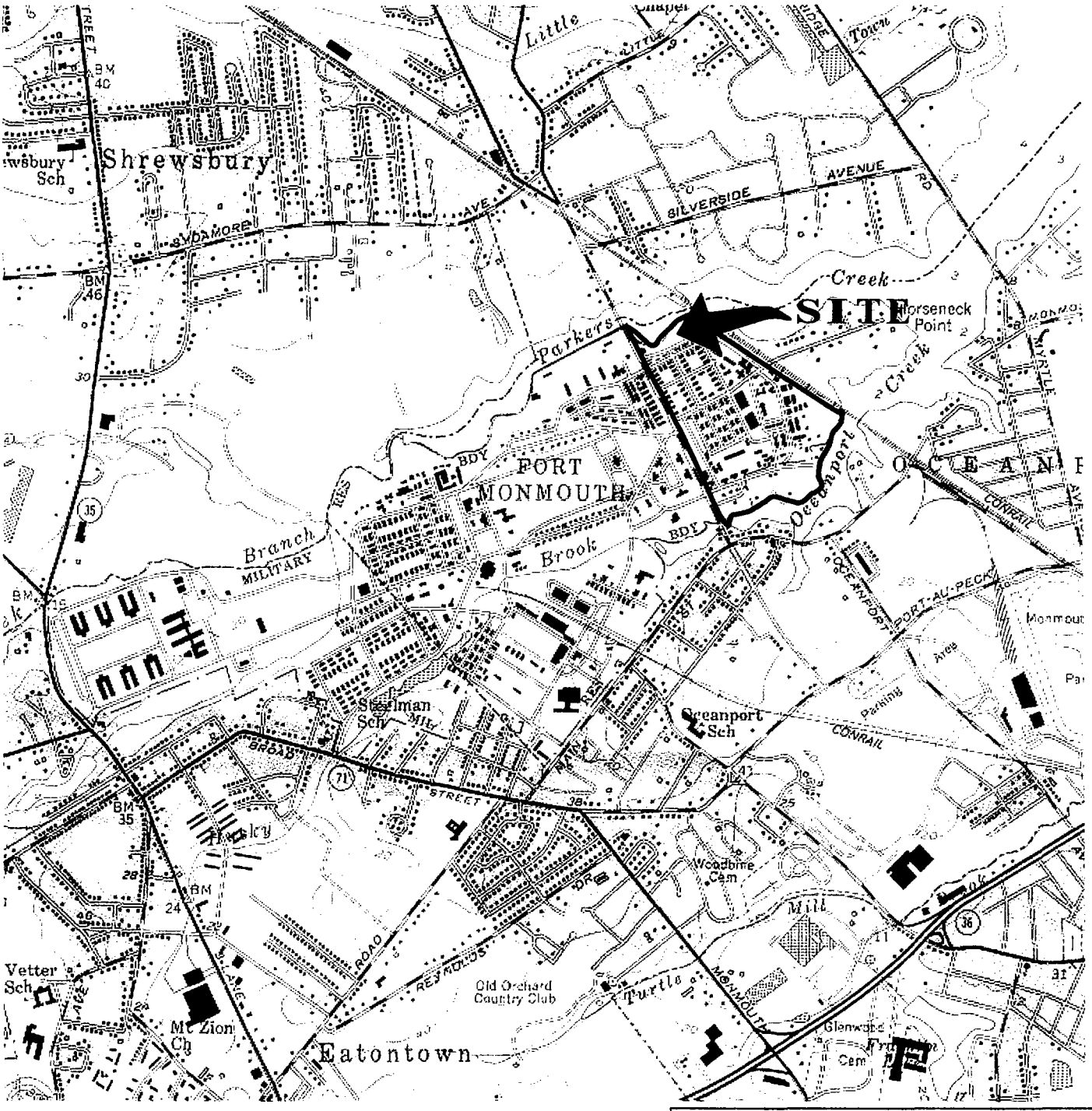
Table 3
SEMI-VOLATILE ANALYSIS DATA SHEET

Lab Name: FMETL NJDEP # 13461 Matrix: (soil/water) WATER

Date Sampled: 2/5/99 Location: 74-1 Lab Sample ID: 4252.04(Bldg 74)

CAS NO.	COMPOUND NAME	MDL (ug/L)	RESULTS	QUALIFIER	REGULATORY LEVEL(ug/L)	EXCEEDS CRITERIA
606-20-2	2,6-Dinitrotoluene	0.31	Not Detected	--	nle	no
99-09-2	3-Nitroaniline	0.26	Not Detected	--	nle	no
83-32-9	Acenaphthene	0.26	Not Detected	--	400	no
132-64-9	Dibenzofuran	0.32	Not Detected	--	nle	no
121-14-2	2,4-Dinitrotoluene	0.36	Not Detected	--	10	no
84-66-2	Diethylphthalate	0.82	Not Detected	--	5000	no
86-73-7	Fluorene	0.29	Not Detected	--	300	no
7005-72-3	4-Chlorophenyl-phenylether	0.31	Not Detected	--	nle	no
100-01-6	4-Nitroaniline	0.90	Not Detected	--	nle	no
86-30-6	n-Nitrosodiphenylamine	0.23	Not Detected	--	20	no
103-33-3	Azobenzene	0.80	Not Detected	--	nle	no
101-55-3	4-Bromophenyl-phenylether	0.55	Not Detected	--	nle	no
118-74-1	Hexachlorobenzene	0.82	Not Detected	--	10	no
85-01-8	Phenanthrene	0.18	Not Detected	--	nle	no
120-12-7	Anthracene	0.19	Not Detected	--	2000	no
84-74-2	Di-n-butylphthalate	0.23	Not Detected	--	900	no
206-44-0	Fluoranthene	0.41	Not Detected	--	300	no
92-87-5	Benzidine	1.45	Not Detected	--	50	no
129-00-0	Pyrene	0.32	Not Detected	--	200	no
85-68-7	Butylbenzylphthalate	0.47	Not Detected	--	100	no
56-55-3	Benzo[a]anthracene	0.22	Not Detected	--	10	no
91-94-1	3,3'-Dichlorobenzidine	0.46	Not Detected	--	60	no
218-01-9	Chrysene	0.20	Not Detected	--	20	no
117-81-7	bis(2-Ethylhexyl)phthalate	0.51	Not Detected	--	30	no
117-84-0	Di-n-octylphthalate	0.82	Not Detected	--	100	no
205-99-2	Benzo[b]fluoranthene	0.37	Not Detected	--	10	no
207-08-9	Benzo[k]fluoranthene	0.32	Not Detected	--	2	no
50-32-8	Benzo[a]pyrene	0.31	Not Detected	--	20	no
193-39-5	Indeno[1,2,3-cd]pyrene	0.79	Not Detected	--	20	no
53-70-3	Dibenz[a,h]anthracene	0.28	Not Detected	--	20	no
191-24-2	Benzo[g,h,i]perylene	0.40	Not Detected	--	nle	no

FIGURES



LONG BRANCH, N. J.

40073-C8-TF-024

1954

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DMA 6164 I SE-SERIES V822

NEW JERSEY

QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

FIGURE 1

SITE LOCATION MAP
Building 74
Main Post-East
Fort Monmouth Army Base
Monmouth County, NJ

SMC Environmental Services Group

Engineers, Managers, Scientists & Planners

Valley Forge, PA.

SCALE: 1"= 2000'

DATE: MARCH 1997

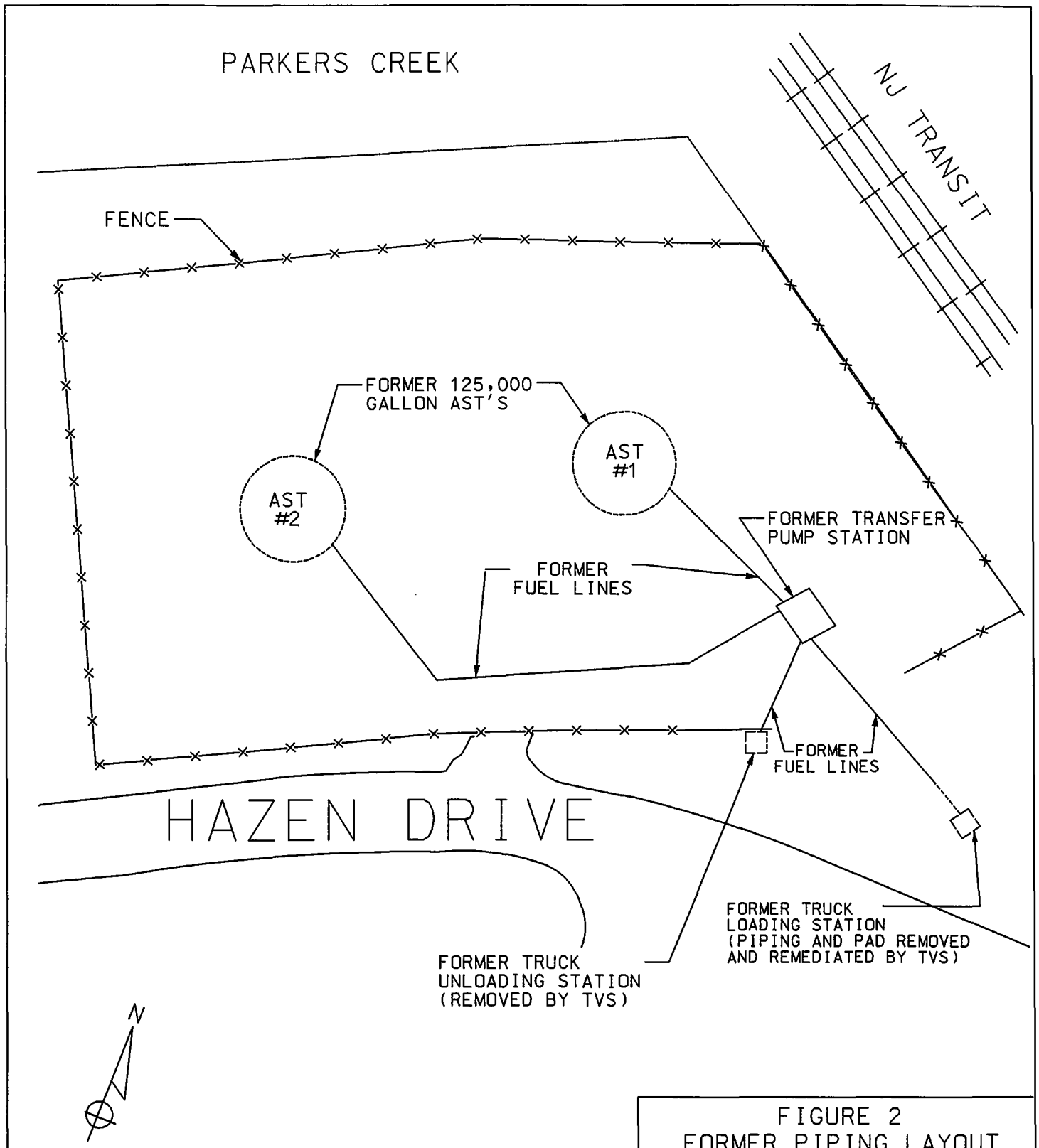


FIGURE 2
FORMER PIPING LAYOUT
AREA 74
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=50'

DATE: MARCH1997

74 2429 FIG2

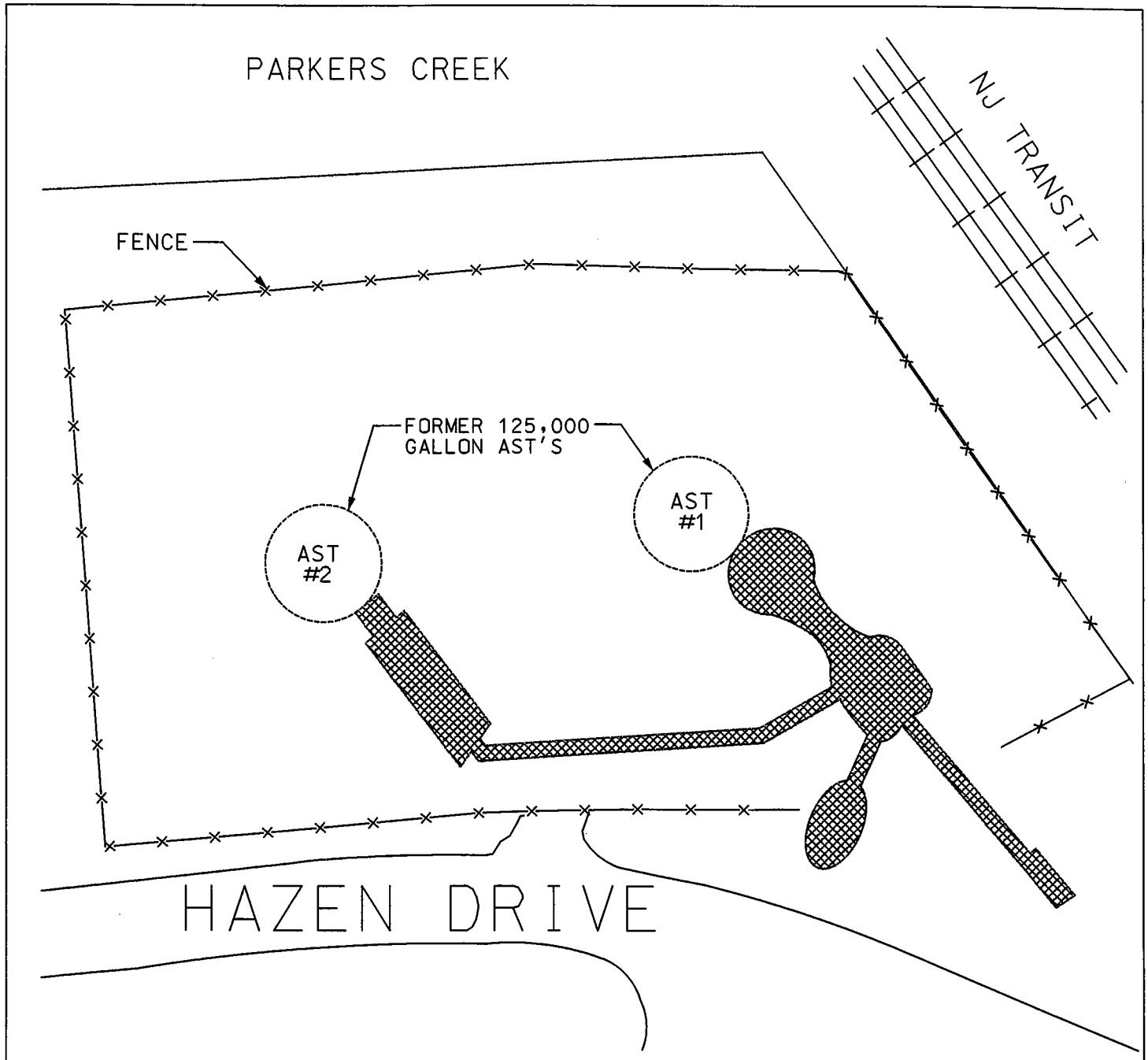


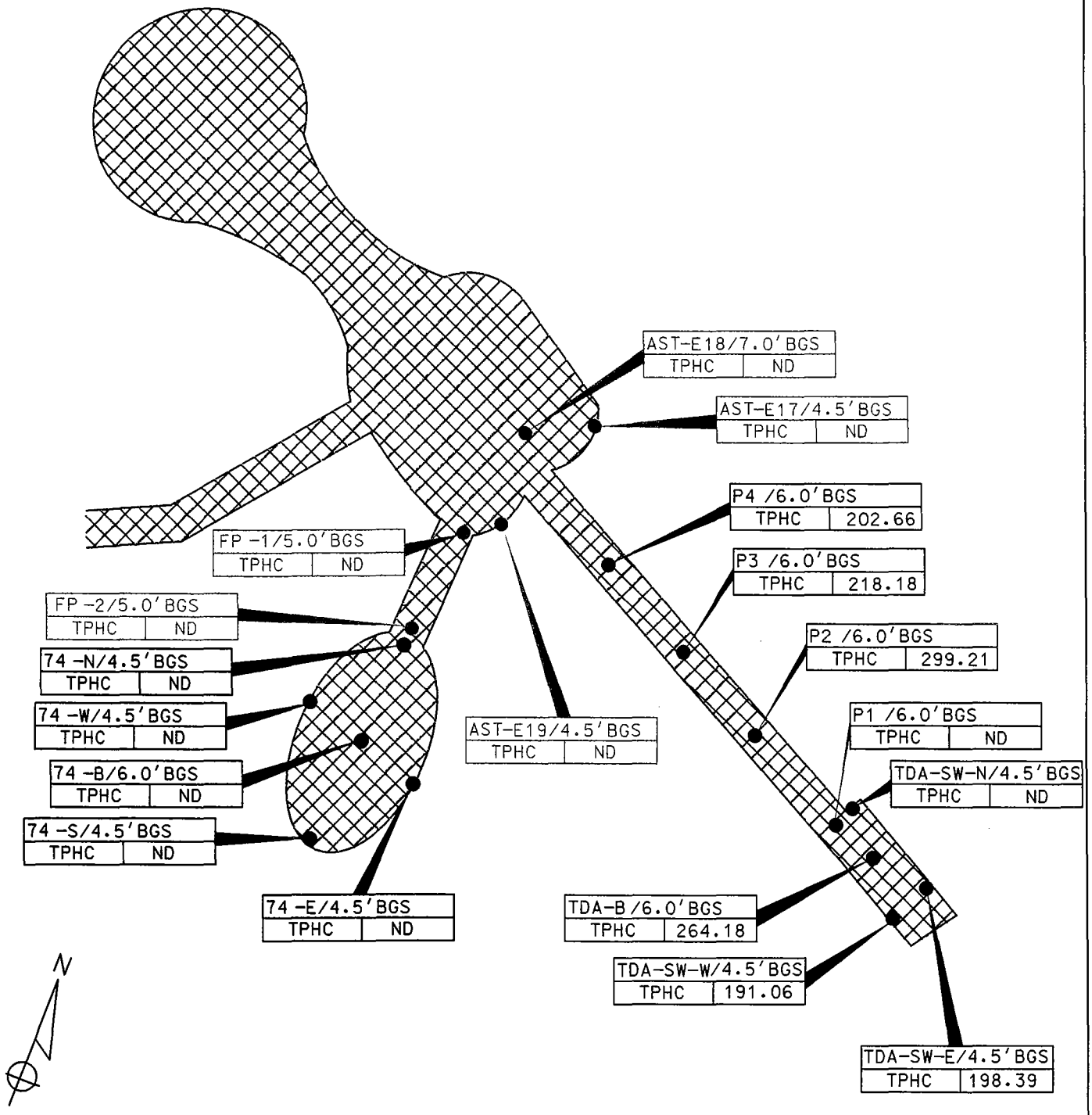
FIGURE 3
SITE EXCAVATION
AREA 74
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

SMC ENVIRONMENTAL
SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=50'

DATE: MARCH 1997

74 2429 FIG3



LEGEND

- SOIL SAMPLE LOCATION (MARCH 12-13,1997)
- SOIL SAMPLE LOCATION (MARCH 24,1997)
- SOIL SAMPLE LOCATION (APRIL 14,1997)
- LIMIT OF EXCAVATION (APRIL 14, 1997)

NOTES:
1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS = BELOW GROUND SURFACE

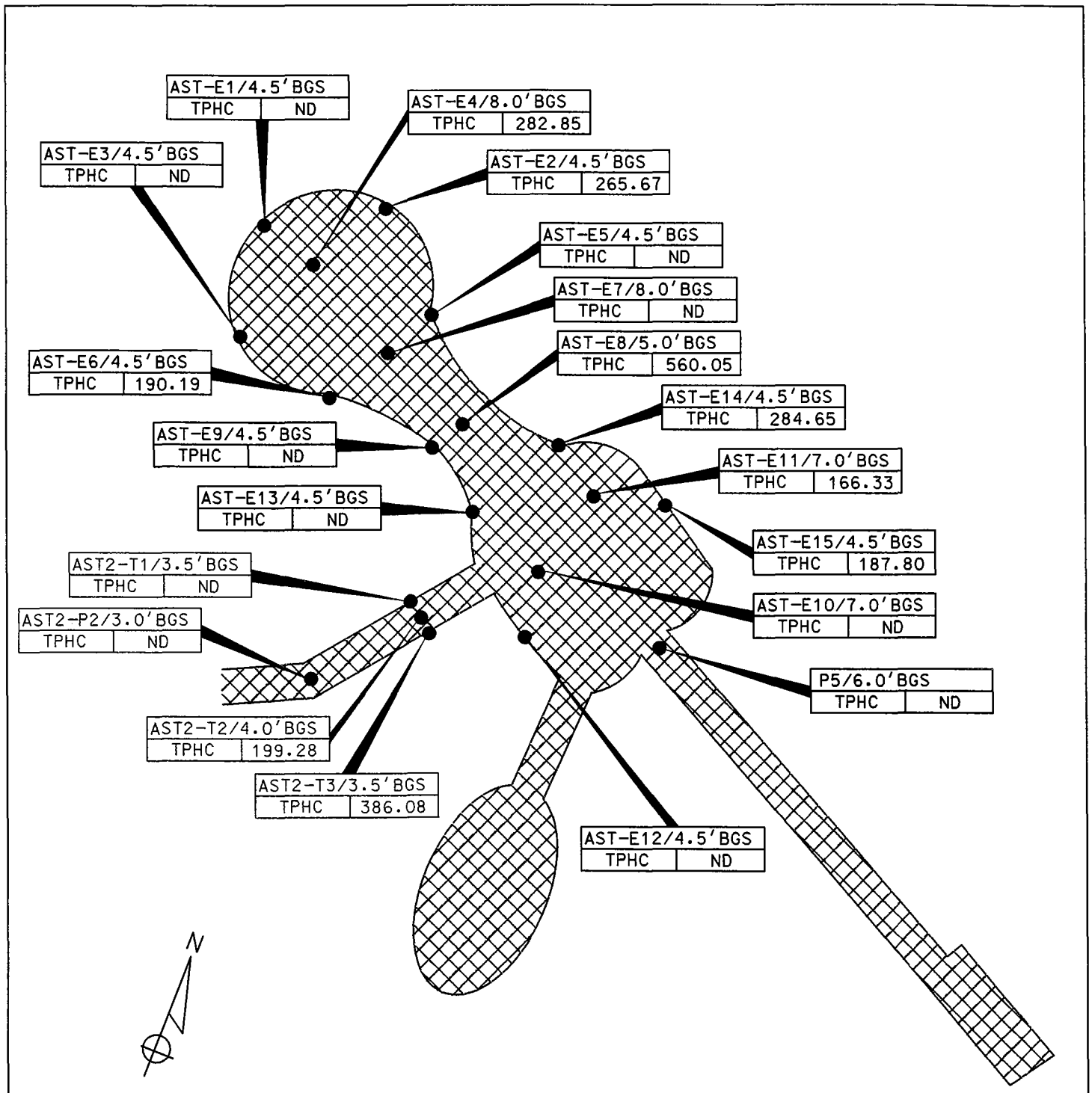
FIGURE 4
SOIL SAMPLING LOCATION MAP
AREA 74
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=20'

DATE: MARCH 1997

74 2429 FIG4



LEGEND

- SOIL SAMPLE LOCATION (MARCH 17-18,1997)
- SOIL SAMPLE LOCATION (MARCH 19,1997)
- SOIL SAMPLE LOCATION (MARCH 20-21,1997)
- LIMIT OF EXCAVATION (APRIL 14, 1997)

NOTES:
1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS = BELOW GROUND SURFACE

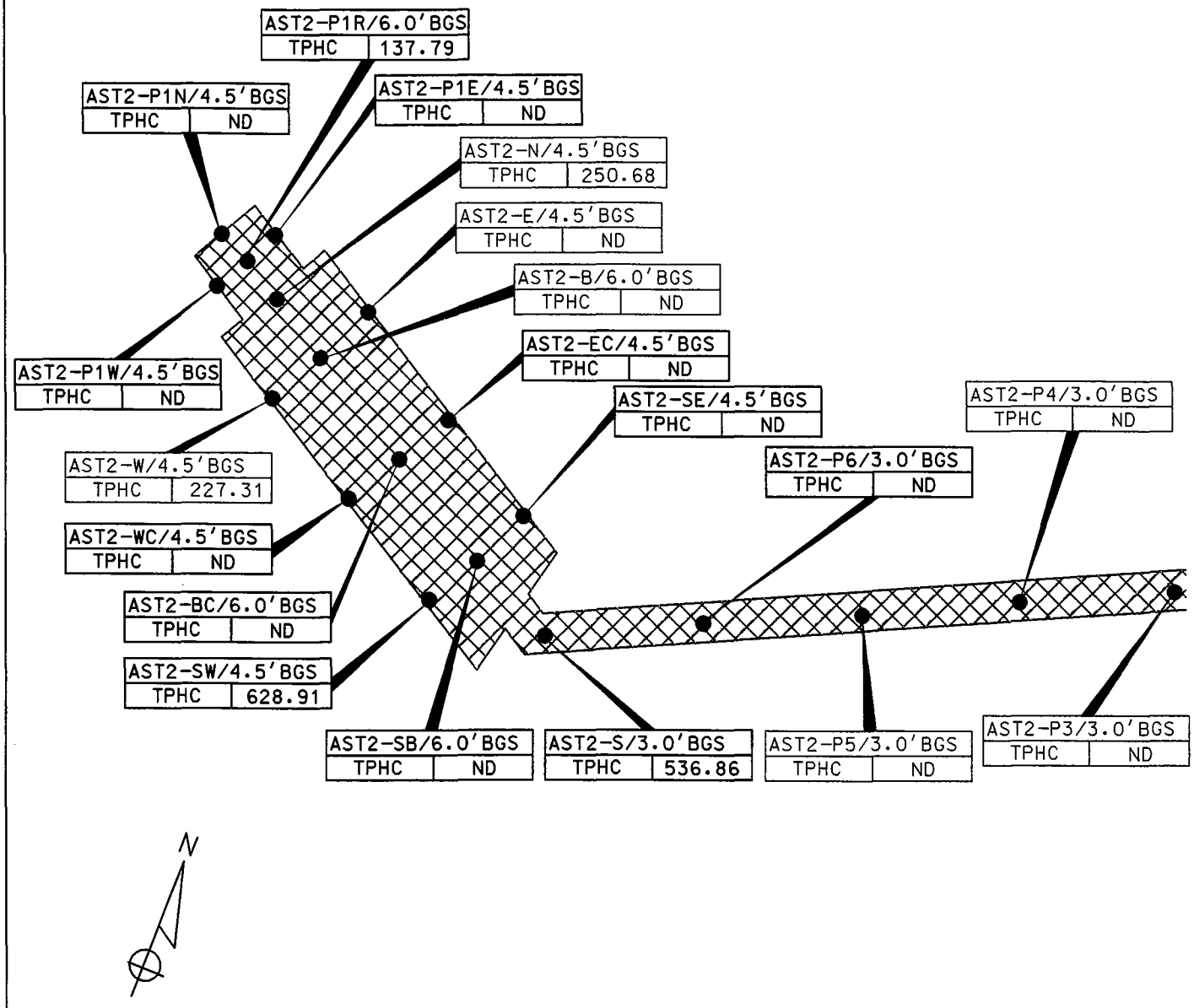
74 2429 FIG4

FIGURE 4
SOIL SAMPLING LOCATION MAP
AREA 74
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=20'

DATE: MARCH 1997



LEGEND

- SOIL SAMPLE LOCATION (MARCH 17-18,1997)
- SOIL SAMPLE LOCATION (MARCH 19,1997)
- SOIL SAMPLE LOCATION (MARCH 25,1997)
- LIMIT OF EXCAVATION (APRIL 14, 1997)

NOTES:
1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS = BELOW GROUND SURFACE

74 2429 FIG4

FIGURE 4
SOIL SAMPLING LOCATION MAP
AREA 74
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=20'

DATE: MARCH 1997

APPENDIX A
SOIL ANALYTICAL DATA PACKAGE

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-4

Project # 2388
Date Rec. 03/13/97
Date Comp. 03/15/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	__	NA __
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)	__	✓

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Page 1 of 1

Customer: SMC / David Daniels / ( )DERA (X)OMA ( )Other: Chuck Appleby

Project No: 2429

Location: Area - 4

Sampler's Signature:

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH	Analysis Parameters: % Solid	Comments: Remarks / Preservation Method
2388-01	TDA-B	3-12-97	11:45	Soil	X	X	Piping Excavation
2388.02	TDA-SW-N	↓	11:50	↓	↓	↓	↓
2388.03	TDA-SW-W		11:55				
2388.04	TDA-SW-E		12:00				
2388.05	P-1	3-13-97	11:00				
2388.06	P-2	↓	12:30				
2388.07	P-3		14:30				
2388.08	P-4		14:45				

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David Daniels	3-13-97 15:30				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks: Sample location is all in letters → "D" as David	

print legibly

Custody.xls 3/13/97

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

Client :	U.S. Army	**Lab. ID # :**	2388
	DPW. SELFM-PW-EV	**Date Rec'd:**	12-Mar-97
	Bldg. 173	**Analysis Start:**	15-Mar-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	15-Mar-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	AREA 4

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2388.01	TDA-B	1.00	15.04	76.46	204	264.18
2388.02	TDA-SW-N	1.00	15.44	82.39	185	ND
2388.03	TDA-SW-W	1.00	15.39	85.32	179	191.06
2388.04	TDA-SW-E	1.00	16.24	76.80	188	198.39
2388.05	P-1	1.00	15.15	79.78	194	ND
2388.06	P-2	1.00	15.45	82.77	184	299.21
2388.07	P-3	1.00	14.99	74.78	210	218.18
2388.08	P-4	1.00	15.02	77.94	201	202.66
METHOD BLANK	14-Mar-97	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

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 ✓
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 1/23/98

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project # 2394
Date Rec. 03/18/97
Date Comp. 03/19/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.		✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). 2345.02 MS = 127% 2345.02 MSD = 118% in range	✓	
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	NA	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		✓
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)		✓

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Page 1 of 1

Customer: SMC/David Daniels/Chuck Appleby
( )DERA (X)OMA ( )Other:

Project No: 2429

Location: Area 74

Sampler's Signature: David H. Daniels

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH-GC	Analysis Parameters: % Solids	Comments / Remarks / Preservation Method
2294.1	AST2-N	3.17.97	15:05	Soil	X	X	
.2	AST2-E	3.17.97	15:10				
.3	AST2-W	3.17.97	15:15				Test results TAT March 19 - Late P.M. DFH.
.4	AST2-B	3.17.97	15:20				
.5	AST2-P1	3.17.97	15:25				
.6	AST2-T1	3.18.97	11:45				
.7	AST2-T2		11:50				
.8	AST2-T3		11:55				
.9	AST2-P2		12:45				
.10	AST2-P3		12:50				
.11	AST2-P4		12:55				
.12	AST2-P5		14:05				
.13	AST2-SS		14:10				

Comments: Please indicate TAT on COC

Relinquished by (signature)	Date/Time	Received by (signature)	Relinquished by (signature)	Date/Time	Received by (signature)
David H. Daniels	3.18.97 14:50	Sarah Hubbard			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

print legibly

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

Client :	U.S. Army	**Lab. ID # :**	2394
	DPW. SELFM-PW-EV	**Date Rec'd:**	18-Mar-97
	Bldg. 173	**Analysis Start:**	19-Mar-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	19-Mar-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	AREA 74

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2394.01	AST2-N	1.00	15.08	84.42	185	250.68
2394.02	AST2-E	1.00	15.02	80.11	195	ND
2394.03	AST2-W	1.00	15.28	76.94	200	227.31
2394.04	AST2-B	1.00	15.08	84.18	185	ND
2394.05	AST2-P1	1.00	15.47	83.36	182	1230.49
2394.06	AST2-T1	1.00	15.24	83.95	184	ND
2394.07	AST2-T2	1.00	15.19	80.63	192	199.28
2394.08	AST2-T3	1.00	15.34	86.64	177	386.08
2394.09	AST-P2	1.00	15.26	88.89	173	ND
2394.10	AST-P3	1.00	14.98	86.27	182	ND
2394.11	AST-P4	1.00	14.83	84.42	188	ND
2394.12	AST-P5	1.00	15.50	80.40	189	ND
2394.13	AST2-55	1.00	15.47	77.57	196	ND
METHOD BLANK	3/19/97	1.00	15.00	32.38	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

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 1/21/98

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project # 2395
Date Rec. 03/18/97
Date Comp. 03/20/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.		✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	NA	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		✓
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)		✓

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Page 1 of 1

Customer: SMC / David Daniels / Chuck Appleby
( )DERA (X)OMA ( )Other:

Project No: 2429

Location: Area 74

Sampler's Signature: David H. Daniels

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH 6c method	Analysis Parameters: % solids	Comments: Remarks / Preservation Method
2395.1	TDA-SP1	3.18.97	9:30	soil	X	X	composite sample
" .2	AST2-SP2	3.18.97	9:45	soil	X	X	" "

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	3/19 97 0950	Sarah J. Hubbard			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

print legibly

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

Client :	U.S. Army	**Lab. ID # :**	2395
	DPW. SELFM-PW-EV	**Date Rec'd:**	18-Mar-97
	Bldg. 173	**Analysis Start:**	20-Mar-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	20-Mar-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	Area 74

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2395.01	TDA-SP1	1.00	15.09	79.14	197	265.15
2395.02	AST2-SP2	1.00	14.93	91.57	172	1226.03
METHOD BLANK	3/19/97	1.00	15.00	100.00	157	0.00

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

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 ✓
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 1/27/17

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project # 2398
Date Rec. 03/19/97
Date Comp. 03/25/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range). 2394.05 52%	✓	__
5. IR Spectra submitted for standards, blanks, & samples	__	NA __
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)	__	✓

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army mil
NJDEP Certification #13461

Chain of Custody Record

Page 1 of 1

Customer: SMC / David Daniels / ( )DERA (X)OMA ( )Other: Chuck Appleby

Project No: 2429

Location: Area 74

Sampler's Signature: David H. Daniels

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH	Analysis Parameters: % Solids	Comments: Remarks / Preservation Method
2398.1	P-5	3/19/97	14:10	Soil	X	X	
.2	AST2-WC	3.19.97	14:45	↓	↓	↓	
.3	AST2-BC	3.19.97	14:50				
.4	AST2-EC	3.19.97	14:55				
.5	AST2-SW	3.19.97	15:00				
.6	AST2-SB	3.19.97	15:05				
.7	AST2-SE	3.19.97	15:10				
.8	AST2-5	3.19.97	15:15				
.9	AST2-P6	3.19.97	15:20	↓	↓	↓	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	3-20-97 0940	Sarah J. Hubbard			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

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Custody.xls/3/13/97

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

Client :	U.S. Army	**Lab. ID # :**	2398
	DPW. SELFM-PW-EV	**Date Rec'd:**	19-Mar-97
	Bldg. 173	**Analysis Start:**	24-Mar-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	25-Mar-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	Area 74

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2398.01	P-5	1.00	15.31	78.12	196	ND
2398.02	AST2-WC	1.00	15.72	82.12	182	ND
2398.03	AST2-BC	1.00	15.26	82.44	187	ND
2398.04	AST2-EC	1.00	15.57	80.41	188	ND
2398.05	AST2-SW	1.00	15.33	86.05	178	628.91
2398.06	AST2-SB	1.00	15.46	82.04	185	ND
2398.07	AST2-SE	1.00	15.15	79.28	196	ND
2398.08	AST2-S	1.00	15.77	88.11	169	536.86
2398.09	AST2-P6	1.00	15.96	82.74	178	ND
METHOD BLANK	24-Mar-97	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

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 ✓
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 11/25/97

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project #2401
Date Rec. 03/20/97
Date Comp. 03/26/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

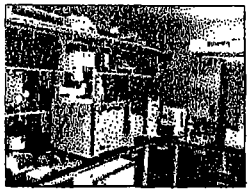
	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	__ NA __	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)	__	✓

Additional 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.

Daniel K. Wright
Laboratory Manager



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: SMC/David Daniels/ Chuck Appleby
( )DERA (X)OMA ( )Other:

Project No: 2429

Location: Area 74

Sampler's Signature: David H. Daniels

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH	Analysis Parameters: % Solids	Comments: Remarks / Preservation Method
2401.01	AST-E1	3.20.97	15:15	Soil	X	X	
2401.02	AST-E2		15:20				
.03	AST-E3		15:25				
.04	AST-E4		15:30				
.05	AST-E5		15:35				
.06	AST-E6		15:40				
.07	AST-E7		15:45				
.08	AST-E8	3.21.97	12:05				
.09	AST-E9		12:10				
.10	AST-E10		13:20				
.11	AST-E11		13:30				
.12	AST-E12		13:35				
.13	AST-E13		13:40				
.14	AST-E14		13:45				

Relinquished by (signature)	Date/Time	Received by (signature)	Relinquished by (signature)	Date/Time	Received by (signature)
David H. Daniels	3.21.97 15:15	Bob Sommer 3-21-97			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

print legibly

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: SMC/David Daniels/Chuck Appleby ( )DERA (X)OMA ( )Other: | Project No: 2429 | Location: Area 74

Sampler's Signature: David H. Daniels

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH	Analysis Parameters: % Solids	Comments: Remarks / Preservation Method
2401.15	AST-E15	3.21.97	13:50	Soil	X	X	
.16	AST-E16	3.21.97	13:55	Soil	X	X	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	3.21.97 15:15	3-21-97			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

print legibly

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

Client :	**U.S. Army**	**Lab. ID # :**	**2401**
	DPW. SELFM-PW-EV	**Date Rec'd:**	**20-Mar-97**
	Bldg. 173	**Analysis Start:**	**25-Mar-97**
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	**26-Mar-97**
Analysis:	**OQA-QAM-025**	**UST Reg. #:**	
Matrix:	**Soil**	**Closure #:**	
Analyst:	**P. Skelton**	**DICAR #:**	
Ext. Meth:	**Shake**	**Location #:**	**Area 74**

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2401.01	AST-E1	1.00	15.13	52.90	294	0.00
2401.02	AST-E2	1.00	15.50	78.82	192	265.67
2401.03	AST-E3	1.00	15.20	78.54	197	0.00
2401.04	AST-E4	1.00	15.37	53.69	285	282.85
2401.05	AST-E5	1.00	15.73	78.61	190	0.00
2401.06	AST-E6	1.00	15.23	77.73	199	190.19
2401.07	AST-E7	1.00	15.22	77.42	199	0.00
2401.08	AST-E8	1.00	15.02	84.03	186	560.05
2401.09	AST-E9	1.00	15.87	81.82	181	0.00
2401.10	AST-E10	1.00	15.31	81.65	188	0.00
2401.11	AST-E11	1.00	15.35	88.58	173	166.33
2401.12	AST-E12	1.00	15.79	81.48	183	0.00
2401.13	AST-E13	1.00	15.16	83.50	186	0.00
2401.14	AST-E14	1.00	15.00	81.81	192	284.65
2401.15	AST-E15	1.00	15.69	77.58	193	187.80
2401.16	AST-E16	1.00	15.01	77.98	201	188.38
METHOD BLANK		1.00	15.00	100.00	157	0.00

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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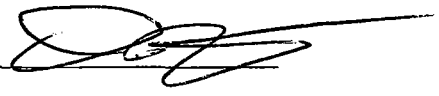
It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

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 11/25/97

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project #2404
Date Rec. 03/24/97
Date Comp. 03/28/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	__ NA __	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)	__	✓

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@di im6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Page 1 of 1

Customer: SMC / David H. Daniels / Chuck Appleby
( )DERA (X)OMA ( )Other:

Project No: 2429

Location: Area 74

Sampler's Signature: David H. Daniels

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH	Analysis Parameters: % Solids	Comments: Remarks / Preservation Method
2404-01	AST. E17	3.24.97	11:15		X	X	
2404-02	AST- E18		11:30				
2404-03	AST- E19		11:20				
2404-04	FP - 1		11:35				
2404-05	FP - 2		11:40				
102.98							

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	3/25/97 0915				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

print legibly

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

Client :	U.S. Army	**Lab. ID # :**	2404
	DPW. SELFM-PW-EV	**Date Rec'd:**	24-Mar-97
	Bldg. 173	**Analysis Start:**	28-Mar-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	28-Mar-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	Area 74

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2404.01	AST-E17	1.00	15.66	77.83	193	0.00
2404.02	AST-E18	1.00	15.71	86.39	173	0.00
2404.03	AST-E19	1.00	15.27	81.77	188	0.00
2404.04	FP-1	1.00	15.87	84.95	174	0.00
2404.05	FP-2	1.00	15.82	87.46	170	0.00
METHOD BLANK		1.00	15.00	100.00	157	0.00

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

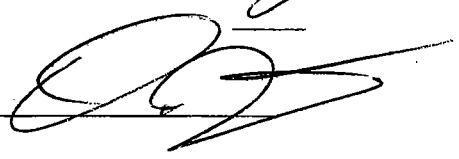
LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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 ✓
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 11/25/97

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project #2405
Date Rec. 03/25/97
Date Comp. 03/28/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
5. IR Spectra submitted for standards, blanks, & samples	__ NA __	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met.	__	✓

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

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Page 1 of 1

Customer: SMC/David Daniels/ Chuck Appleby ( )DERA (X)OMA ( )Other:	Project No: 2429	Location: Area 74	Analysis Parameters	Comments:
Sampler's Signature: David H. Daniels				

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	TPH	% Solids	Remarks / Preservation Method
2405.1	AST2-SP2R	3.25.97	9:45	Soil	X	X	composite sample

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	3.25.97 13:10				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

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

Client :	U.S. Army	**Lab. ID # :**	2405
	DPW. SELFM-PW-EV	**Date Rec'd:**	25-Mar-97
	Bldg. 173	**Analysis Start:**	28-Mar-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	28-Mar-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	Area 74

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2405.01	AST2-SP2R	1.00	15.14	87.58	177	117.73
METHOD BLANK		1.00	15.00	100.00	157	0.00

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

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	✓
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 11/25/97

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project #2406
Date Rec. 03/25/97
Date Comp. 03/28/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.		✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	NA	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		✓
7. Analysis holding time met. (If not met, list number of days exceeded for each sample)		✓

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Page 1 of 1

Customer: SMC/ David Daniels/ Chuck Appleby
( )DERA (X)OMA ( )Other:

Project No: 2429

Location: Area 74

Sampler's Signature: David H. Daniels

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	Analysis Parameters: TPH	Analysis Parameters: % solids	Comments: Remarks / Preservation Method
2406.01	AST2-P1R	3.25.97	9:20	Soil	X	X	
02	AST2-P1N	↓	9:25	↓	↓	↓	
03	AST2-P1E	↓	9:30	↓	↓	↓	
04	AST2-P1W	↓	9:35	↓	↓	↓	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	3-25-97 13:10	[signature] 3-25-97			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Relinquished by (signature):	Date/Time:	Received for laboratory by (signature):	Date/Time:	Remarks:	

print legibly

Custody.xls3/13/97

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

Client :	**U.S. Army**	**Lab. ID # :**	**2406**
	DPW. SELFM-PW-EV	**Date Rec'd:**	**25-Mar-97**
	Bldg. 173	**Analysis Start:**	**28-Mar-97**
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	**28-Mar-97**
Analysis:	**OQA-QAM-025**	**UST Reg. #:**	
Matrix:	**Soil**	**Closure #:**	
Analyst:	**P. Skelton**	**DICAR #:**	
Ext. Meth:	**Shake**	**Location #:**	**Area 74**

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2406.01	AST2-P1R	1.00	15.43	87.23	175	**137.79**
2406.02	AST2-P1N	1.00	15.02	89.47	175	**0.00**
2406.03	AST2-P1E	1.00	15.62	91.02	165	**0.00**
2406.04	AST2-P1W	1.00	15.43	88.96	171	**0.00**
METHOD BLANK		1.00	15.00	100.00	157	**0.00**

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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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 11/25/97

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
2429
AREA-74

Project # 2452
Date Rec. 04/14/97
Date Comp. 04/16/97
Released by:

Daniel K. Wright
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).	__	✓
4. Duplicate Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).		✓
5. IR Spectra submitted for standards, blanks, & samples	__ NA __	
6. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.	__	✓
7. Analysis holding time met.	__	✓

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

Additional 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.

Daniel K. Wright
Laboratory Manager

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (908)532-4359 Fax (908)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: SMC / Chuck Appleby
Phone #: 610 265-2700
( )DERA (X)OMA ( )Other:
Project No: 2429
Location: Area 74
Samplers Name / Company : David H. Daniels / SMC

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: % Solids	Analysis Parameters: TPH	Comments: Remarks / Preservation Method
2452-01	74-B	4.14.97	13:40	Soil	1	X	X	
.02	74-N		13:45					
.03	74-N2		13:50					
.04	74-E		13:55					
.05	74-S		14:00					
.06	74-W		14:05					

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	4.14.97 1600	[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
Turnaround time: (X)Standard 4 wks, (X)Rush 5 Days, (_)ASAP Verbal ____ Hrs.

Remarks:

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

Client :	U.S. Army	**Lab. ID # :**	2452
	DPW. SELFM-PW-EV	**Date Rec'd:**	14-Apr-97
	Bldg. 173	**Analysis Start:**	16-Apr-97
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	16-Apr-97
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	P. Skelton	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	AREA 74

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
2452.01	74-B	1.00	16.10	71.32	205	ND
2452.02	74-N	1.00	16.21	79.23	183	ND
2452.03	74-N2	1.00	16.11	80.42	181	186.07
2452.04	74-E	1.00	15.94	81.46	181	ND
2452.05	74-S	1.00	16.90	82.64	168	ND
2452.06	74-W	1.00	15.30	81.75	188	ND
METHOD BLANK	15-Apr-97	1.00	15.00	100.00	157	ND

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

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	✓
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 11/21/07

Laboratory Certification #13461

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

APPENDIX B
GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732)532-6224 FAX: (732)532-3484
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
NJDEP LABORATORY CERTIFICATION # 13461

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

Bldg. 74

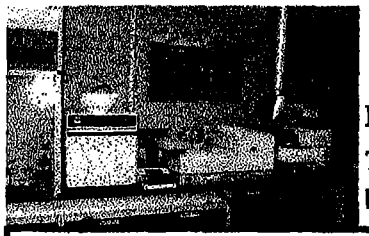
Field Location No. & Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	4148.01	Aqueous	18-Dec-98	12/18/98
74-1 5-9'	4148.02	Aqueous	18-Dec-98 10:00	12/18/98
74-1 5-9'	4148.03	Aqueous	18-Dec-98 10:10	12/18/98
74-2 5-9'	4148.04	Aqueous	18-Dec-98 10:41	12/18/98
74-2 5-9'	4148.05	Aqueous	18-Dec-98 11:14	12/18/98
74-3 5-9'	4148.06	Aqueous	18-Dec-98 13:20	12/18/98
74-3 5-9'	4148.07	Aqueous	18-Dec-98 14:30	12/18/98
74-4 5-9'	4148.08	Aqueous	18-Dec-98 13:30	12/18/98
74-4 5-9'	4148.09	Aqueous	18-Dec-98 13:45	12/18/98
74-5 5-9'	4148.10	Aqueous	18-Dec-98 14:11	12/18/98
74-5 5-9'	4148.11	Aqueous	18-Dec-98 14:20	12/18/98
Field Dup.	4148.12	Aqueous	18-Dec-98	12/18/98
Field Blank	4148.13	Aqueous	18-Dec-98 09:40	12/18/98

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

2-7-99
Daniel ~~Wright~~/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: CHAS. APPLEBY / VERSAR
Phone #: X 6024
( )DERA (X)OMA ( )Other:_____

Project No:
Location: BLDG. 74

Samplers Name / Company : MARK LAURA TKS. PHSO7

Lab Sample I.D.		Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: VOA + 15	Analysis Parameters: B/N + 15	Comments: Remarks / Preservation Method
4148	1	TRIP BLANK	12-18-98		AQ.	2	X		HCL
1	2	74-1 - 5-9'		1000	"	2	X		HCL
	3	" - "		1010	"	1		X	<4°C
	4	74-2 -		1041	"	2	X		HCL
	5	" -		1114	"	1		X	<4°C
	6	74-3 -		1320	"	2	X		HCL
	7	" -		1430	"	1		X	<4°C
	8	74-4 -		1330	"	2	X		HCL
	9	" -		1345	"	1		X	<4°C
	10	74-5 -		1411	"	2	X		HCL
	11	"		1420	"	1		X	<4°C
	12	FIELD DUP		-	"	3	X	X	HCL/<4°C
	13	FIELD BLANK		0940	"	3	X	X	HCL/<4°C

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	12-18-98 1515	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
		[signature]			

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified
Turnaround time: (X)Standard 4 wks, (_)Rush ____ Days, (_)ASAP Verbal ____ Hrs.

Remarks:

coc.XLS12/9/98

FIELD DOCUMENTATION

Post Remedial Groundwater Sampling at Former Underground Storage Tank Site [# 2 fuel oil]

FOR BLDG. # 74

Ground Water Sampling with the use of a Passively Placed Narrow Diameter Point (PPNDP)

Objective:

To collect a representative groundwater sample utilizing a narrow diameter point [PPNDP] This is a small diameter [1-inch OD] screened casing passively placed in a borehole. The casing is of p.v.c. construction.

1. Methods

A. A solid push - rod (bull point) is used to create a narrow diameter hole to a depth below the water table. A piece of schedule 40 PVC screen with 0.010-inch slots and an end cap is placed to the bottom of the hole. Glues or adhesives are not used for joining the casing. Threaded PVC casing is used. No filter or gravel pack is used.

2. Installation

A. Using a Geoprobe, a borehole was advanced with a pre-probe with a diameter slightly larger than the casing. The hole was made to a depth of 10 feet. The water table was at 5 feet below ground surface.

B. The screened section of PVC was placed into the borehole so the screened section was across the ground water table from 5 -10 feet. Riser casing from 5 -0 feet. This location required the placement of five ppndp points. The area involved was an old fuel terminal and was large in area. The points were named 75B1 – 75B5.

3. Purging

A. Three volumes of the standing water in the point were purged. The amount of water extracted was app. 0.123 gal. Three to five volumes are purged due to the potential for cross contamination of the screen from upper soil horizons. This was accomplished utilizing a peristaltic pump, and utilizing food grade tubing.

4. Sampling

A. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. Any deviations from the methods in the "Field

Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E-1.6(c) has been approved by the person responsible for conducting the remediation.

All samples were preserved in the field immediately after collection and submitted to the laboratory as soon as possible and no later than 48 hours after sample collection.

The acquisition of samples and water level measurements were performed as recommended and described in the May 1992 edition of NJDEP Field Sampling Procedures Manual.

5. Quality Assurance/Quality Control

A. Decontamination

The associated equipment (bull point, riser pipe, etc.) was decontaminated between borings using the following procedure:

1. Remove all adherent soil material.
2. Wash with a laboratory grade glassware detergent.
3. Rinsed with potable water.
4. Rinse with distilled and deionized ASTM Type II water.

B. Field Blanks

1 Field blank was taken at this location.

C. Sample bottles: Supplied by Environmental Sampling Supply, Oakland, Calif. The sample bottles are certified clean and are sealed upon delivery.

D. P.V.C. Screens: Supplied by Bedrock Enterprises, Forked River N.J.

Geoprobe Operator: Mark Laura
Employer: U.S. Army, Fort Monmouth
Phone Number: [732] 532-8990
NJDEP License #: J-1486

Mark Laura 12-30-98
Mark Laura / Date

METHODOLOGY 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 3510/8270
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.

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:	yes
a. VOA Fraction ____	
b. B/N Fraction bis(2-ethylhexyl)phthalate, MTB @ 27.53 ppb	
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)	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 NA

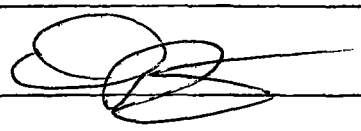
11. Extraction Holding Time Met — Yes

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: 2-7-99

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 4148 **Site:** Bldg. 74

	Date	Hold Time
Date Sampled	12/18/98	NA
Receipt/Refrigeration	12/18/98	NA
Extractions		
1. Base Neutrals	12/21/98	14 days
Analyses		
1. Volatile Organics	12/28,29/98	14 days
2. Base Neutrals	12/28,29/98	40 days

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit
J : Compound identified below detection limit
B : Compound in both sample and blank
D : Results from dilution of sample
U : Compound searched for but not detected

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

Data File Nam	**vb02437.d**	Sample Name	**Vblk76**
Operator	**Skelton**	Field ID	**Vblk76**
Date Acquired	**28 Dec 98 9:59 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: **Vblk76**

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: Vblk76

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02437.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/28/98

GC Column: HP5MS 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 Nam	**vb02450.d**	Sample Name	**4148.01**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Acquired	**28 Dec 98 8:25 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: **Trip Blank**

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: 4148.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02450.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/28/98

GC Column: HP5MS 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 Nam	**vb02457.d**	Sample Name	**4148.13**
Operator	**Skelton**	Field ID	**Field Blank**
Date Acquired	**29 Dec 98 1:41 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: **Field Blank**

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: 4148.13

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02457.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/29/98

GC Column: HP5MS 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 Nam	**vb02451.d**	Sample Name	**4148.02**
Operator	**Skelton**	Field ID	**74-1**
Date Acquired	**28 Dec 98 9:09 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: 74-1

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: 4148.02

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02451.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/28/98

GC Column: HP5MS 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 Nam	**vb02452.d**	Sample Name	**4148.04**
Operator	**Skelton**	Field ID	**74-2**
Date Acquired	**28 Dec 98 9:58 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	10.52	79732	6.43 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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: 74-2

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix: (soil/water) WATER Lab Sample ID: 4148.04

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02452.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/28/98

GC Column: HP5MS 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 Nam	**vb02453.d**	Sample Name	**4148.06**
Operator	**Skelton**	Field ID	**74-3**
Date Acquired	**28 Dec 98 10:42 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	10.52	94656	7.64 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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: 74-3

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: 4148.06

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02453.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/28/98

GC Column: HP5MS 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 Nam	**vb02454.d**	Sample Name	**4148.08**
Operator	**Skelton**	Field ID	**74-4**
Date Acquired	**28 Dec 98 11:27 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: 74-4

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: 4148.08

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02454.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/28/98

GC Column: HP5MS 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 Nam	**vb02455.d**	Sample Name	**4148.10**
Operator	**Skelton**	Field ID	**74-5**
Date Acquired	**29 Dec 98 12:12 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: 74-5

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: 4148.10

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02455.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/29/98

GC Column: HP5MS 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 Nam	**vb02456.d**	Sample Name	**4148.12**
Operator	**Skelton**	Field ID	**Field Dup**
Date Acquired	**29 Dec 98 12:56 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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	Dichlorodifluoromethan			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	
75-35-3	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	
	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 ethe			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-Dichloroprope			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-Tetrachloroethan			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

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

FIELD ID: **Field Dup**

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4148 SDG No _____ Location UST

Matrix (soil/water) WATER Lab Sample ID: 4148.12

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02456.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: not dec. _____ Date Analyzed: 12/29/98

GC Column: HP5MS 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

BASE NEUTRAL

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

Data File Name	BNA01737.D	Sample Name	Sblk185
Operator	Skelton	Misc Info	Sblk185 A 98122
Date Acquired	28 Dec 1998 10:05 pm	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifier
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64	ug/L	
62-53-3	Aniline			not detected	NLE	2.90	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
78-59-1	Isophorone			not detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene			not detected	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene			not detected	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

Sblk185

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Sblk185

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01737.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/28/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File Name	bna01745.d	Sample Name	4148.13
Operator	Skelton	Misc Info	Field Blank
Date Acquired	29 Dec 1998 3:41 am	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifier
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64	ug/L	
62-53-3	Aniline			not detected	NLE	2.90	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
78-59-1	Isophorone			not detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene			not detected	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene			not detected	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate	24.48	2575404	27.53 ug/L	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

Field Blank

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4148.13

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01745.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/29/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File Name	**bna01739.d**	Sample Name	**4148.03**
Operator	**Skelton**	Misc Info	**74-1**
Date Acquired	**28 Dec 1998 11:29 pm**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifier
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64	ug/L	
62-53-3	Aniline			not detected	NLE	2.90	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
78-59-1	Isophorone			not detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene			not detected	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene			not detected	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

74-1

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4148.03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01739.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/28/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File Name	bna01740.d	Sample Name	4148.05
Operator	Skelton	Misc Info	74-2
Date Acquired	29 Dec 1998 12:11 am	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifier
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64	ug/L	
62-53-3	Aniline			not detected	NLE	2.90	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
78-59-1	Isophorone			not detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene			not detected	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene			not detected	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

74-2

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4148.05

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01740.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/29/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File Name	bna01741.d	Sample Name	4148.07
Operator	Skelton	Misc Info	74-3
Date Acquired	29 Dec 1998 12:53 am	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifier
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64	ug/L	
62-53-3	Aniline			not detected	NLE	2.90	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
78-59-1	Isophorone			not detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene	20.46	398362	2.67 ug/L	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene	20.94	329330	2.02 ug/L	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

74-3

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4148.07

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01741.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/29/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File Name	bna01742.d	Sample Name	4148.09
Operator	Skelton	Misc Info	74-4
Date Acquired	29 Dec 1998 1:36 am	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifier
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64	ug/L	
62-53-3	Aniline			not detected	NLE	2.90	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
78-59-1	Isophorone			not detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene			not detected	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene			not detected	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

74-4

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4148.09

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01742.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/29/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File Name	bna01743.d	Sample Name	4148.11
Operator	Skelton	Misc Info	74-5
Date Acquired	29 Dec 1998 2:18 am	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
110-86-1	Pyridine			not detected	NLE	2.52 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64 ug/L	
62-53-3	Aniline			not detected	NLE	2.90 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22 ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59 ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45 ug/L	
78-59-1	Isophorone			not detected	100	2.31 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58 ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62 ug/L	
83-32-9	Acenaphthene			not detected	400	1.98 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22 ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68 ug/L	
86-73-7	Fluorene			not detected	300	1.93 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73 ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88 ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67 ug/L	
120-12-7	Anthracene			not detected	2000	1.79 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83 ug/L	
206-44-0	Fluoranthene	20.46	357277	2.49 ug/L	300	1.85 ug/L	
92-87-5	Benzidine			not detected	50	4.11 ug/L	
129-00-0	Pyrene	20.95	291389	1.87 ug/L	200	1.02 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28 ug/L	
218-01-9	Chrysene			not detected	20	2.32 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13 ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

74-5

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4148.11

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01743.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/29/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File Name	bna01744.d	Sample Name	4148.12
Operator	Skelton	Misc Info	Field Dup
Date Acquired	29 Dec 1998 2:59 am	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL		Qualifier
110-86-1	Pyridine			not detected	NLE	2.52	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.64	ug/L	
62-53-3	Aniline			not detected	NLE	2.90	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.45	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	2.65	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	2.50	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.09	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	2.44	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	2.96	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.22	ug/L	
67-72-1	Hexachloroethane			not detected	10	2.59	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.45	ug/L	
78-59-1	Isophorone			not detected	100	2.31	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.54	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.58	ug/L	
91-20-3	Naphthalene			not detected	NLE	3.03	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	2.55	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.64	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	2.49	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.59	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.15	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.62	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.74	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.35	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.54	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.62	ug/L	
83-32-9	Acenaphthene			not detected	400	1.98	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	2.13	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.22	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.68	ug/L	
86-73-7	Fluorene			not detected	300	1.93	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.53	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.70	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.73	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.92	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.54	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.88	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.67	ug/L	
120-12-7	Anthracene			not detected	2000	1.79	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.83	ug/L	
206-44-0	Fluoranthene			not detected	300	1.85	ug/L	
92-87-5	Benzidine			not detected	50	4.11	ug/L	
129-00-0	Pyrene			not detected	200	1.02	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.15	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.57	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	2.28	ug/L	
218-01-9	Chrysene			not detected	20	2.32	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.30	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.31	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.57	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.36	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.22	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	3.12	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.13	ug/L	

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

Qualifiers

E = Value exceeded 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 FIELD ID

TENTATIVELY IDENTIFIED COMPOUNDS

Field Dup

Lab Name: FMETL Lab Code 13461

Project 980211 Case No.: 4148 Location 74 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4148.12

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA01744.D

Level: (low/med) LOW Date Received: 12/18/98

% Moisture: decanted: (Y/N) N Date Extracted: 12/21/98

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/29/98

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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** ✓
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 2/7/99

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)532-6224 FAX: (732)532-6263
WET-CHEM - METALS - ORGANICS - FIELD SAMPLING
NJDEP LABORATORY CERTIFICATION # 13461

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

Bldg. 74

Field Location No. & Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	4210.01	Aqueous	25-Jan-99	01/25/99
Field Blank	4210.02	Aqueous	25-Jan-99 13:00	01/25/99
Bldg. 74/ #4	4210.03	Aqueous	25-Jan-99 13:15	01/25/99
Bldg. 74/#5	4210.04	Aqueous	25-Jan-99 14:35	01/25/99
Bldg. 74/#3	4210.05	Aqueous	25-Jan-99 15:10	01/25/99

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

3-4-99
Daniel Wright/Date
Laboratory Director

Table of Contents

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:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Charles Appleby
Phone #: X26234
( )DERA (✓)OMA ( )Other:_____

Project No:
Location: Bldg 74 UST
Partial (21 of 41) 2nd Round

Samplers Name / Company : Corey McCormack, TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	VOA's	BN's					HNU	Comments: Remarks / Preservation Method
42610. .01	Trip	1/25/99	0730	AQ	2	✓							HCL / 4°C
.02	Field Blank		1300		3	✓	✓					~~✓~~ cpm	
.03	Bldg 74 #4		1315		3	✓	✓					✓	0.0 2.17 ft
.04	Bldg 74 #5		1435		3	✓	✓					✓	0.0 2.21 ft
.05	Bldg 74 #63 cpm		1510		3	✓	✓					✓	0.0 2.10 ft
													#Could not get to #1 & #2 due to very wet field. Truck sinking/getting stuck, waiting for drying. cpm

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Corey McCormack	1/25/99 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
Turnaround time: (✓)Standard 4 wks, (_)Rush ___ Days, (_)ASAP Verbal ___ Hrs.

Remarks: Shows Trip/Blank w/ 65. Shows Age from 65. cpm

200000

print legibly

coc1/20/99

FIELD DOCUMENTATION

Post Remedial Groundwater Sampling at Former Underground Storage Tank Site [# 2 fuel oil]

FOR BLDG. # 74

Ground Water Sampling with the use of a Passively Placed Narrow Diameter Point (PPNDP)

Objective:

To collect a representative groundwater sample utilizing a narrow diameter point [PPNDP] This is a small diameter [1-inch OD] screened casing passively placed in a borehole. The casing is of p.v.c. construction.

1. Methods

A. A solid push - rod (bull point) is used to create a narrow diameter hole to a depth below the water table. A piece of schedule 40 PVC screen with 0.010-inch slots and an end cap is placed to the bottom of the hole. Glues or adhesives are not used for joining the casing. Threaded PVC casing is used. No filter or gravel pack is used.

2. Installation

A. Using a Geoprobe, a borehole was advanced with a pre-probe with a diameter slightly larger than the casing. The hole was made to a depth of 10 feet. The water table was at 5 feet below ground surface.

B. The screened section of PVC was placed into the borehole so the screened section was across the ground water table from 5 -10 feet. Riser casing from 5 -0 feet. This location required the placement of five ppndp points. The area involved was an old fuel terminal and was large in area. The points were named 75B1 – 75B5.

3. Purging

A. Three volumes of the standing water in the point were purged. The amount of water extracted was app. 0.123 gal. Three to five volumes are purged due to the potential for cross contamination of the screen from upper soil horizons. This was accomplished utilizing a peristaltic pump, and utilizing food grade tubing.

4. Sampling

A. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. Any deviations from the methods in the "Field

Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E-1.6(c) has been approved by the person responsible for conducting the remediation.

All samples were preserved in the field immediately after collection and submitted to the laboratory as soon as possible and no later than 48 hours after sample collection.

The acquisition of samples and water level measurements were performed as recommended and described in the May 1992 edition of NJDEP Field Sampling Procedures Manual.

5. Quality Assurance/Quality Control

A. Decontamination

The associated equipment (bull point, riser pipe, etc.) was decontaminated between borings using the following procedure:

1. Remove all adherent soil material.
2. Wash with a laboratory grade glassware detergent.
3. Rinsed with potable water.
4. Rinse with distilled and deionized ASTM Type II water.

B. Field Blanks

1 Field blank was taken at this location.

C. Sample bottles: Supplied by Environmental Sampling Supply, Oakland, Calif. The sample bottles are certified clean and are sealed upon delivery.

D. P.V.C. Screens: Supplied by Bedrock Enterprises, Forked River N.J.

Geoprobe Operator: Mark Laura
Employer: U.S. Army, Fort Monmouth
Phone Number: [732] 532-8990
NJDEP License #: J-1486

Mark Laura 12-30-98
Mark Laura / Date

METHODOLOGY 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 3510/8270
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.

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: — yes
   a. VOA Fraction _____
   b. B/N Fraction bis (2-Ethylhexyl) phthalate @ 1.33 ug/l
   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 _____
   b. B/N Fraction All Surrogates Low Bldg 74 #5
   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 — 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

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:
Bldg 74 #5: No Volume to re-extract due to low surrogates

Laboratory Manager: _____ Date: 3-4-99

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 4210

Site: Bldg. 74

	Date	Hold Time
Date Sampled	01/25/99	NA
Receipt/Refrigeration	01/25/99	NA
Extractions		
1. Base Neutrals	01/26/99	7 Days
Analyses		
1. Volatile Organics	02/5/99	14 Days
2. Base Neutrals	01/26,27/99	40 Days

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit
J : Compound identified below detection limit
B : Compound in both sample and blank
D : Results from dilution of sample
U : Compound searched for but not detected

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

Data File	**V05694.D**	Sample Name	**Vblk155**
Operator	**Skelton**	Field ID	**Vblk155**
Date Acquired	**5 Feb 1999 10:41 am**	Sample Multiplie	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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: **Vblk155**

Lab Name: FMETL Project 980932

NJDEP # 13461 Case No.: 4210 Location UST SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Vblk155

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: V05694.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: not dec. Date Analyzed: 2/5/99

GC Column: RTX-502 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	**V05695.D**	Sample Name	**4210.01**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Acquired	**5 Feb 1999 11:37 am**	Sample Multiplie	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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 Project 980932

NJDEP # 13461 Case No.: 4210 Location UST SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4210.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: V05695.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: not dec. Date Analyzed: 2/5/99

GC Column: RTX-502 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: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	14.25	8	JN

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

Data File	**V05696.D**	Sample Name	**4210.02**
Operator	**Skelton**	Field ID	**Field Blank**
Date Acquired	**5 Feb 1999 12:19 pm**	Sample Multiplie	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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: **Field Blank**

Lab Name: FMETL Project 980932

NJDEP # 13461 Case No.: 4210 Location UST SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4210.02

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: V05696.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: not dec. Date Analyzed: 2/5/99

GC Column: RTX-502 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: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	14.25	17	JN

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

Data File	**V05697.D**	Sample Name	**4210.03**
Operator	**Skelton**	Field ID	**Bldg74 #4**
Date Acquired	**5 Feb 1999 1:00 pm**	Sample Multiplie	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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: **Bldg74#4**

Lab Name: FMETL Project 980932

NJDEP # 13461 Case No.: 4210 Location UST SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4210.03

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: V05697.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: not dec. Date Analyzed: 2/5/99

GC Column: RTX-502 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: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	14.23	7	JN

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

Data File	**V05698.D**	Sample Name	**4210.04**
Operator	**Skelton**	Field ID	**Bldg74 #5**
Date Acquired	**5 Feb 1999 1:42 pm**	Sample Multiplie	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Bldg74#5**

Lab Name: FMETL Project 980932

NJDEP # 13461 Case No.: 4210 Location UST SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4210.04

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: V05698.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: not dec. Date Analyzed: 2/5/99

GC Column: RTX-502 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: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	14.25	16	JN

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

Data File	**V05699.D**	Sample Name	**4210.05**
Operator	**Skelton**	Field ID	**Bldg74 #3**
Date Acquired	**5 Feb 1999 2:24 pm**	Sample Multiplie	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifiers
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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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: **Bldg74#3**

Lab Name: FMETL Project 980932

NJDEP # 13461 Case No.: 4210 Location UST SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 4210.05

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: V05699.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: not dec. Date Analyzed: 2/5/99

GC Column: RTX-502 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: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000110-54-3	Hexane	14.26	15	JN

BASE NEUTRAL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	BN02696.D	Sample Name	Sblk196
Operator	Bhaskar	Misc Info	Sblk196 A 990126
Date Acquired	26-Jan-99	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94	ug/L	
62-53-3	Aniline			not detected	NLE	0.15	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.61	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.46	ug/L	
78-59-1	Isophorone			not detected	100	0.35	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	0.26	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.25	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.25	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	0.19	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.38	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.16	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.50	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.21	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.26	ug/L	
83-32-9	Acenaphthene			not detected	400	0.26	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.36	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.82	ug/L	
86-73-7	Fluorene			not detected	300	0.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.31	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	0.90	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.23	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.80	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.55	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.82	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.18	ug/L	
120-12-7	Anthracene			not detected	2000	0.19	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.23	ug/L	
206-44-0	Fluoranthene			not detected	300	0.41	ug/L	
92-87-5	Benzidine			not detected	50	1.45	ug/L	
129-00-0	Pyrene			not detected	200	0.32	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.47	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.22	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.46	ug/L	
218-01-9	Chrysene			not detected	20	0.20	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate	24.54	51621	1.33 ug/L	30	0.51	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.82	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.37	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.32	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.31	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.79	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.28	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.40	ug/L	

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

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: **Sblk196**

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4210 Location: 74 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: Sblk196

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN02696.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: decanted: (Y/N) N Date Extracted: 1/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/26/99

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	BN02701.D	Sample Name	4210.02
Operator	Bhaskar	Misc Info	Field Blank
Date Acquired	26-Jan-99	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94	ug/L	
62-53-3	Aniline			not detected	NLE	0.15	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.61	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.46	ug/L	
78-59-1	Isophorone			not detected	100	0.35	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	0.26	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.25	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.25	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	0.19	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.38	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.16	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.50	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.21	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.26	ug/L	
83-32-9	Acenaphthene			not detected	400	0.26	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.36	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.82	ug/L	
86-73-7	Fluorene			not detected	300	0.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.31	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	0.90	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.23	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.80	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.55	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.82	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.18	ug/L	
120-12-7	Anthracene			not detected	2000	0.19	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.23	ug/L	
206-44-0	Fluoranthene			not detected	300	0.41	ug/L	
92-87-5	Benzidine			not detected	50	1.45	ug/L	
129-00-0	Pyrene			not detected	200	0.32	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.47	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.22	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.46	ug/L	
218-01-9	Chrysene			not detected	20	0.20	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate	24.54	50140	1.26 ug/L	30	0.51	ug/L	B
117-84-0	Di-n-octylphthalate			not detected	100	0.82	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.37	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.32	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.31	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.79	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.28	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.40	ug/L	

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

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: **Field Blank**

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4210 Location: 74 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 4210.02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN02701.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: decanted: (Y/N) N Date Extracted: 1/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/26/99

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	BN02702.D	Sample Name	4210.03
Operator	Bhaskar	Misc Info	Bldg74#4
Date Acquired	26-Jan-99	Sample Multiplier	1.11

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.55	ug/L	D
62-75-9	N-nitroso-dimethylamine			not detected	20	1.04	ug/L	D
62-53-3	Aniline			not detected	NLE	0.17	ug/L	D
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.53	ug/L	D
106-46-7	1,4-Dichlorobenzene			not detected	75	0.26	ug/L	D
100-51-6	Benzyl alcohol			not detected	NLE	0.20	ug/L	D
95-50-1	1,2-Dichlorobenzene			not detected	600	0.18	ug/L	D
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.68	ug/L	D
67-72-1	Hexachloroethane			not detected	10	0.37	ug/L	D
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	D
78-59-1	Isophorone			not detected	100	0.39	ug/L	D
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.51	ug/L	D
65-85-0	Benzoic Acid			not detected	NLE	0.29	ug/L	D
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.28	ug/L	D
91-20-3	Naphthalene			not detected	NLE	0.28	ug/L	D
106-47-8	4-Chloroaniline			not detected	NLE	0.21	ug/L	D
87-68-3	Hexachlorobutadiene			not detected	1	0.42	ug/L	D
91-57-6	2-Methylnaphthalene			not detected	NLE	0.18	ug/L	D
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.67	ug/L	D
91-58-7	2-Chloronaphthalene			not detected	NLE	0.36	ug/L	D
88-74-4	2-Nitroaniline			not detected	NLE	0.23	ug/L	D
131-11-3	Dimethylphthalate			not detected	7000	0.20	ug/L	D
208-96-8	Acenaphthylene			not detected	NLE	0.21	ug/L	D
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.34	ug/L	D
99-09-2	3-Nitroaniline			not detected	NLE	0.29	ug/L	D
83-32-9	Acenaphthene			not detected	400	0.29	ug/L	D
132-64-9	Dibenzofuran			not detected	NLE	0.36	ug/L	D
121-14-2	2,4-Dinitrotoluene			not detected	10	0.40	ug/L	D
84-66-2	Diethylphthalate			not detected	5000	0.91	ug/L	D
86-73-7	Fluorene			not detected	300	0.32	ug/L	D
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.34	ug/L	D
100-01-6	4-Nitroaniline			not detected	NLE	1.00	ug/L	D
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.26	ug/L	D
103-33-3	Azobenzene			not detected	NLE	0.89	ug/L	D
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.61	ug/L	D
118-74-1	Hexachlorobenzene			not detected	10	0.91	ug/L	D
85-01-8	Phenanthrene			not detected	NLE	0.20	ug/L	D
120-12-7	Anthracene			not detected	2000	0.21	ug/L	D
84-74-2	Di-n-butylphthalate			not detected	900	0.26	ug/L	D
206-44-0	Fluoranthene			not detected	300	0.46	ug/L	D
92-87-5	Benzidine			not detected	50	1.61	ug/L	D
129-00-0	Pyrene			not detected	200	0.36	ug/L	D
85-68-7	Butylbenzylphthalate			not detected	100	0.52	ug/L	D
56-55-3	Benzo[a]anthracene			not detected	10	0.24	ug/L	D
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.51	ug/L	D
218-01-9	Chrysene			not detected	20	0.22	ug/L	D
117-81-7	bis(2-Ethylhexyl)phthalate	24.54	50945	1.48 ug/L	30	0.57	ug/L	D B
117-84-0	Di-n-octylphthalate			not detected	100	0.91	ug/L	D
205-99-2	Benzo[b]fluoranthene			not detected	10	0.41	ug/L	D
207-08-9	Benzo[k]fluoranthene			not detected	2	0.36	ug/L	D
50-32-8	Benzo[a]pyrene			not detected	20	0.34	ug/L	D
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.88	ug/L	D
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.31	ug/L	D
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.44	ug/L	D

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

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: **Bdg74#4**

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4210 Location: 74 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 4210.03

Sample wt/vol: 901 (g/ml) ML Lab File ID: BN02702.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: decanted: (Y/N) N Date Extracted: 1/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/26/99

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	**BN02703.D**	Sample Name	**4210.04**
Operator	**Bhaskar**	Misc Info	**Bldg74#5**
Date Acquired	**27-Jan-99**	Sample Multiplier	**1.04**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.20	ug/L	D
62-75-9	N-nitroso-dimethylamine			not detected	20	0.98	ug/L	D
62-53-3	Aniline			not detected	NLE	0.16	ug/L	D
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.50	ug/L	D
106-46-7	1,4-Dichlorobenzene			not detected	75	0.24	ug/L	D
100-51-6	Benzyl alcohol			not detected	NLE	0.19	ug/L	D
95-50-1	1,2-Dichlorobenzene			not detected	600	0.17	ug/L	D
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.63	ug/L	D
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	D
98-95-3	Nitrobenzene			not detected	10	0.48	ug/L	D
78-59-1	Isophorone			not detected	100	0.36	ug/L	D
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	D
65-85-0	Benzoic Acid			not detected	NLE	0.27	ug/L	D
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.26	ug/L	D
91-20-3	Naphthalene			not detected	NLE	0.26	ug/L	D
106-47-8	4-Chloroaniline			not detected	NLE	0.20	ug/L	D
87-68-3	Hexachlorobutadiene			not detected	1	0.40	ug/L	D
91-57-6	2-Methylnaphthalene			not detected	NLE	0.17	ug/L	D
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.56	ug/L	D
91-58-7	2-Chloronaphthalene			not detected	NLE	0.33	ug/L	D
88-74-4	2-Nitroaniline			not detected	NLE	0.22	ug/L	D
131-11-3	Dimethylphthalate			not detected	7000	0.19	ug/L	D
208-96-8	Acenaphthylene			not detected	NLE	0.20	ug/L	D
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.32	ug/L	D
99-09-2	3-Nitroaniline			not detected	NLE	0.27	ug/L	D
83-32-9	Acenaphthene			not detected	400	0.27	ug/L	D
132-64-9	Dibenzofuran			not detected	NLE	0.33	ug/L	D
121-14-2	2,4-Dinitrotoluene			not detected	10	0.37	ug/L	D
84-66-2	Diethylphthalate			not detected	5000	0.85	ug/L	D
86-73-7	Fluorene			not detected	300	0.30	ug/L	D
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.32	ug/L	D
100-01-6	4-Nitroaniline			not detected	NLE	0.94	ug/L	D
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.24	ug/L	D
103-33-3	Azobenzene			not detected	NLE	0.83	ug/L	D
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.57	ug/L	D
118-74-1	Hexachlorobenzene			not detected	10	0.85	ug/L	D
85-01-8	Phenanthrene			not detected	NLE	0.19	ug/L	D
120-12-7	Anthracene			not detected	2000	0.20	ug/L	D
84-74-2	Di-n-butylphthalate			not detected	900	0.24	ug/L	D
206-44-0	Fluoranthene			not detected	300	0.43	ug/L	D
92-87-5	Benzidine			not detected	50	1.51	ug/L	D
129-00-0	Pyrene			not detected	200	0.33	ug/L	D
85-68-7	Butylbenzylphthalate			not detected	100	0.49	ug/L	D
56-55-3	Benzo[a]anthracene			not detected	10	0.23	ug/L	D
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.48	ug/L	D
218-01-9	Chrysene			not detected	20	0.21	ug/L	D
117-81-7	bis(2-Ethylhexyl)phthalate	24.54	62967	1.44 ug/L	30	0.53	ug/L	D B
117-84-0	Di-n-octylphthalate			not detected	100	0.85	ug/L	D
205-99-2	Benzo[b]fluoranthene			not detected	10	0.38	ug/L	D
207-08-9	Benzo[k]fluoranthene			not detected	2	0.33	ug/L	D
50-32-8	Benzo[a]pyrene			not detected	20	0.32	ug/L	D
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.82	ug/L	D
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.29	ug/L	D
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.42	ug/L	D

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

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: **Bdg74#5**

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4210 Location: 74 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 4210.04

Sample wt/vol: 960 (g/ml) ML Lab File ID: BN02703.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: decanted: (Y/N) N Date Extracted: 1/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/99

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	**BN02704.D**	Sample Name	**4210.05**
Operator	**Bhaskar**	Misc Info	**Bldg74#3**
Date Acquired	**27-Jan-99**	Sample Multiplier	**1.09**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.45	ug/L	D
62-75-9	N-nitroso-dimethylamine			not detected	20	1.02	ug/L	D
62-53-3	Aniline			not detected	NLE	0.16	ug/L	D
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.52	ug/L	D
106-46-7	1,4-Dichlorobenzene			not detected	75	0.25	ug/L	D
100-51-6	Benzyl alcohol			not detected	NLE	0.20	ug/L	D
95-50-1	1,2-Dichlorobenzene			not detected	600	0.17	ug/L	D
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.66	ug/L	D
67-72-1	Hexachloroethane			not detected	10	0.36	ug/L	D
98-95-3	Nitrobenzene			not detected	10	0.50	ug/L	D
78-59-1	Isophorone			not detected	100	0.38	ug/L	D
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.50	ug/L	D
65-85-0	Benzoic Acid			not detected	NLE	0.28	ug/L	D
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.27	ug/L	D
91-20-3	Naphthalene			not detected	NLE	0.27	ug/L	D
106-47-8	4-Chloroaniline			not detected	NLE	0.21	ug/L	D
87-68-3	Hexachlorobutadiene			not detected	1	0.41	ug/L	D
91-57-6	2-Methylnaphthalene			not detected	NLE	0.17	ug/L	D
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.64	ug/L	D
91-58-7	2-Chloronaphthalene			not detected	NLE	0.35	ug/L	D
88-74-4	2-Nitroaniline			not detected	NLE	0.23	ug/L	D
131-11-3	Dimethylphthalate			not detected	7000	0.20	ug/L	D
208-96-8	Acenaphthylene			not detected	NLE	0.21	ug/L	D
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.34	ug/L	D
99-09-2	3-Nitroaniline			not detected	NLE	0.28	ug/L	D
83-32-9	Acenaphthene			not detected	400	0.28	ug/L	D
132-64-9	Dibenzofuran			not detected	NLE	0.35	ug/L	D
121-14-2	2,4-Dinitrotoluene			not detected	10	0.39	ug/L	D
84-66-2	Diethylphthalate			not detected	5000	0.89	ug/L	D
86-73-7	Fluorene			not detected	300	0.32	ug/L	D
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.34	ug/L	D
100-01-6	4-Nitroaniline			not detected	NLE	0.98	ug/L	D
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.25	ug/L	D
103-33-3	Azobenzene			not detected	NLE	0.87	ug/L	D
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.60	ug/L	D
118-74-1	Hexachlorobenzene			not detected	10	0.89	ug/L	D
85-01-8	Phenanthrene			not detected	NLE	0.20	ug/L	D
120-12-7	Anthracene			not detected	2000	0.21	ug/L	D
84-74-2	Di-n-butylphthalate			not detected	900	0.25	ug/L	D
206-44-0	Fluoranthene			not detected	300	0.45	ug/L	D
92-87-5	Benzidine			not detected	50	1.58	ug/L	D
129-00-0	Pyrene			not detected	200	0.35	ug/L	D
85-68-7	Butylbenzylphthalate			not detected	100	0.51	ug/L	D
56-55-3	Benzo[a]anthracene			not detected	10	0.24	ug/L	D
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.50	ug/L	D
218-01-9	Chrysene			not detected	20	0.22	ug/L	D
117-81-7	bis(2-Ethylhexyl)phthalate	24.54	59474	1.61 ug/L	30	0.56	ug/L	D B
117-84-0	Di-n-octylphthalate			not detected	100	0.89	ug/L	D
205-99-2	Benzo[b]fluoranthene			not detected	10	0.40	ug/L	D
207-08-9	Benzo[k]fluoranthene			not detected	2	0.35	ug/L	D
50-32-8	Benzo[a]pyrene			not detected	20	0.34	ug/L	D
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.86	ug/L	D
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.31	ug/L	D
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.44	ug/L	D

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

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: **Bdg74#3**

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4210 Location: 74 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 4210.05

Sample wt/vol: 918 (g/ml) ML Lab File ID: BN02704.D

Level: (low/med) LOW Date Received: 1/25/99

% Moisture: decanted: (Y/N) N Date Extracted: 1/26/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/27/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

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** ✓
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 3/9/99

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.

3-4-99

Daniel K. Wright
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
NJDEP LABORATORY CERTIFICATION # 13461

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

Bldg. 74

Field Location No. & Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
Trip Blank	4252.01	Aqueous	05-Feb-99	02/05/99
Field Blank	4252.02	Aqueous	05-Feb-99 09:15	02/05/99
Bldg. 74 #2	4252.03	Aqueous	05-Feb-99 09:20	02/05/99
Bldg. 74 #1	4252.04	Aqueous	05-Feb-99 09:25	02/05/99

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

3-4-99
Daniel Wright/Date
Laboratory Director

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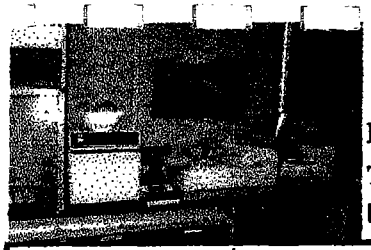
CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Charles Appleby
Phone #: X26224
( )DERA ( )OMA (✓)Other: _____
Project No:
Location: Bldg 74 USTs Con't
Samplers Name / Company : Corey McCormack, TV

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	V/O+15	B/N+15					H2SO4 pH<2	Comments: Remarks / Preservation Method
4252.01	Trip	2/5/99	0800	AQ	2	✓							HCL/4°C
.02	Field Blank		0915		3	✓	✓						
.03	Bldg 74		0920		3	✓	✓					✓	0.0
.04	" "		0925		3	✓	✓					✓	0.0

Analysis Parameters

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Corey McCormack	2/5/99 1050				

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: ( )Full, (✓)Reduced, ( )Standard, ( )Screen / non-certified
Turnaround time: (✓)Standard 4 wks, ( )Rush ___ Days, ( )ASAP Verbal ___ Hrs.

Remarks: shows Trip/Blank w/ 485. shows Dup from 485
Title: L → T

200000

print legibly

coc1/28/99

FIELD DOCUMENTATION

Post Remedial Groundwater Sampling at Former Underground Storage Tank Site [# 2 fuel oil]

FOR BLDG. # 74

Ground Water Sampling with the use of a Passively Placed Narrow Diameter Point (PPNDP)

Objective:

To collect a representative groundwater sample utilizing a narrow diameter point [PPNDP] This is a small diameter [1-inch OD] screened casing passively placed in a borehole. The casing is of p.v.c. construction.

1. Methods

A. A solid push - rod (bull point) is used to create a narrow diameter hole to a depth below the water table. A piece of schedule 40 PVC screen with 0.010-inch slots and an end cap is placed to the bottom of the hole. Glues or adhesives are not used for joining the casing. Threaded PVC casing is used. No filter or gravel pack is used.

2. Installation

A. Using a Geoprobe, a borehole was advanced with a pre-probe with a diameter slightly larger than the casing. The hole was made to a depth of 10 feet. The water table was at 5 feet below ground surface.

B. The screened section of PVC was placed into the borehole so the screened section was across the ground water table from 5 -10 feet. Riser casing from 5 -0 feet. This location required the placement of five ppndp points. The area involved was an old fuel terminal and was large in area. The points were named 75B1 – 75B5.

3. Purging

A. Three volumes of the standing water in the point were purged. The amount of water extracted was app. 0.123 gal. Three to five volumes are purged due to the potential for cross contamination of the screen from upper soil horizons. This was accomplished utilizing a peristaltic pump, and utilizing food grade tubing.

4. Sampling

A. Sampling methods, sample preservation requirements, sample handling times, decontamination procedure for field equipment, and frequency for field blanks, field duplicates and trip blanks conform to applicable industry methods such as those specified in the NJDEP "Field Sampling Procedures Manual" in effect as of the date on which sampling is performed. Any deviations from the methods in the "Field

Sampling Procedures Manual" pursuant to N.J.A.C. 7:26E-1.6(c) has been approved by the person responsible for conducting the remediation.

All samples were preserved in the field immediately after collection and submitted to the laboratory as soon as possible and no later than 48 hours after sample collection.

The acquisition of samples and water level measurements were performed as recommended and described in the May 1992 edition of NJDEP Field Sampling Procedures Manual.

5. Quality Assurance/Quality Control

A. Decontamination

The associated equipment (bull point, riser pipe, etc.) was decontaminated between borings using the following procedure:

1. Remove all adherent soil material.
2. Wash with a laboratory grade glassware detergent.
3. Rinsed with potable water.
4. Rinse with distilled and deionized ASTM Type II water.

B. Field Blanks

1 Field blank was taken at this location.

C. Sample bottles: Supplied by Environmental Sampling Supply, Oakland, Calif. The sample bottles are certified clean and are sealed upon delivery.

D. P.V.C. Screens: Supplied by Bedrock Enterprises, Forked River N.J.

Geoprobe Operator: Mark Laura
Employer: U.S. Army, Fort Monmouth
Phone Number: [732] 532-8990
NJDEP License #: J-1486

Mark Laura 12-30-98
Mark Laura / Date

METHODOLOGY 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 3510/8270
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.

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: — ND

   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 — 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

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 NA

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: 3-4-99

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 4252 Site: Bldg. 74

	Date	Hold Time
Date Sampled	02/05/99	NA
Receipt/Refrigeration	02/05/99	NA
Extractions		
1. Base Neutrals	02/09/99	7 Days
Analyses		
1. Volatile Organics	02/17/99	14 Days
2. Base Neutrals	02/10,11/99	40 Days

VOLATILE ORGANICS

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL : Method Detection Limit
J : Compound identified below detection limit
B : Compound in both sample and blank
D : Results from dilution of sample
U : Compound searched for but not detected

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

Data File	**VB02646.D**	Sample Name	**Vblk82**
Operator	**Skelton**	Field ID	**Vblk82**
Date Acquired	**17-Feb-99**	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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Vblk82**

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4252 SDG No _____ Location UST

Matrix: (soil/water) WATER Lab Sample ID: Vblk82

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02646.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: not dec. _____ Date Analyzed: 2/17/99

GC Column: Rtx5MS 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	**VB02647.D**	Sample Name	**4252.01**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Acquired	**17-Feb-99**	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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	12.60	215110	7.39 ug/L	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-35-3	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	
	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

2/19/99 9:50 AM

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4252 SDG No _____ Location UST

Matrix: (soil/water) WATER Lab Sample ID: 4252.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02647.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: not dec. _____ Date Analyzed: 2/17/99

GC Column: Rtx5MS 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	**VB02648.D**	Sample Name	**4252.02**
Operator	**Skelton**	Field ID	**Field Blank**
Date Acquired	**17-Feb-99**	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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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: **Field Blank**

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4252 SDG No _____ Location UST

Matrix: (soil/water) WATER Lab Sample ID: 4252.02

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02648.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: not dec. _____ Date Analyzed: 2/17/99

GC Column: Rtx5MS 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	**VB02649.D**	Sample Name	**4252.03**
Operator	**Skelton**	Field ID	**Bldg74** #2
Date Acquired	**17-Feb-99**	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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	10.29	61360	6.51 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	
75-35-3	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	
	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

2/19/99 9:50 AM

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: Bldg74 #2

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4252 SDG No _____ Location UST

Matrix: (soil/water) WATER Lab Sample ID: 4252.03

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02649.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: not dec. _____ Date Analyzed: 2/17/99

GC Column: Rtx5MS 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	**VB02650.D**	Sample Name	**4252.04**
Operator	**Skelton**	Field ID	**Bldg74 #1**
Date Acquired	**17-Feb-99**	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	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
	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	
75-35-3	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	
	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

2/19/99 9:50 AM

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: Bldg74 #1

Lab Name: FMETL Project 980932

NJDEP# 13461 Case No.: 4252 SDG No _____ Location UST

Matrix: (soil/water) WATER Lab Sample ID: 4252.04

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB02650.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: not dec. _____ Date Analyzed: 2/17/99

GC Column: Rtx5MS 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

BASE NEUTRAL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN02800.D**	Sample Name	**Sblk204**
Operator	**Bhaskar**	Misc Info	**Sblk204 A 990209**
Date Acquired	**10-Feb-99**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94	ug/L	
62-53-3	Aniline			not detected	NLE	0.15	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.61	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.46	ug/L	
78-59-1	Isophorone			not detected	100	0.35	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	0.26	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.25	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.25	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	0.19	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.38	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.16	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.50	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.21	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.26	ug/L	
83-32-9	Acenaphthene			not detected	400	0.26	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.36	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.82	ug/L	
86-73-7	Fluorene			not detected	300	0.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.31	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	0.90	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.23	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.80	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.55	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.82	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.18	ug/L	
120-12-7	Anthracene			not detected	2000	0.19	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.23	ug/L	
206-44-0	Fluoranthene			not detected	300	0.41	ug/L	
92-87-5	Benzidine			not detected	50	1.45	ug/L	
129-00-0	Pyrene			not detected	200	0.32	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.47	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.22	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.46	ug/L	
218-01-9	Chrysene			not detected	20	0.20	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	0.51	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.82	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.37	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.32	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.31	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.79	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.28	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.40	ug/L	

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

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: **Sblk204**

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4252 Location: Bldg.74 SDG No: _____

Matrix: (soil/water) WATER Lab Sample ID: Sblk204

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN02800.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 2/9/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/10/99

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	**BN02804.D**	Sample Name	**4252.02**
Operator	**Bhaskar**	Misc Info	**Field Blank**
Date Acquired	**10-Feb-99**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94	ug/L	
62-53-3	Aniline			not detected	NLE	0.15	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.61	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.46	ug/L	
78-59-1	Isophorone			not detected	100	0.35	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	0.26	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.25	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.25	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	0.19	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.38	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.16	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.50	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.21	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.26	ug/L	
83-32-9	Acenaphthene			not detected	400	0.26	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.36	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.82	ug/L	
86-73-7	Fluorene			not detected	300	0.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.31	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	0.90	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.23	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.80	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.55	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.82	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.18	ug/L	
120-12-7	Anthracene			not detected	2000	0.19	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.23	ug/L	
206-44-0	Fluoranthene			not detected	300	0.41	ug/L	
92-87-5	Benzidine			not detected	50	1.45	ug/L	
129-00-0	Pyrene			not detected	200	0.32	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.47	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.22	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.46	ug/L	
218-01-9	Chrysene			not detected	20	0.20	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	0.51	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.82	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.37	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.32	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.31	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.79	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.28	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.40	ug/L	

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

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: **Field Blank**

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4252 Location: Bldg.74 SDG No: _____

Matrix: (soil/water) WATER Lab Sample ID: 4252.02

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN02804.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 2/9/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/10/99

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	BN02805.D	Sample Name	4252.03
Operator	Bhaskar	Misc Info	Bldg.74 #2
Date Acquired	10-Feb-99	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94	ug/L	
62-53-3	Aniline			not detected	NLE	0.15	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.61	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.46	ug/L	
78-59-1	Isophorone			not detected	100	0.35	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	0.26	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.25	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.25	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	0.19	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.38	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.16	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.50	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.21	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.26	ug/L	
83-32-9	Acenaphthene			not detected	400	0.26	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.36	ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.82	ug/L	
86-73-7	Fluorene			not detected	300	0.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.31	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	0.90	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.23	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.80	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.55	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.82	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.18	ug/L	
120-12-7	Anthracene			not detected	2000	0.19	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.23	ug/L	
206-44-0	Fluoranthene	20.54	74496	2.43 ug/L	300	0.41	ug/L	
92-87-5	Benzidine			not detected	50	1.45	ug/L	
129-00-0	Pyrene	21.03	65418	1.67 ug/L	200	0.32	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.47	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.22	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.46	ug/L	
218-01-9	Chrysene	23.97	31646	1.47 ug/L	20	0.20	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	0.51	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.82	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.37	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.32	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.31	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.79	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.28	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.40	ug/L	

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

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: Bldg.74 #2

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4252 Location: Bldg.74 SDG No: _____

Matrix: (soil/water) WATER Lab Sample ID: 4252.03

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN02805.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: _____ decanted: (Y/N) N Date Extracted: 2/9/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/10/99

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	BN02806.D	Sample Name	4252.04
Operator	Bhaskar	Misc Info	Bldg.74
Date Acquired	11-Feb-99	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifiers
110-86-1	Pyridine			not detected	NLE	5.00 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.94 ug/L	
62-53-3	Aniline			not detected	NLE	0.15 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.48 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.23 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.18 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.16 ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	0.61 ug/L	
67-72-1	Hexachloroethane			not detected	10	0.33 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.46 ug/L	
78-59-1	Isophorone			not detected	100	0.35 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.46 ug/L	
65-85-0	Benzoic Acid			not detected	NLE	0.26 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.25 ug/L	
91-20-3	Naphthalene			not detected	NLE	0.25 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	0.19 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.38 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.16 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.50 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.32 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.21 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.18 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.19 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.31 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.26 ug/L	
83-32-9	Acenaphthene			not detected	400	0.26 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.32 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.36 ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.82 ug/L	
86-73-7	Fluorene			not detected	300	0.29 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.31 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	0.90 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.23 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.80 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.55 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.82 ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.18 ug/L	
120-12-7	Anthracene			not detected	2000	0.19 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.23 ug/L	
206-44-0	Fluoranthene			not detected	300	0.41 ug/L	
92-87-5	Benzidine			not detected	50	1.45 ug/L	
129-00-0	Pyrene			not detected	200	0.32 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.47 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.22 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	0.46 ug/L	
218-01-9	Chrysene			not detected	20	0.20 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	0.51 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	0.82 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.37 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.32 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.31 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.79 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.28 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.40 ug/L	

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

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: Bldg.74 #1

Lab Name: FMETL Lab Cod 13461

Project: UST Case No.: 4252 Location: Bldg.74 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: 4252.04

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN02806.D

Level: (low/med) LOW Date Received: 2/5/99

% Moisture: decanted: (Y/N) N Date Extracted: 2/9/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/11/99

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

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** ✓
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 3/4/99

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.

3-4-99

Daniel K. Wright
Laboratory Manager

APPENDIX C
PHOTOGRAPHS

REMEDIATION OF FORMER TRUCK LOADING AREA

EXCAVATION AND REMOVAL OF FORMER PIPING RUN

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

REMEDIATION FROM BENEATH FORMER PIPING
NEAR FORMER AST #2

REMEDIATION FROM BENEATH FORMER PIPING
NEAR FORMER AST #1

SMC ENVIRONMENTAL
SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

REMEDIATION OF FORMER TRANSFER PUMP AREA

REMEDIATION OF FORMER TRUCK UNLOADING AREA

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

ENCLOSURE 4 of Attachment E

Army NFA Request and NJDEP Approval Letter

DEPARTMENT OF THE ARMY

HEADQUARTERS, U.S. ARMY COMMUNICATIONS-ELECTRONICS COMMAND AND FORT MONMOUTH
FORT MONMOUTH, NEW JERSEY 07703-5000

REPLY TO ATTENTION OF
SELFM-PW-EV

August 3, 2000

New Jersey Department of
Environmental Protection
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF FEDERAL CASE MANAGEMENT
CN 029
401 EAST STATE STREET, Floor 5
Trenton, NJ 08625 -0028
ATTN: Ian Curtis, Case Manager

Dear Mr. Curtis:

Enclosed please find UST Closure and Site Investigation Reports for the following Fort Monmouth underground storage tank sites:

NJDEP Req. #	Bldg. #	NJDEP Req. #	Bldg. #
0090010-03	64	0090010-59	492
0090010-05	65	0081533-80	551
	74	0081533-81	552
0081533-03	205	0081533-120	746
0090010-29	412	0081533-122	748
0090010-30	413	0081533-123	749
0090010-31	414	0081533-131	810
0090010-33	417	0081533-132	811
0090010-42	428	0081533-332	906B
0090010-47	434	0081533-159	1006
	447	0081533-206	1075
0090010-57	485	0081515-21	2531

If the information provided in this enclosure is inadequate or you require further information with regard to these documents please contact me at (732) 532-1475.

Sincerely,

Dinkerrai Desai
Environmental Protection Specialist
Directorate of Public Works

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

ATTACHMENT F

UST 29 File Review

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

Date: *February 19, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 29*** Registration ID: 90010-1

Recommended Status of Site: ***Case Closed; request NFA***

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

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

NJDEP Release No. or DICAR (If applicable): None

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gal. Contents: No. 2 Fuel Oil

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: June 1990

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: TPH<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 29, which was a general purpose administration building that was demolished in 1980. The tank was removed in 1990, but closure soil samples were not collected because contamination was not observed, which was the standard Army procedure at the time. A Site Assessment Compliance Statement and Standard Reporting Form (SRF) for tank removal were submitted to the State in 1991, but there is no record of NFA approval from the NJDEP.

Additional soil sampling was performed using a Geoprobe in 2006 to confirm the absence of petroleum contamination. Three soil samples were collected from the site for total petroleum hydrocarbons (TPH) analysis, and one groundwater sample for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). The soil and groundwater results were all non-detected (ND) for all parameters, and so no evidence of soil or groundwater contamination was encountered. The soil TPH results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. Therefore no additional sampling or remedial action was warranted.

In conclusion, the analytical results support the UST Case Status of "Case Closed." Tank T-29 was removed so the Addendum 1 ECP UHOT Report probability of "High" is likely overrated.

Recommendations (if any): Request NFA from NJDEP

Signed: Kent A. Friesen

Kent A. Friesen, Parsons

Let's protect our earth

Bldg. ~~29-H~~ 29

For State Use Only	
Date Rec'd.	
Auth	
Routing	
UST NO.	

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
TRENTON, NEW JERSEY 08625
ATTN: BUST Program
(609) 984-3156

STANDARD REPORTING FORM
for the:
Installation/Abandon/(Remove)/Sale-Transfer/Substantial Modification
Circle Only One — Use One Form Per Activity

(More than one tank can be listed per tank activity)

Answer questions 1 through 5 and others as applicable.

1. Company name and address: (as it appears on registration questionnaire)

U.S. Army
DEH Bldg. # 167
Attn: SELFM-EH
Fort Monmouth NJ 07703

2. Facility name and location: (if different from above)

U.S. Army Fort Monmouth
Main Past East

3. Contact person for this activity: Mr. Joseph M. Fallon

Telephone Number: (908) 532-6223

4. The identification number of the affected tank as it appears in Question Number 12 on the Registration Questionnaire: Tank No. 1, 26, 32, & 58
Bldg. 29, 401, 416, 490

5. Registration Number (if known): UST - # 0090010

(OVER)

6. For TRANSFER OF OWNERSHIP:

New Company Name _____

New Facility Name _____

Address _____

_____

New owner/operator (print) _____

Signature _____

7. For ABANDONMENT or REMOVAL:

a. Describe the proposed procedure in detail on an attached sheet.

b. Specify the product last stored in the tank: #2 Heating Oil

c. Date abandoned or removed: May and June of 1990

d. Is Site Assessment Compliance Statement being completed? YES or NO Form MUST be completed and returned within 90 days of tank closure. (per 40 CFR 280.72)

8. For SUBSTANTIAL MODIFICATIONS:

a. Describe the reason for the modification and, in detail, the proposed procedure to be used on an attached sheet.

b. Specify the product presently stored in the tank: _____

c. Specify the product to be stored in the tank: _____

9. For NEW OR REPLACEMENT INSTALLATIONS:

a. Attach the specifications as required by the attached instructions.

b. Specify the product (s) to be stored in the tank: _____

NOTE: All appropriate and applicable permits, licenses and certificates from any local, state and/or federal agency must be obtained separately from this notification as required by the above stated activity.

CERTIFICATION

**** This registration form shall be signed by the highest ranking individual at the facility with overall responsibility for that facility. (7:14B-2.3 (a) 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 civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment."

Signature: James Ott

Name (print or type): JAMES OTT

Title: Acting Director Dir, Engineering and Housing Date: 22 NOV 1991

RF - 6/89

Let's protect our earth

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

For State Use Only
Date Rec'd
Auth
Routing
UST NO.

SITE ASSESSMENT COMPLIANCE STATEMENT

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

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

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

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

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

FACILITY U.S. Army Fort Monmouth **UST #** 0090010

Tank No. 1, 26, 32 + 58

Check off the following items as appropriate for the site.

✓ The UST facility is only regulated by State law, therefore a site assessment is not mandatory.

____ The UST facility is regulated by Federal law and a site assessment was conducted.

The results of the site assessment indicate:

✓ There was NO release from the UST system.

____ There was a release from the UST system and it was reported to the DEP Environmental Hotline (609-292-7172).

NOTE: The results of the site assessment are not to be submitted to the DEP or Health Agency unless requested to do so. The results are to be available for inspection at the UST facility.

Questions can be directed to the Bureau at (609) 984-3156.

*** This registration form shall be signed by the highest ranking individual at the facility with overall responsibility for that facility (7:14B-2.3 (a) 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 civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment.

SACS-2,1/89

22 NOV 1991
(SIGNATURE) Date / /

JAMES OTT
Acting Director
(PRINT OR TYPE NAME)
Dir, Engineering and Housing
(Title)

DEPARTMENT OF THE ARMY
Headquarters, U.S. Army Garrison Fort Monmouth
Fort Monmouth, New Jersey 07703-5000

REPLY TO
ATTENTION OF

22 NOV 1991

Directorate of Engineering
and Housing

SUBJECT: Removal Procedure:

U.S. Army Fort Monmouth
Main Post East
Site Registration #0090010
Tank #1, 26, 32, 58
POC: Joseph M. Fallon (908) 532-6223

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

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

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

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

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

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. 29

Bldg. 29

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
29S 7.5-8.0'	6005001	Soil	24-Jan-06 14:39	01/24/06
29C 7.5-8.0'	6005002	Soil	24-Jan-06 14:59	01/24/06
29N 7.5-8.0'	6005003	Soil	24-Jan-06 15:20	01/24/06
29C GW	6005004	Aqueous	24-Jan-06 15:41	01/24/06

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

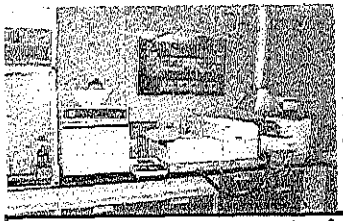
ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

(QC and raw data not included for brevity)

3-6-06
Daniel Wright/Date
Laboratory Director

Table of Contents

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: John McCarthy
Phone: X26224
( )DERA ( )OMA ( )Other:_____

Project No: 06-34880
Location: 29 (Former UST)

Samplers Name / Company: George Boyce /TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VO+10	BN+15						Comments: Remarks / Preservation Method
06850 01	29S 7.5-8.0	1/24/06	1439	Soil	2	X								4455
02	29C 7.5-8.0		1459	Soil	2	X								4456
03	29N 7.5-8.0		1520	Soil	2	X								4457
04	29C GW		1541	AQ	4		X	X						

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
George Boyce	1-24-06 1400				
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: VO+10 on 25% >1000 PPM TPH
Shared TRIP with 701

print legibly

COC.XLS1/12/2006

SAMPLE RECEIPT FORM

Date Received: 1-24-06 Work Order ID#: 600050

Site/Proj. Name: Bldg 29/UST Cooler Temp (°C): 4.0°C

Received By: J. Venzura Sign: J. Venzura
(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
600050/01	<2	HCl			

Comments:

Former UST 29 Sample Location GPS Positions

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

(In US Survey Feet)

Position	Northing (Y Coord.)	Easting (X Coord.)
29N	540702.154	622550.744
29C	540698.273	622553.523
29S	540693.132	622554.911

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: 60050

Site: UST
Bldg. 29

	Date	Hold Time
Date Sampled	01/24/06	NA
Receipt/Refrigeration	01/24/06	NA
Extractions		
1. BN	01/27/06	7 days
2. TPHC	01/26/06	14 days
Analyses		
1. VOA	02/03/06	14 days
2. BN	01/30/06	40 days
3. TPHC	01/30/06	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 — no
   (If not met, list those compounds and their recoveries, which fall outside the acceptable range)
   a. VOA Fraction Various out see form
   b. B/N Fraction Benzidine Low
   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 NA

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: 3-6-06

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: 3-6-06

VOLATILE ORGANICS (AQUEOUS)

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

U: The compound was analyzed for but not detected.

B: Indicates that the compound was found in the associated method blank as well as in the sample.

J: Indicates an estimated value. This flag is used:
(1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.
(2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.

D: This flag is used to identify all compounds (target or TIC) that required a dilution.

E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.

N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

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

Data File	VB021618.D	Sample Name	MB 03Feb2006
Operator	Skelton	Field ID	MB 03Feb2006
Date Acquired	3 Feb 2006 4:05 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	2.01 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	5	1.23 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	5.70 ug/L	10.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.21 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.26 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.20 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	nle	0.24 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.23 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.26 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	0.29 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.23 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.19 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	6000	0.36 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.24 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.21 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.24 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.24 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.26 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.20 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	70	0.22 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.20 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.24 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.24 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.23 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.24 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.23 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.22 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.35 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.26 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.25 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.28 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.20 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.43 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.28 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.27 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.43 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.21 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.21 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.27 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.45 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.36 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.35 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.45 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

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

Qualifiers

B = Compound found in related blank
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: **MB 03Feb2006**

Lab Name: FMETL NJDEP#: 13461

Project: 06-34880 Case No.: 60048 Location: 701 SDG No.: UST

Matrix: (soil/water) WATER Lab Sample ID: MB 03Feb2006

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021618.D

Level: (low/med) LOW Date Received: 1/23/2006

% Moisture: not dec. Date Analyzed: 2/3/2006

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: 4

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

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

Data File	VB021623.D	Sample Name	6004806
Operator	Skelton	Field ID	Trip Blank
Date Acquired	3 Feb 2006 7:24 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	2.01 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	5	1.23 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	5.70 ug/L	10.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.21 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.26 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.20 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	nle	0.24 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.23 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.26 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	0.29 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.23 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.19 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	6000	0.36 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.24 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.21 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.24 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.24 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.26 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.20 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	70	0.22 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.20 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.24 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.24 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.23 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.24 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.23 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.22 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.35 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.26 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.25 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.28 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.20 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.43 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.28 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.27 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.43 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.21 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.21 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.27 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.45 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.36 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.35 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.45 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

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

Qualifiers

B = Compound found in related blank
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: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: 06-34880 Case No.: 60048 Location: 701 SDG No.: UST

Matrix: (soil/water) WATER Lab Sample ID: 6004806

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021623.D

Level: (low/med) LOW Date Received: 1/23/2006

% Moisture: not dec. _____ Date Analyzed: 2/3/2006

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	VB021625.D	Sample Name	6005004
Operator	Skelton	Field ID	29C-GW
Date Acquired	3 Feb 2006 8:46 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	2.01 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	5	1.23 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	5.70 ug/L	10.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.21 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.26 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.20 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	nle	0.24 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	1	0.23 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.26 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	nle	0.29 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.23 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.19 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	6000	0.36 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.24 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.21 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.24 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.24 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.26 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.20 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	70	0.22 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.20 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.24 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.24 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.23 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.24 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.23 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.22 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.35 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.26 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.25 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.28 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.20 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.43 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	1	0.22 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.28 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.27 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.43 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.21 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.21 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.27 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.45 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.36 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.35 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.45 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

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

Qualifiers

B = Compound found in related blank
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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2/28/2006 2:13 PM

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: 29C-GW

Lab Name: FMETL NJDEP#: 13461

Project: 06-34880 Case No.: 60050 Location: 29 SDG No.: UST

Matrix: (soil/water) WATER Lab Sample ID: 6005004

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021625.D

Level: (low/med) LOW Date Received: 1/24/2006

% Moisture: not dec. Date Analyzed: 2/3/2006

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	**BNA11471.D**	Sample Name	**MB-012706-01**
Operator	**BPatel**	Misc Info	**MB-012706-01**
Date Acquired	**30-Jan-06**	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	0.8	0.60	10.00	ug/L	
62-53-3	Aniline			not detected	6	2.38	10.00	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	7	0.71	10.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.02	10.00	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00	ug/L	
100-51-6	Benzyl alcohol			not detected	2000	0.66	10.00	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	10	0.76	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	7	0.96	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	6	0.86	10.00	ug/L	
78-59-1	Isophorone			not detected	40	0.76	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00	ug/L	
91-20-3	Naphthalene			not detected	300	0.76	10.00	ug/L	
106-47-8	4-Chloroaniline			not detected	30	1.37	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	40	0.92	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	600	0.72	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00	ug/L	
131-11-3	Dimethylphthalate			not detected	NLE	0.78	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	10	0.71	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00	ug/L	
83-32-9	Acenaphthene			not detected	400	0.73	10.00	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.81	10.00	ug/L	
84-66-2	Diethylphthalate			not detected	6000	0.96	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.71	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	10	0.62	10.00	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.72	10.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00	ug/L	
118-74-1	Hexachlorobenzene			not detected	0.02	0.95	10.00	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00	ug/L	
120-12-7	Anthracene			not detected	2000	0.76	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not detected	700	0.92	10.00	ug/L	
206-44-0	Fluoranthene			not detected	300	0.82	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA11471.D**	Sample Name	**MB-012706-01**
Operator	**BPatel**	Misc Info	**MB-012706-01**
Date Acquired	**30-Jan-06**	Sample Multiplier	**1**

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

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-012706-01

Lab Name: FMETL Lab Code 13461

Project: 06-34880 Case No.: 60050 Location: 29 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-012706-01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11471.D

Level: (low/med) LOW Date Received: 1/24/2006

% Moisture: decanted: (Y/N) N Date Extracted: 1/27/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/30/2006

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	**BNA11480.D**	Sample Name	**6005004**
Operator	**BPatel**	Misc Info	**29C-GW**
Date Acquired	**30-Jan-06**	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	0.8	0.60	10.00	ug/L	
62-53-3	Aniline			not detected	6	2.38	10.00	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	7	0.71	10.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.02	10.00	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00	ug/L	
100-51-6	Benzyl alcohol			not detected	2000	0.66	10.00	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	10	0.76	10.00	ug/L	
67-72-1	Hexachloroethane			not detected	7	0.96	10.00	ug/L	
98-95-3	Nitrobenzene			not detected	6	0.86	10.00	ug/L	
78-59-1	Isophorone			not detected	40	0.76	10.00	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00	ug/L	
91-20-3	Naphthalene			not detected	300	0.76	10.00	ug/L	
106-47-8	4-Chloroaniline			not detected	30	1.37	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	40	0.92	10.00	ug/L	
91-58-7	2-Chloronaphthalene			not detected	600	0.72	10.00	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00	ug/L	
131-11-3	Dimethylphthalate			not detected	NLE	0.78	10.00	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	10	0.71	10.00	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00	ug/L	
83-32-9	Acenaphthene			not detected	400	0.73	10.00	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.81	10.00	ug/L	
84-66-2	Diethylphthalate			not detected	6000	0.96	10.00	ug/L	
86-73-7	Fluorene			not detected	300	0.71	10.00	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	10	0.62	10.00	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.72	10.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00	ug/L	
118-74-1	Hexachlorobenzene			not detected	0.02	0.95	10.00	ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00	ug/L	
120-12-7	Anthracene			not detected	2000	0.76	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not detected	700	0.92	10.00	ug/L	
206-44-0	Fluoranthene			not detected	300	0.82	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA11480.D**	Sample Name	**6005004**
Operator	**BPatel**	Misc Info	**29C-GW**
Date Acquired	**30-Jan-06**	Sample Multiplier	**1**

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

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

Qualifiers

E= Value Exceeds Linear Range
D= Value from dilution
B= Compound in Related Blank
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

29C-GW

Lab Name: FMETL Lab Code 13461

Project: 06-34880 Case No.: 60050 Location: 29 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 6005004

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11480.D

Level: (low/med) LOW Date Received: 1/24/2006

% Moisture: decanted: (Y/N) N Date Extracted: 1/27/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 1/30/2006

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	**Project # :**	60050
	DPW. SELFM-PW-EV	**Location :**	29
	Bldg. 173	**UST Reg. # :**	06-34880
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	**Date Received :**	24-Jan-06
Matrix :	Soil	**Date Extracted :**	26-Jan-06
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	30-Jan-06
Injection Volume :	1uL	**Analyst :**	B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
6005001	29S	1.00	15.33	78.81	80	414	ND
6005002	29C	1.00	15.11	79.52	80	416	ND
6005003	29N	1.00	15.12	79.98	80	413	ND
METHOD BLANK	MB-012606-01	1.00	15.00	100.00	64	333	ND

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

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

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

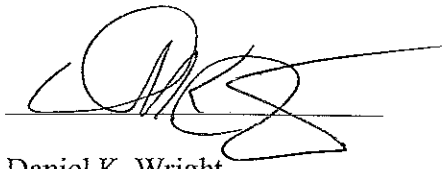
Date: 3/6/06

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 142A Report

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 142A
Main Post

NJDEP UST Registration No. 090010-13
NJDEP Closure Approval No. C-93-3714

February 1997

SMITH
TECHNOLOGY CORPORATION

SMITH

UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 142A

MAIN POST
NJDEP UST REGISTRATION NO. 090010-13
NJDEP CLOSURE APPROVAL NO. C-93-3714

FEBRUARY 1997

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:

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

SMITH

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SMITH

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EXECUTIVE SUMMARY

UST Closure

On July 20, 1994, a steel underground storage tank (UST) with fiberglass coating was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) Closure Approval No. C-93-3714 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 090010-13 (Fort Monmouth ID No. 142A), was located immediately adjacent to Building 142A in the Main Post area of U.S. Army, Fort Monmouth. UST No. 090010-13 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) 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 and no evidence of potentially contaminated soils was observed surrounding the tank.

On July 20, 1994, following the removal of the UST, post-excavation soil samples A, B, C, D, E, F, and DUP A were collected from a total of six (6) locations along the sidewalls of the UST excavation. The samples were collected at a depth of 5.5 feet below ground surface (bgs). Sample H was collected along the former piping length of the excavation, which was approximately 6 feet in length. The piping sample was collected at a depth of 0.5 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC).

Findings

All post-excavation soil samples collected from the UST excavation and from below piping associated with the former UST at Building 142A 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 D and E, contained levels of TPHC ranging in concentration from 15.1 mg/kg to 21.7 mg/kg, respectively. 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 for Site Remediation.*

Discrepancies

The removal contractor collected soil samples using polystyrene scoops instead of NJDEP approved stainless steel scoops. The results of the soil samples were therefore evaluated at 50% of the actual value to compensate for any potential loss due to absorbency of the polystyrene scoop.

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 exist 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. 090010-13 at Building 142A.

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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. 090010-13, was closed at Building 142A at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on July 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 August 5, 1993. The plan was approved on September 8, 1993 and assigned TMS No. C-93-3714. The UST was a steel 1,000-gallon tank with fiberglass coating containing No. 2 fuel oil.

Decommissioning activities for UST No. 090010-13 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. 090010-13 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. 090010-13 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 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.

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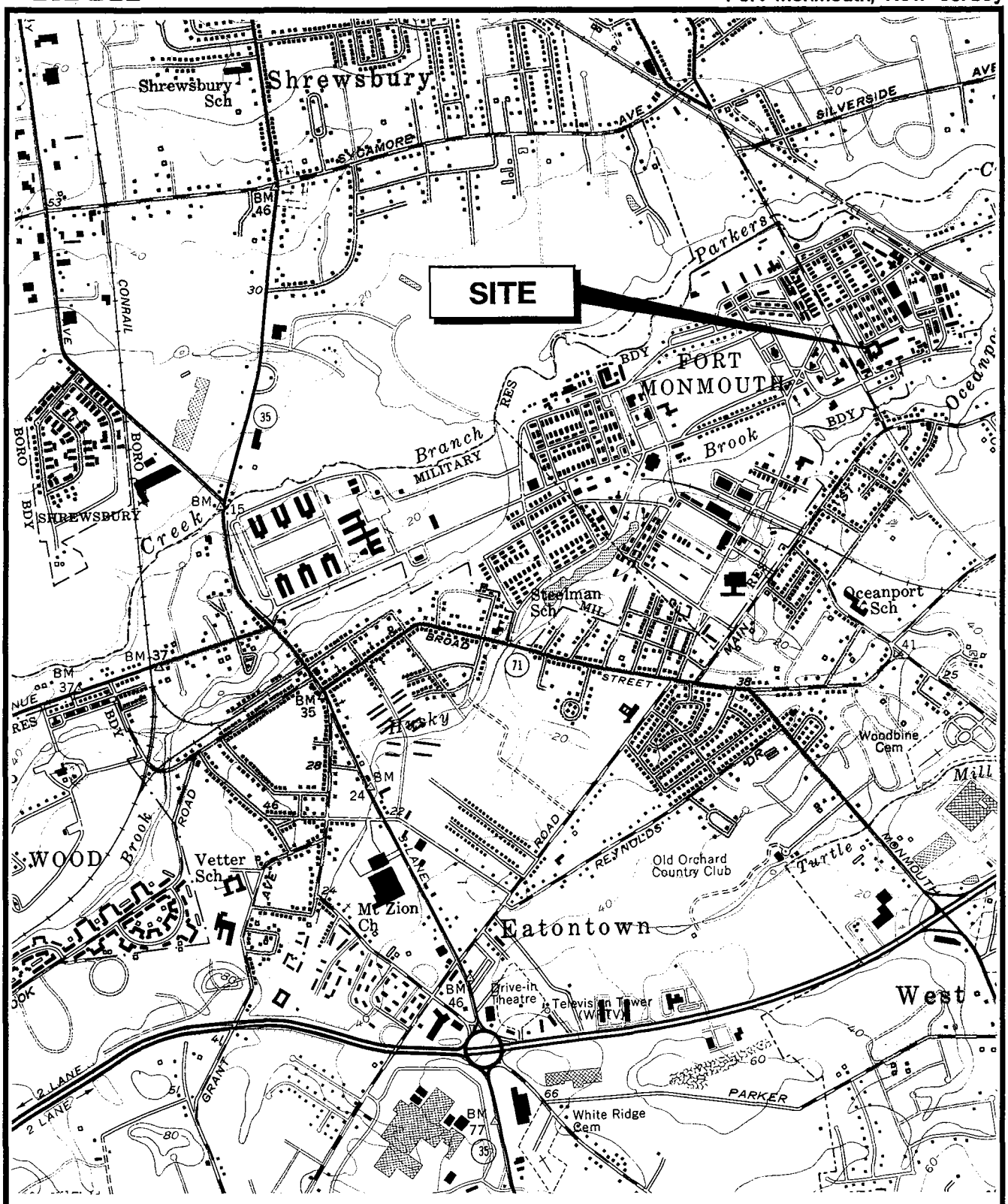
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: Long Branch, New Jersey Quadrangle

Project No. 09-5004-08

Figure 1
Site Location Map
Building 142A

1.2 SITE DESCRIPTION

Building 142A is located in the northeastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 090010-13 was located northeast of Building 142A and appurtenant piping ran approximately 6 feet southwest from the excavation to Building 142A. The fill port area was located directly above the tank. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 142A. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

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

Local Geology

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

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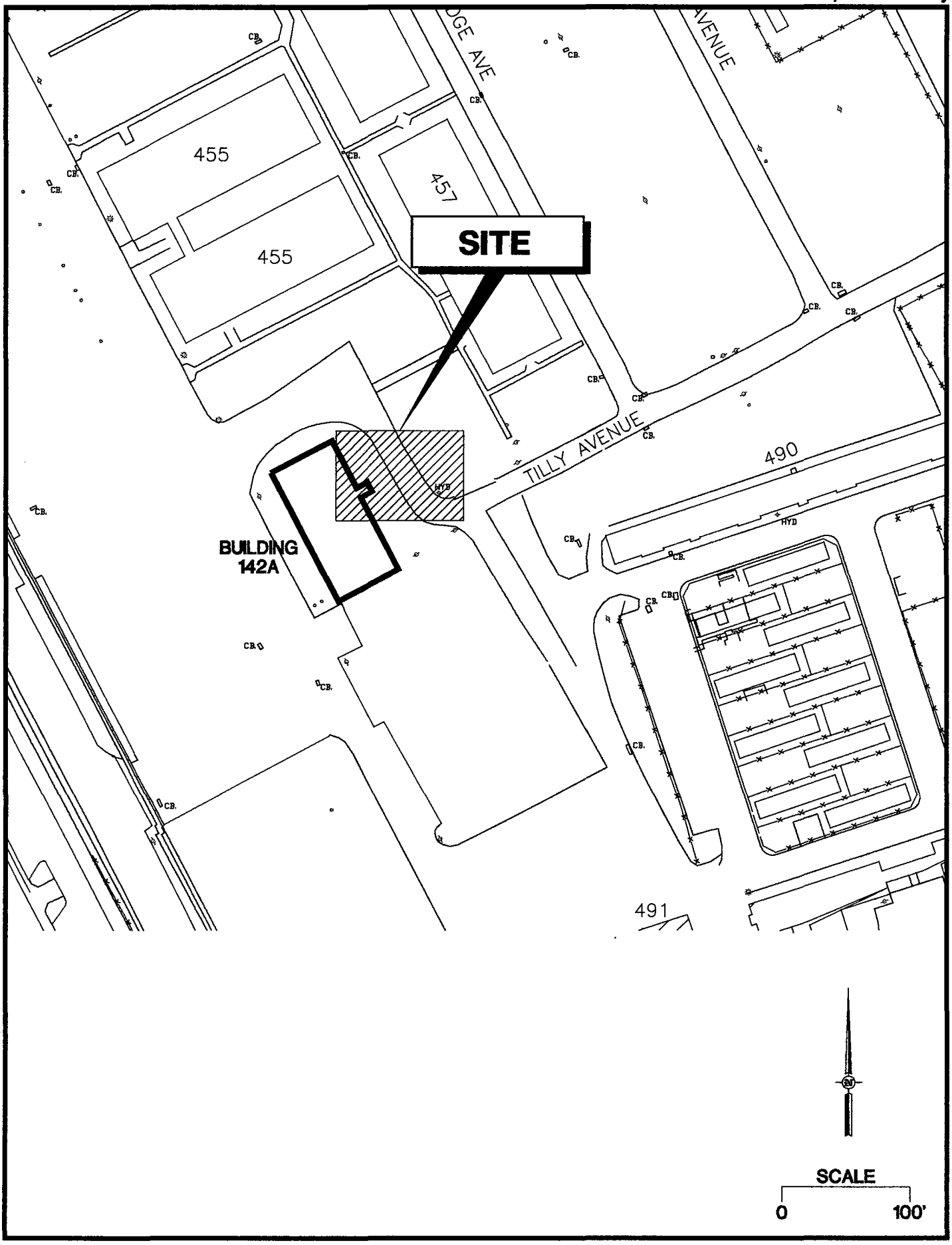

Source: Smith Technology Corporation (096)

Project No. 09-5004-08

Figure 2
Building 142A
Site Map

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

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

Hydrogeology

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

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

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

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involve with, or were affected by, the decommissioning of the UST system were minimized. All areas which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- All underground obstructions (utilities, etc.) were marked out by the contractor performing the closure prior to excavation activities.
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose 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 732 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix C for the waste manifest (NJA-1603196).

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. No evidence of contamination was observed.

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 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 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 he NJDEP-BUST document *Interim Closure Requirements for Underground Storage Tank Systems* (September 1990 and revisions dated November 1, 1991) which was the applicable regulation at the date of the closure. All records of the Site Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Closure and Site Investigation Activities.

- Closure Contractor: Cleaning Up The Environment Inc. (CUTE)
  Closure Supervisor: George Bernotsky
  Phone Number: (201) 427-2881
  NJDEP Certification No.: 3249

- 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) 721-0900
  NJDEP Hazardous Waste Hauler No.: 2265

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Soil excavated from around the tank and appurtenant piping, as well as the UST excavation sidewalls and bottom, did not exhibit any evidence of potential contamination.

TABLE 2
PAGE 1 OF 1

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 142A
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/5.5-6.0'	1573.1	7/20/94	7/21/94	Total Solid	--	--	88 %	--	--
				TPHC	6.6	yes	ND	10,000	--
B/5.5-6.0'	1573.2	7/20/94	7/21/94	Total Solid	--	--	93 %	--	--
				TPHC	6.6	yes	ND	10,000	--
C/5.5-6.0'	1573.3	7/20/94	7/21/94	Total Solid	--	--	92 %	--	--
				TPHC	6.6	yes	ND	10,000	--
D/5.5-6.0'	1573.4	7/20/94	7/21/94	Total Solid	--	--	94 %	--	--
				TPHC	6.6	yes	15.1	10,000	--
E/5.5-6.0'	1573.5	7/20/94	7/21/94	Total Solid	--	--	90 %	--	--
				TPHC	6.6	yes	21.7	10,000	--
F/5.5-6.0'	1573.6	7/20/94	7/21/94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	ND	10,000	--
Dup A/5.5-6.0'	1573.7	7/20/94	7/21/94	Total Solid	--	--	95 %	--	--
				TPHC	6.6	yes	ND	10,000	--
H/0.5-1.0'	1573.8	7/20/94	7/21/94	Total Solid	--	--	92 %	--	--
				TPHC	6.6	yes	ND	10,000	--

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

Actual soil TPHC values may be higher than reported due to absorbency by polystyrene scoops. If absorbency resulted in reducing the actual soil TPHC concentration by 50%, the highest soil contaminant would be 43.4 mg/kg.

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2.3 SOIL SAMPLING

On July 20, 1994, following the removal of the UST, post-excavation soil samples A, B, C, D, E, F, and DUP A were collected from a total of six (6) locations along the sidewalls of the UST excavation. The samples were collected at a depth of 5.5 feet below ground surface (bgs). Sample H was collected along the former piping length of the excavation, which was approximately 6 feet in length. The piping sample was collected at a depth of 0.5 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC).

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements* and the NJDEP *Field Sampling Procedures Manual*. A summary of sampling activities including parameters analyzed is provided 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 43.4 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.

TABLE 1
PAGE 1 OF 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 142A, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
Dup A	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H	7/20/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop

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

Smith Technology Corporation (Project No. 09-5004-08)

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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 seven (7) locations on July 20, 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 E.

All post-excavation soil samples collected on July 20, 1994, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. Post-excavation soil Samples D and E collected on July 20, 1994, contained TPHC concentrations of 15.1 mg/kg to 21.7 mg/kg, respectively. All other samples contained non-detectable concentrations of TPHC.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 142A 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.

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

No further action is proposed in regard to the closure and site assessment of UST No. 090010-13 at Building 142A.

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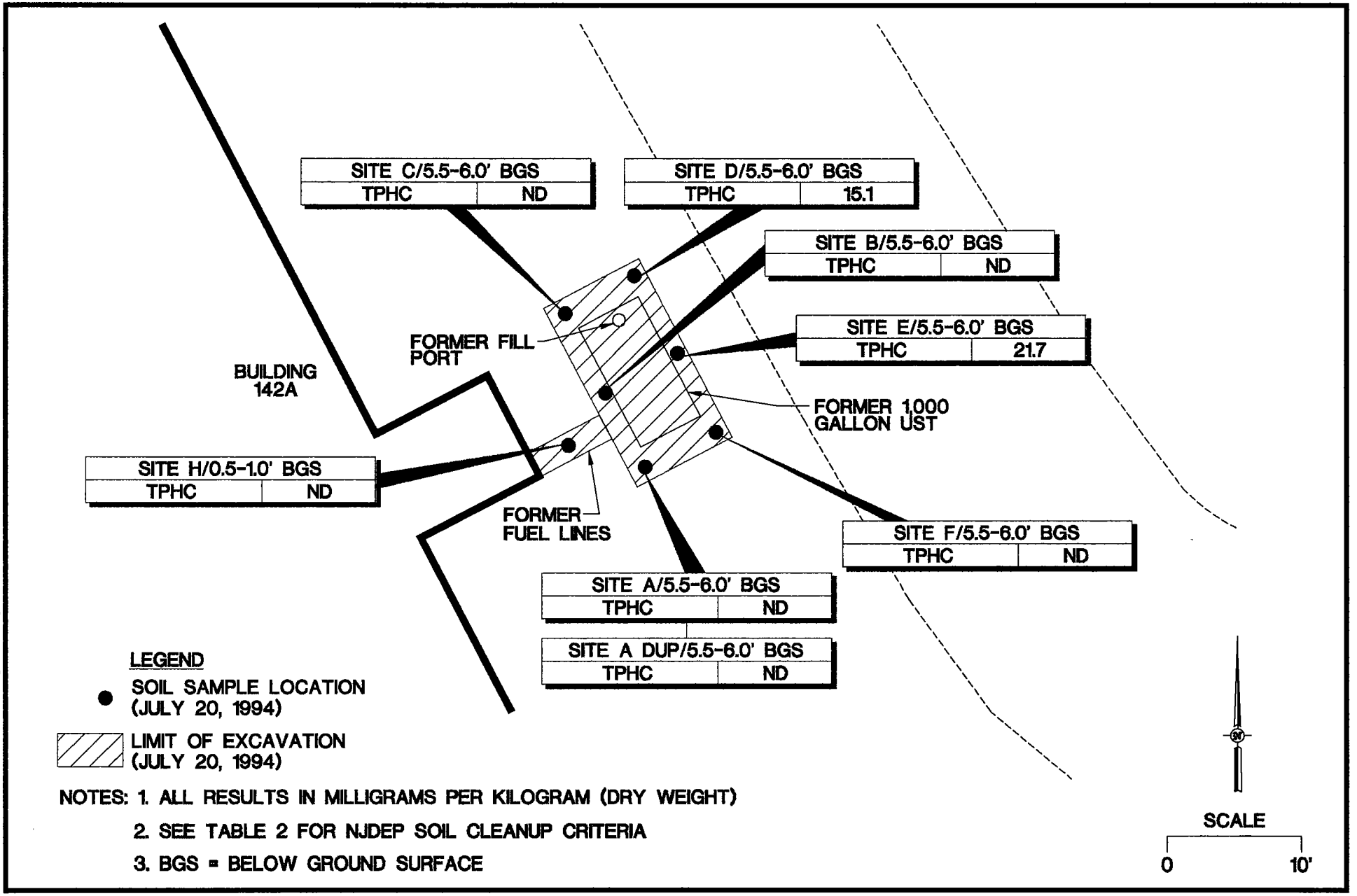
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: Smith Technology Corporation (097)

Project No. 09-5004-08

Figure 3

Building 142A
Soil Sampling Results

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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-93-3714	0090010

US Army
BLDG. 142 A
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:

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

Fred Altman

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

SMITH

APPENDIX B

CERTIFICATIONS

UNDERGROUND STORAGE TANK (UST) CLOSURE CERTIFICATION

BUILDING NO. 142A

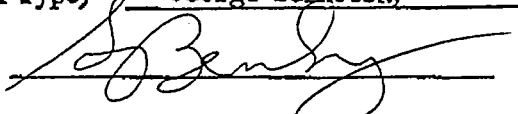
NJDEP UST REGISTRATION NO. 90010-13A

DATE TANK REMOVED 7/20/94

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) George Bernotsky

SIGNATURE 

NJDEP UST CLOSURE CERTIFICATE NO. 0003249

COMPANY PERFORMING TANK DECOMMISSIONING CUTE Inc

NJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128

DATE OF SUBMITTAL 8/16/94

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 028
Trenton, NJ 08625-0028
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. 142A

090010-13
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

US Army Fort Monmouth, New Jersey
Directorate of Public Works, Bldg. 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? ___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 X No ___N/A

III. DECOMMISSIONING OF TANK SYSTEMS Closure Approval No. C-93-3714

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 ___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. 15.1 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 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 US Army Fort Monmouth DATE _____
(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) See Appendix B 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 US 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 _____

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. NJ3211620159 — Manifest Document No. 6311916
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, Main Post c/o James Shroglio Bldg 2504, AH: SELFM-PL-EM-S, 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: NJD054126426N
C. State Trans. ID NJDEPS 2265 *1
D. Transporter's Phone (908) 462-1001
7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: Lionetti Oil Recovery Co Inc., Runyon & Chesapeake RD, Old Bridge NJ 08857
10. US EPA ID Number: NJD084646169
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. Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT	04400	G	X721 2
b. Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT	00732	G	X721 2
c. Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT	001932	G	X721 2
d. Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT	04454	G	X721 2

J. Additional Descriptions for Materials Listed Above
a. oil 60% water 40% L.T
b. oil 60% water 40% L.T
c. oil 60% water 40% L.T
d. oil 60% water 40% L.T

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

15. Special Handling Instructions and Additional Information
Not EPA Regulated - NJ hazardous
24 hr Emerg # 201-429-2881
*DEC # 55404
a) NJDEPE 009000-7
b) NJDEPE 009000-13A
c) NJDEPE 009000-13B
d) NJDEPE 009000-16

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

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

Printed/Typed Name: Joseph M. Fallon — Signature: Joseph M. Fallon — Month Day Year 07 13 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: PAULO R. MEDEIROS — Signature: [signature] — Month Day Year 07 13 94

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

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy

NJA 1603196

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

CALCULATION SHEET

Building No. 142 A NJDEPE Reg. No. 0090010 - 13 A

Tank Size 1000 gal Tank Void 7.5 tons

CLEAN FILL

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
	Fill	7.5	18774

TOTAL 7.5

STONE

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #

TOTAL ∅

ID#27 soil to stockpile (∅ + 7.5) - 7.5 = ∅ tons

Chargeable clean fill ∅

Chargeable stone ∅

Joseph Scarano Sand & Gravel Co.
1453 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3333

№ 18774

Order Date __/__/__

Deliver Date 7/6/94

Name By Tankway

Address

Clean Fill

Delivered [ ] C.O.D. [ ]

F.O.B./P.U. [ ] Charge [✓]

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	G - 70,650		
	T 25,590	22.53 tons	
	N		
		Sub Total	
		Delivery	
		N.J. Tax-	
		Total	

Driver Unit 5

Received [signature]

* Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel!
since 1925

Bldg 142A 7.5 tons
Bldg 142B 15.03 Tons

SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

Bldg 423-0090010-39
~~Bldg [illegible]~~
Bldg 142A ust# 0090010-13
Bldg 165-ust 90010-16
Bldg 421-ust 0090010-37
Fort Monmouth
Eatontown, NJ

MAZZA & SONS, INC.

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

NO. ______

DATE 28 July 94

Customer's Name: Cute inc

Address: 153 Gardner Ave P.O. 237 Midland Pk, NJ

Make of Autos

Tires
Tank
Price:

47840 LB G
36940 LB G
10,900

PAID
JUL 28 1994

Paid in Reg. Acct.
Bal. $28.84

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

Weigher ______ Customer Don Ellis

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 #: 1573.1-.8
Sample Rec'd: 07/20/94
Analysis Start: 07/21/94
Analysis Comp: 07/21/94

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

NJDEPE UST Reg.#:
Closure #: C-90-3714
DICAR #:
Location #: Bldg. 142A

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1573.1	Site A, S.E. Corner 6' OVA= ND	88	ND	6.6
1573.2	Site B, W. Wall 6' OVA= ND	93	ND	6.6
1573.3	Site C, N.W. Corner 6' OVA= ND	92	ND	6.6
1573.4	Site D, N.E. Corner 6' OVA= ND	94	15.1	6.6
1573.5	Site E, E. Wall 6' OVA= ND	90	21.7	6.6
1573.6	Site F, S.W. Corner 6' OVA= ND	86	ND	6.6
1573.7	Site G, Dup OVA= NA	95	ND	6.6
1573.8	Site H, Pipe Chase 1' OVA= ND	92	ND	6.6
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1572.1 dup= 100% 1572.1 s= 86% 1572.1 sd= 80% RPD= 7.2%

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 #: 1573.1-.8
Sample Rec'd: 07/20/94
Analysis Start: 07/21/94
Analysis Comp: 07/21/94

Analysis: Munsel

Lab ID#	Soil Color
1573.1	10YR 3/3 Dark Brown
1573.2	10YR 5/8 Yellowish Brown
1573.3	10YR 5/8 Yellowish Brown
1573.4	10YR 5/8 Yellowish Brown
1573.5	10YR 5/8 Yellowish Brown
1573.6	10YR 3/4 Dark Yellowish Brown
1573.7	10YR 5/6 Yellowish Brown
1573.8	10YR 5/8 Yellowish Brown

Brian K. McKee
Laboratory Director

SERV-AIR, INC.

P.O. #:

Chain of Custody

Project #:

Customer: D. Desai

Phone:

Sampler: Dinker Desai

Date / Time: 7/20/94 1030

Site Name: 142 A Bldg C-93-3714

Analysis Parameters: TPHC, % Solid, Mussel, OVA (Hnu)

Start:

Finish:

Preservation Method

Lab Sample ID Number	Date/Time		Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solid	Mussel					OVA (Hnu)	Remarks
1573.1	7/20/94	1115	Site A - ~~Northeast~~ SE 6'	Soil	1	X	X	X					ND	
.2		1119	Site B - ~~?~~W 6'	Soil	1	X	X	X					"	
.3		1122	Site C - NW Corner 6'	Soil	1	X	X	X					"	
.4		1126	Site D - NE Corner 6'	Soil	1	X	X	X					"	
.5		1129	Site E East 6'	Soil	1	X	X	X					"	OVA SN 852114
.6		1132	Site F SW corner		1	X	X	X					"	Cal. 7/20/94
.7		1136	Site G (Dup)		1	X	X	X					"	0 Air + 95ppm CH4
.8		1140	Site H (Pipe) 1'		1	X	X	X					"	@ 3.0
													"	Reading = 70
													"	B. M[illegible]
													"	

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

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
[signature]	7/20 12:10 PM	B. M[illegible]	

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

July 21, 1994 0945

Sarah J. Hubbard

Blank	0 MV
40.75	111 MV
81.5	203 MV
163	409 MV
1572.1	3 MV
1572.1	3 MV duplicate
1572.1	32 MV Spike
1572.1	30 MV Spike Duplicate
1572.2	1 MV
1572.3	2 MV
1572.4	0 MV
1572.5	0 MV
1572.6	2 MV
1572.7	3 MV
1572.8	27 MV
1573.1	3 MV
1573.2	3 MV
1573.3	2 MV
1573.4	9 MV
1573.5	11 MV
1573.6	4 MV
1573.7	2 MV
1573.8	4 MV

PRINTED IN U.S.A.

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 #1573

B. McK

Brian K. McKee
Laboratory Manager

ATTACHMENT H

UST 142B Report

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 142B
Main Post

NJDEP UST Registration No. 090010-73
Emergency UST Removal
Spill Case No. 94-7-21-1561-45

February 1997

SMITH
TECHNOLOGY CORPORATION

SMITH

UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 142B

MAIN POST
NJDEP UST REGISTRATION NO. 090010-73
EMERGENCY UST REMOVAL
SPILL CASE NO. 94-7-1561-45

FEBRUARY 1997

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:

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

SMITH

TABLE OF CONTENTS

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TABLE OF CONTENTS (CONTINUED)

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EXECUTIVE SUMMARY

UST Closure

On July 21, 1994, a steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST was discovered during decommissioning of 090010-13 at Building 142A. The UST was found to be located immediately adjacent to Building 142B in the Main Post area of U.S. Army, Fort Monmouth. The UST was removed as an emergency since it was not previously registered with the NJDEP nor previously known to exist. The UST was later registered with the NJDEP on September 14, 1994, and was assigned registration No. 090010-73. UST No. 090010-73 was a 550-gallon No. 2 fuel oil UST. The UST fill port was located directly above the tank. The tank closure was performed by Cleaning Up The Environment Inc. (CUTE Inc.).

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) 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. Holes were noted in the UST and evidence of potentially contaminated soil was observed surrounding the tank.

On July 21, 1994, following the removal of the UST, approximately 30 cubic yards of potentially contaminated soils was removed from the excavation due to visible contamination. Post-excavation soil samples A, B, C, D, E, F, and DUP A were collected from a total of six (6) locations along the sidewalls of the excavation. The samples were collected at a depth of 5.5 feet below ground surface (bgs). All samples were analyzed for total petroleum hydrocarbons (TPHC). No fuel lines were found during the emergency removal of UST No. 090010-73.

Based on the inspection of the UST, and field screening of subsurface soils, the DPW has concluded that an historical discharge was associated with the UST. On July 21, 1994, a spill was reported to the NJDEP "Hotline" for UST No. 090010-73 and was assigned Spill Case No. 94-7-21-1561-45.

Findings

All post-excavation soil samples collected from the UST excavation at Building 142B 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). All samples (samples A, B, C, D, E, F, and DUP A) 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.

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 for Site Remediation.*

Discrepancies

The removal contractor collected soil samples using polystyrene scoops instead of NJDEP approved stainless steel scoops. The results of the soil samples were therefore evaluated at 50% of the actual value to compensate for any potential loss due to absorbency of the polystyrene scoop.

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 exist in the former location of the UST.

No further action is proposed in regard to the closure and site assessment of UST No. 090010-73 at Building 142B.

SMITH

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), was closed at Building 142B at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on July 21, 1994. Refer to site location map on Figure 1. The UST was discovered during decommissioning of UST No. 090010-13 at Building 142A. The UST was found to be located immediately adjacent to Building 142B in the Main Post area of U.S. Army, Fort Monmouth. The UST was removed as an emergency since it was not previously registered with the NJDEP nor previously known to exist. The UST was registered with the NJDEP on September 14, 1994 and was assigned registration No. 090010-73. The UST was a steel 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 090010-73 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. 090010-73 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The signed certifications for UST No. 090010-73 are included in Appendix A.

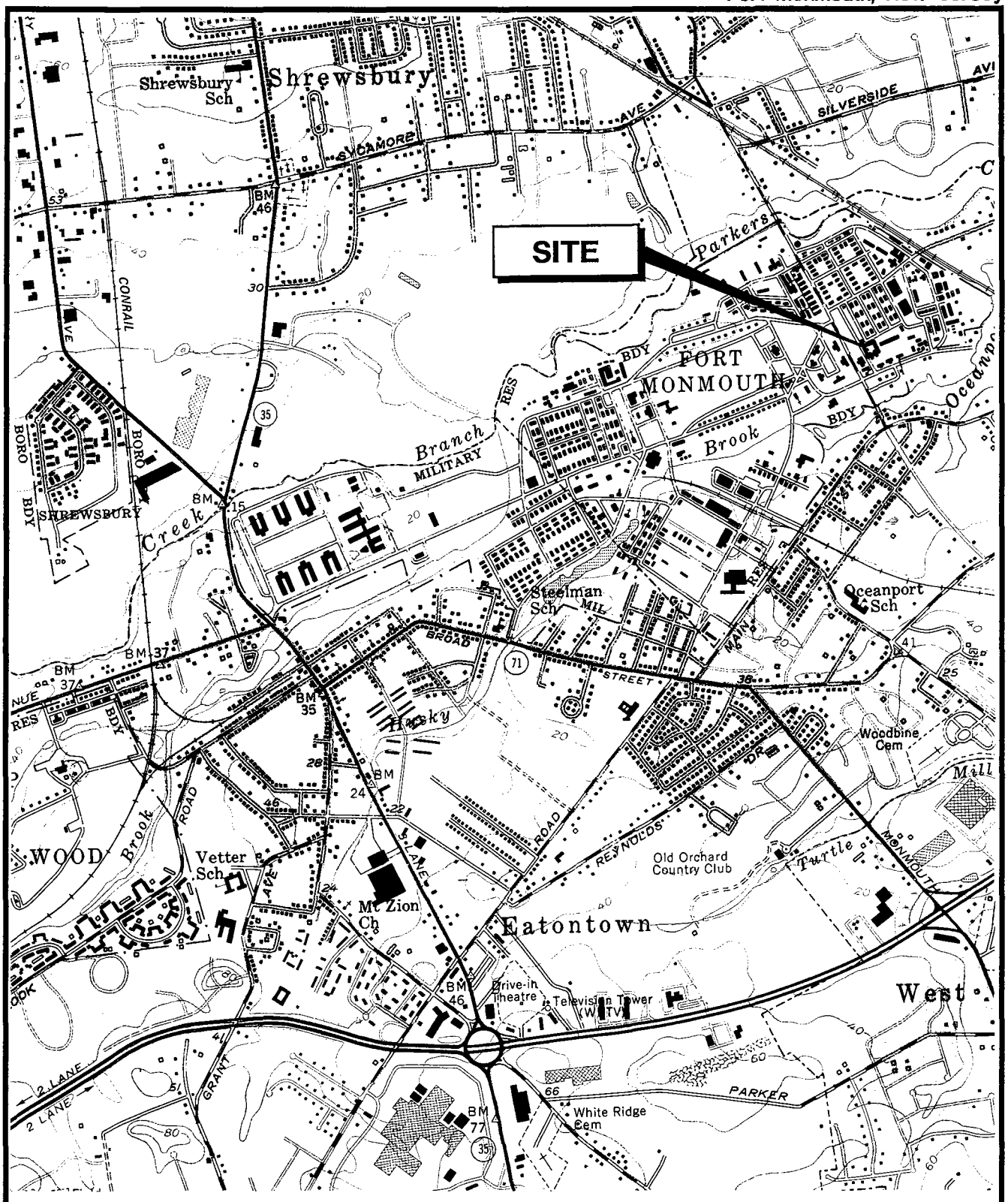
Based on an inspection of the UST, and field screening of subsurface soils, the DPW has concluded that an historical discharge was associated with the UST. On July 21, 1994, a spill was reported to the NJDEP "Hotline" for UST No. 090010-73 and was assigned Spill Case No. 94-7-21-1561-45.

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.

SMITH

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



Source: Long Branch, New Jersey Quadrangle

Project No. 09-5004-08

Figure 1
Site Location Map
Building 142B

1.2 SITE DESCRIPTION

Building 142B is located in the northeastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 090010-73 was located east of Building 142B. The fill port area was located directly above the tank, however, no fuel lines were found upon removal of the UST. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 142B. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

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

Local Geology

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

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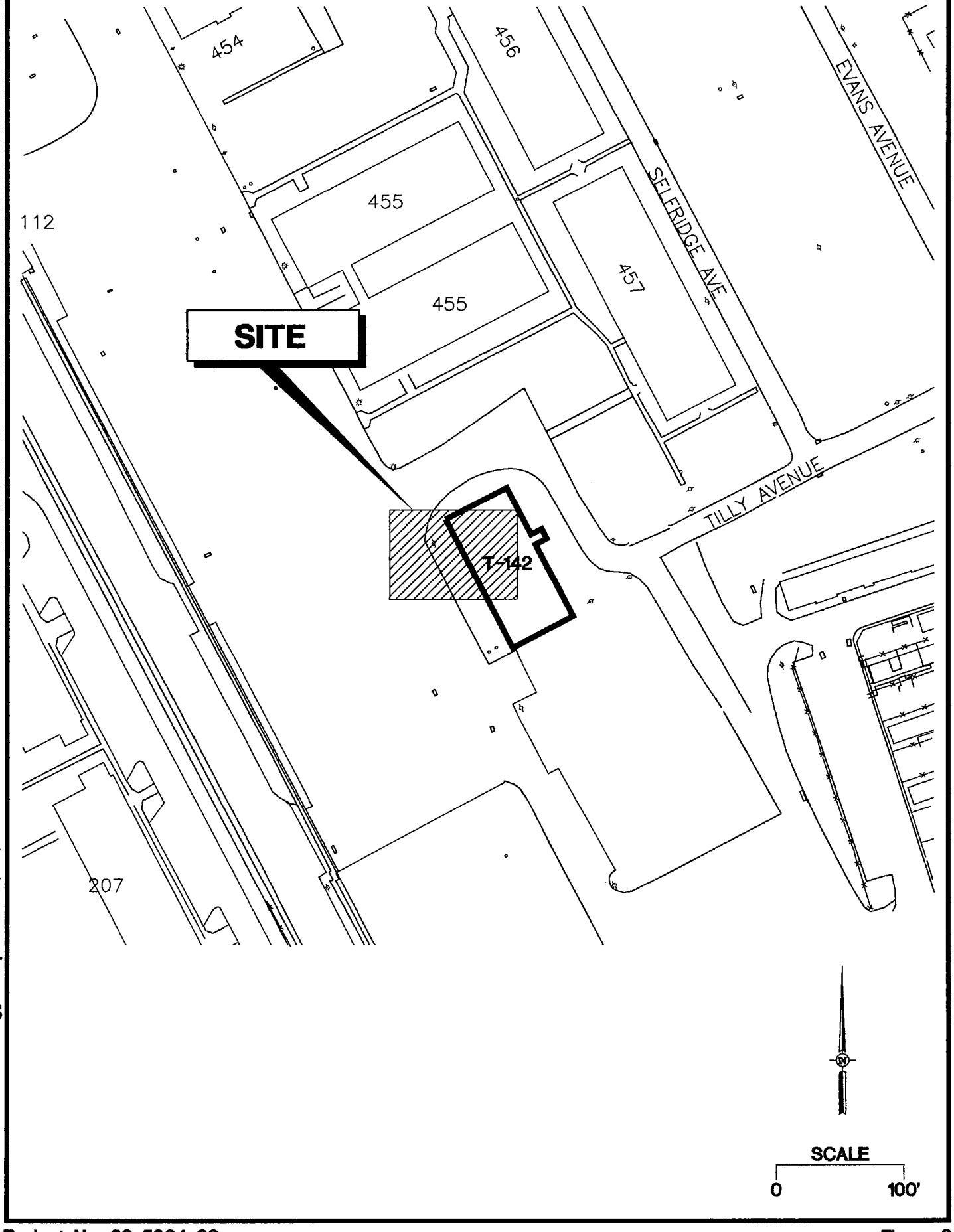
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: Smith Technology Corporation (110)

Project No. 09-5004-08

Figure 2
Building T-142B
Site Map

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

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

Hydrogeology

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

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

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

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involve with, or were affected by, the decommissioning of the UST system were minimized. All areas which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- All underground obstructions (utilities, etc.) were marked out by the contractor performing the closure prior to excavation activities.
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose 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 922 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix B for the waste manifest (NJA-1603196).

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. Holes were observed in the UST during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. Evidence of potentially contaminated soil was observed surrounding the tank.

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 C for UST Disposal Certificate.

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, approximately 30 cubic yards of soil was removed from the excavation on July 21, 1994. All 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 the hazardous storage area on Main Post prior to ultimate disposal at Soil Remediation of Philadelphia. Soils that did not exhibit signs of contamination were used as backfill following removal of the UST.

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2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All 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: Cleaning Up The Environment Inc. (CUTE Inc.)
  Closure Supervisor: George Bernotsky
  Phone Number: (201) 427-2881
  NJDEP Certification No.: 3249

- 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) 721-0900
  NJDEP Hazardous Waste Hauler No.: 2265

2.2 FIELD SCREENING/MONITORING

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

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2.3 SOIL SAMPLING

On July 21, 1994, post-excavation soil samples A, B, C, D, E, F, and DUP A were collected from a total of six (6) locations along the sidewalls of the excavation, at a depth of 5.5 feet below ground surface (bgs). No fuel lines were found during the removal of the UST.

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 still have been non-detectable. 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.

TABLE 1
PAGE 1 OF 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 142B, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	7/21/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	7/21/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	7/21/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	7/21/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	7/21/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	7/21/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
Dup A	7/21/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop

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

Smith Technology Corporation (Project No. 09-5004-08)

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3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST, post-excavation soil samples were collected from a total of six (6) locations on July 21, 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 July 21, 1994, from the UST excavation contained concentrations of TPHC below the NJDEP soil cleanup criteria. All post-excavation soil samples collected on July 21, 1994 contained non-detectable concentrations of TPHC.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 142B 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.

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

No further action is proposed in regard to the closure and site assessment of UST No. 090010-73 at Building 142B.

TABLE 2
PAGE 1 OF 1

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 142B
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/5.5-6.0'	1578.1	7/21/94	7/22/94	Total Solid	--	--	83 %	--	--
				TPHC	6.6	yes	ND	10,000	--
B/5.5-6.0'	1578.2	7/21/94	7/22/94	Total Solid	--	--	84 %	--	--
				TPHC	6.6	yes	ND	10,000	--
C/5.5-6.0'	1578.3	7/21/94	7/22/94	Total Solid	--	--	79 %	--	--
				TPHC	6.6	yes	ND	10,000	--
D/5.5-6.0'	1578.4	7/21/94	7/22/94	Total Solid	--	--	88 %	--	--
				TPHC	6.6	yes	ND	10,000	--
E/5.5-6.0'	1578.5	7/21/94	7/22/94	Total Solid	--	--	82 %	--	--
				TPHC	6.6	yes	ND	10,000	--
F/5.5-6.0'	1578.6	7/21/94	7/22/94	Total Solid	--	--	84 %	--	--
				TPHC	6.6	yes	ND	10,000	--
Dup A/5.5-6.0'	1578.7	7/21/94	7/22/94	Total Solid	--	--	81 %	--	--
				TPHC	6.6	yes	ND	10,000	--

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

Actual soil TPHC values may be higher than reported due to absorbency by polystyrene scoops. If absorbency resulted in reducing the actual soil TPHC concentration by 50%, the highest soil contaminant would still have been non-detectable mg/kg.

Smith Technology Corporation (Project No. 09-5004-08)

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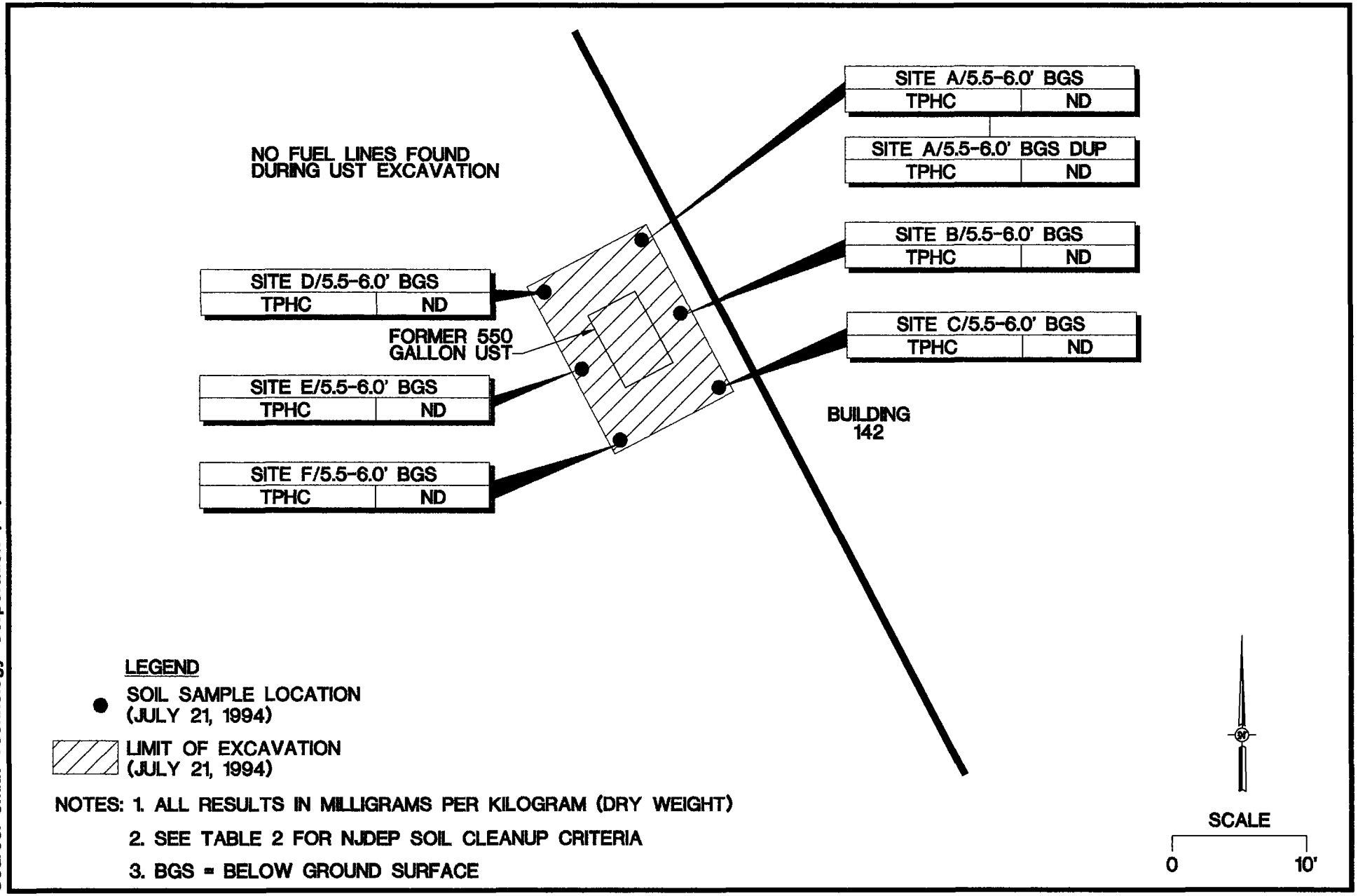
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: Smith Technology Corporation (111)

Project No. 09-5004-08

Figure 3

Building 142B
Soil Sampling Results

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APPENDIX A

CERTIFICATIONS

UNDERGROUND STORAGE TANK (UST) CLOSURE CERTIFICATION

BUILDING NO. 142B

NJDEP UST REGISTRATION NO. 90010-13B (73)

DATE TANK REMOVED 7/21/94

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) George Bernotsky

SIGNATURE [signature]

NJDEP UST CLOSURE CERTIFICATE NO. 0003249

COMPANY PERFORMING TANK DECOMMISSIONING CUTE Inc.

NJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128

DATE OF SUBMITTAL 8/16/94

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 028
Trenton, NJ 08625-0028
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 _____

00-90010-73
FACILITY REGISTRATION #

Bldg. 142B

I. FACILITY NAME AND ADDRESS

US Army Fort Monmouth, New Jersey
Directorate of Public Works, Bldg. 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. 94-7-21-1561-45
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) #2 fuel oil

C. Have any vapor hazards been mitigated? ___Yes ___No X N/A

III. DECOMMISSIONING OF TANK SYSTEMS Closure Approval No. N/A Emergency Removal

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

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. ND 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 X Yes ___ No As pertains to this site
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 US Army Fort Monmouth DATE _____
(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) See Appendix A 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 US 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 _____

SMITH

APPENDIX B

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 9-30-9[illegible]

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJ3 2 1 1 6 2 0 5 9 7 [illegible] Manifest Document No.: [illegible]

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, MonPost c/o James Shughrue 8129 2504, AMSEL-EM-B DL-EM-M5, 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: NJD054126284

C. State Trans. ID: NJDEPS 2265 [illegible]

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 908 462-[illegible]

E. State Trans. ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address: Lionetti Oil Recovery Co Inc., Runyon + Chesapeake RD, Old Bridge NJ 08857

10. US EPA ID Number: NJD084141961

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	01100	G	X 7 2 2
b.	X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	00732	G	X 7 2 2
c.	X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	01932	G	X 7 2 2
d.	X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	00454	G	X 7 2 2

J. Additional Descriptions for Materials Listed Above

a. oil 60% water 40% L.T
b. oil 60% water 40% L.T
c. oil 60% water 40% L.T
d. oil 60% water 40% L.T

K. Handling Codes for Wastes Listed Above

a. T04 Filtration
b. T04 Filtration
c. T04 Filtration
d. T04 Filtration

15. Special Handling Instructions and Additional Information: Not EPA Regulated. NJ hazardous. 24 hr Emerg # 201-429-2881. DEC# 55404

a) NJDEPE 0090010-7
b) NJDEPE 0090010-13A
c) NJDEPE 0090010-13B
d) NJDEPE 0090010-16

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

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

Printed/Typed Name: Joseph M. Fallon | Signature: Joseph M. Fallon | Month Day Year: 07 13 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: PAULO R. MEDEIROS | Signature: [signature] | Month Day Year: 07 13 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

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

Printed/Typed Name: | Signature: | Month Day Year:

GENERATOR / TRANSPORTER / FACILITY

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

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

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

CALCULATION SHEET

Building No. 142B NJDEPE Reg. No. 0090010 - 13B

Tank Size 1000 gal Tank Void 7.5 tons

CLEAN FILL

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
	Fill	22.18	18811
		22.35	18810
		~~22.03~~	18774
		15.03	

TOTAL 59.56

STONE

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #

TOTAL ∅

ID#27 soil to stockpile (∅ + 59.56) - 7.5 = 52.06 tons

Chargeable clean fill ~~∅~~ 52.06

Chargeable stone ∅

Joseph Scrano Sand & Gravel Co.

1453 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3333

18811

Order Date July / 13 / 94

Name Big A Trucking

Deliver Date / /

Address

Delivered ☐ C.O.D. ☐

Clark Fill

F.O.B./P.U. ☐ Charge ☑

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	G 69910		
	T 25500	22.18 tons	
	N 44360		
		Sub Total	
		Delivery	
		N.J. Tax	
		Total	

Driver

Received

* Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel
since 1925

Joseph Soprano Sand & Gravel Co.

1453 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3333

296

18810

Order Date July, 13, 94

Name Big A Trucking

Deliver Date ___/___/___

Address Clan Fill

Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☑

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	G 20200 00		
	T 25500		
	N 44700	22.35 tons	
		Sub Total	
		Delivery	
		N.J. Tax	
		Total	

Driver [illegible]

Received [signature]

* Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel!
since 1925

Joseph Scarano Sand & Gravel Co.

1463 W. Park Ave., Weyalda
Asbury Park, N.J. 07712
908-493-3333

18774

Order Date 11/

Deliver Date 7/6/94

Name BJ Trucking

Address

Clean Fill

Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☑

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	12-70;650		
	T 25;570	22.53 tons	
	11		

Sub Total

Delivery

N.J. Tax–

Total

Driver Unit 5

Received

* Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel!
since 1925

Bldg 142A 7.5 tons
Bldg 142B 15.03 Tons

SMITH

APPENDIX C

UST DISPOSAL CERTIFICATE

Bldg [illegible]
411 – UST-009001028
491 – " 009001071
430 – 009001045
1426 – No UST? 009001013?
Fort Monmouth
Eatontown, NJ

MAZZA & SONS, INC.

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

NO. ____________

DATE 1 Aug 94

Customer's Name Cute inc

Address ____________

Make of Autos

Tires
Tank
Price.

43520 LB G

38390 LB G

PAID
AUG - 1 1994

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

Weigher ____________ Customer Don Ellis

SMITH

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-PW-EV
Bldg. 167
Ft. Monmouth, NJ 07703

Lab. ID #: 1578.1-.7
Sample Rec'd: 07/21/94
Analysis Start: 07/22/94
Analysis Comp: 07/22/94

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

NJDEPE UST Reg.#:
Closure #:
DICAR #:
Location #: **Bldg. 142B**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1578.1	Site A, N.W. Corner OVA= 61	83	ND	6.6
1578.2	Site B, N.E. Corner OVA= 2	84	ND	6.6
1578.3	Site C, East OVA= 1	79	ND	6.6
1578.4	Site D, South East OVA= 8	88	ND	6.6
1578.5	Site E, South West OVA= 2	82	ND	6.6
1578.6	Site F, West OVA= 2	84	ND	6.6
1578.7	Site G, N.W. Dup OVA= 50	81	ND	6.6
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1578.7 dup= 100% 1578.7 s= 114% 1578.7 sd= 107% RPD= 6.3%

Brian K. McKee
Laboratory Director

SERV-AIR, INC.

P.O. #:

Chain of Custody

Project #: Closure

Customer: D. Desai

Phone:

Sampler: Cute

Site Name: BCPS 142B

Date / Time: 7/21/94 1430

Analysis Parameters: TPHC, 9a Solid, Msmsel, OSA

Start:

Finish:

Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	Remarks
A 1578.1	7/21 1-30	A NW Corner	Soil	1	81
B .2	1-20	B NE "		1	2
C .3	1-30	C East		1	1
D .4	1-40	D SOUTHEAST		1	8
E .5	1-50	E Southwest		1	2
F .6	1-59	F West		1	2 OVA SN A32114
G .7	2-04	G NW - (DUP)		1	50 Cal 7-21-94 13:10 @ Air +95 ppm CH4 @ 3.0 Read 66 - High Humidity

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

Relinquished By (signature): [signature] | Date / Time: 7/21 2-40PM | Received for Lab by (signature): [signature] | Date / Time: 7/21/94 1440

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

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 #: 1578.1-.7
Sample Rec'd: 07/21/94
Analysis Start: 07/22/94
Analysis Comp: 07/22/94

Analysis: Munsel

Lab ID#	Soil Color
1578.1	2.5Y 4/4 Olive Brown
1578.2	10YR 4/6 Dark Yellowish Brown
1578.3	2.5Y 4/4 Olive Brown
1578.4	2.5Y 4/4 Olive Brown
1578.5	2.5Y 5/6 Light Olive Brown
1578.6	2.5Y 5/6 Light Olive Brown
1578.7	2.5Y 4/4 Olive Brown

Brian K. McKee
Laboratory Director

July 22, 1994 0848 Sarah J. Hubbard

Blank

40.75 105 MV

81.5 204 MV

165 408 MV

1578.1 1 MV

1578.2 0 MV

1578.3 0 MV

1578.4 0 MV

1578.5 0 MV

1578.6 0 MV

1578.7 1 MV

1578.7 1 MV Duplicate

1578.7 36 MV Spike

1578.7 34 MV Duplicate Spike

1579.1 1 MV

1579.2 0 MV

1579.3 2 MV

1579.4 0 MV

1579.5 0 MV

1579.6 4 MV

1579.7 0 MV

PHC Conformance/Non-conformance Summary Report

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

Comments: _____

Laboratory Authentication Statement

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

Project #1578

Brian K. McKee
Laboratory Manager

ATTACHMENT I

Bldgs. 168, 169, 170, and 171 File Review

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

Date: *February 26, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldgs. 168, 169, 170, 171*** Registration ID: *None*

Recommended Status of Site: ***No USTs found***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***Low and High (see below)***

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 [ ] No [X] Not Applicable

Tank Description: [ ] Steel [ ] Fiberglass Size: ____ Contents: ____ ***No Tanks Present***

[ ] Residential [ ] Commercial/Industrial

Tank Removed? [ ] Yes [ ] No If "yes," removal date: _____

Were closure soil samples taken? [ ] Yes [ ] No ***Not Applicable*** Analyses: _____

Comparison criteria: ___ _____ _

Were closure soil sample results less than comparison criteria? [ ] Yes [ ] No ***Not Applicable***

Brief Narrative

Former Buildings 168, 169, 170 and 171 were general purpose warehouses according to FTMM real property records. These records also indicate that Bldgs. 168 and 169 were heated with coal, and 170 and 171 were heated with coal-oil. A 1956 drawing of fuel storage tanks indicates that tanks were formerly present at the southern end of Bldgs. 168 and 169, which seems inconsistent with the real property records.

There were no tanks removed from any of these four building locations. During the site assessment activities in March 1997 at adjacent Area 74, efforts were made using a metal detector and test trenching to locate USTs associated with Bldgs. 168, 169, 170 and 171. Field notes (see attached) indicate that no tanks were found. Small concrete pads were found near former Bldg. 170 suggesting that heating fuel may have been stored in an aboveground storage tank.

The UHOT Addendum Report reports a high probability for an existing UST at Bldgs 170 and 171, and low probability for Bldgs. 168 and 169, although the rationale for the distinction was not provided. FTMM UST files describe the removal of a 550 gallon fiberglass diesel fuel tank described as UST 170D (registration ID 90010-69), which was removed at Bldg. 170 located in the western side of the Main Post. However, this is not the same location as former Bldg. 170 that was formerly located north of Hazen Drive on the eastern side of the Main Post.

The historical documentation and field observations support the conclusion that there are no remaining USTs present. If there were formerly USTs at Bldgs. 168 and 169 (as suggested on the 1956 fuel storage drawing), it is plausible that they were removed prior to subsequent construction of the large bulk fuel oil storage tanks in the immediate vicinity.

Recommendations (if any): __None; no environmental issues indicated ___
_____

Signed: _____

Kent A. Friesen, Parsons

Thurs. 2429 3/13/97 (24)

(Area 74)

Chuck believes that there is a possibility that the former two buildings may have had oil USTs associated with them, and If so, they may still be in the ground.

There is a possible ~~san~~ storm drain line going through the 2nd AST that is not marked.

Chuck wants us to look at B-170 to see if there is a UST associated ~~wit~~ with the building. If so, then there is a strong possibility that the former Buildings # 169 #168 would have had USTs.

12^{30}-1^{00} Pumping water while I collect my next sample, P-2

Thurs, 2429 3/13/97 (25)

(Area 74)

1^{00} to 1^{30} Lunch Break

1^{30} Remediation of trenches continues.

2^{30} Collect sample from P-3 location.

2^{45} Collect sample from P-4 location.

Note: will not be collecting a sample from P-5 location due to the fact that there is a section of pipe still there that is connected to the concrete pad.

Done Sampling, filling out COC and taking it to the lab.

Fri: 2429 3/14/97 (28)

(Area 74)

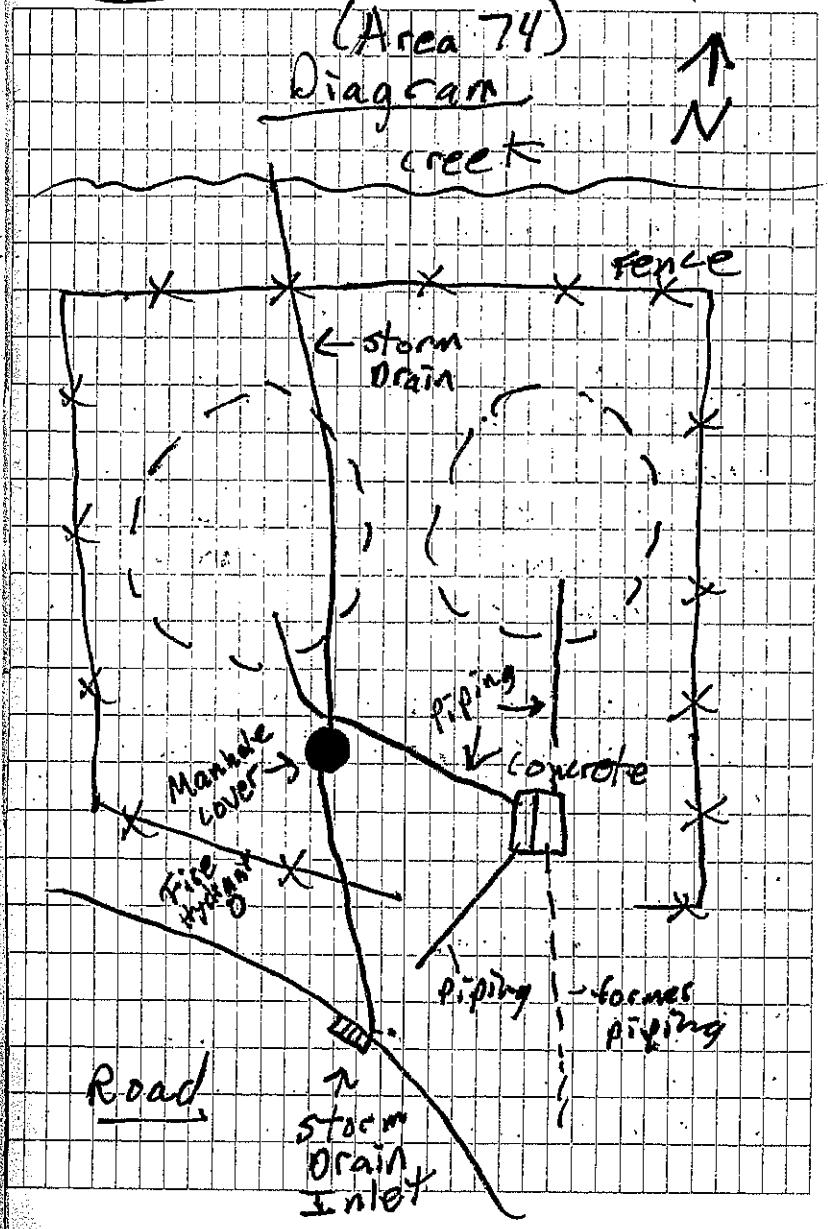
900 I am looking at the most recent blue prints that Chuck gave to me at the end of yesterday which show the first AST and building 168+169. After review this for awhile I determine that the marked out storm drain may be wrong. The drawing shows the storm drain going through the other AST area. As shown on the diagram → next page (29).

910 I get Tim Walker to look over the prints, we use a scale and mark off distances with a tape measure to locate the possible manhole cover. After we determine this location we use the metal detector.

Fri 2429 3/14/97 (29)

(Area 74)

Diagram



(Area 74)

the metal detector indicates that there is an area of metal that could be a manhole cover.

10[00] I stop Tim on the backhoe from digging where he is. He has three large and deep trenches in the area of the marked out storm drain, however, no storm drain.

10[10] Start to hand shovel the area of the potential manhole cover.

10[30] the entire manhole cover is uncovered.

1035 Tim + I (D+D) walk around the tenic in area to locate the discharge

(Area 74)

pipe to the near by creek to the north. We find it where the blue print showed it to be. We flag out the storm drain line from the creek to the manhole cover.

While Tim + I were near building 170, we looked for signs of an possible USTs associated with building 170. However, we find evidence to sugest tha the building was heated by ASTs, there were two small concrete slabs along the east side of B-170 with small copper tubing going into the building. No vents nor fill pipe ends were seen.

11[00] Tim is excavating the piping run associated with the first AST.

ATTACHMENT J

UST 202A File Review

PARSONS

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

Date: *February 19, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 202A*** Registration ID: *90010-21*

Recommended Status of Site: ***Case Closed (no change)***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***High (see below)***

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

NJDEP Release No. or DICAR (If applicable): *None*

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

Tank Description: [ ] Steel [X] Fiberglass Size: 1000 gals. Contents: Heating Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 10/1/2001

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

Comparison criteria: 5,100 mg/kg TPH; RDCSRS

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

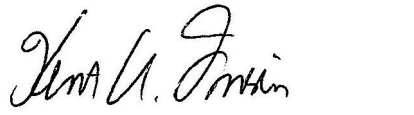
Brief Narrative

Bldg. 202 was formerly civilian quarters according to FTMM real property records. Two fiberglass (202A and 202B) and two steel (202C and 202D) tanks were removed from Bldg. 202.

Following tank 202A removal in October 2001, 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 were non-detected (ND) to 7974 mg/kg for TPH. Contaminated soil was then removed from the west sidewall, and final soil samples results were ND to 239 mg/kg. The final results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. The samples with highest TPH concentrations were also analyzed for volatile organic compounds (VOCs); ethyl benzene, xylenes, 1,3-dichlorobenzene, vinyl acetate, chlorobenzene, and dibromochloromethane, were detected, but at concentrations below the respective NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS). Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support the UST Case Status of "Case Closed." Although the ECP UHOT Addendum indicates a high probability of a tank being present, this seems unlikely since a steel tank was already removed (see file reviews for UST 202C and 202D).

Recommendations (if any): Request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

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: UST Program

Bldg. 202A

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
202A-A/North Wall 3.5-4'	1648301	Soil	01-Oct-01 13:10	10/01/01
202A-B/South Wall 3.5-4'	1648302	Soil	01-Oct-01 14:30	10/01/01
202A-C/East Wall 3.5-4'	1648303	Soil	01-Oct-01 13:25	10/01/01
202A-D/West Wall 3.5-4'	1648304	Soil	01-Oct-01 14:15	10/01/01
202A-E/Piping 1.5-2'	1648305	Soil	01-Oct-01 14:50	10/01/01
202A-F/Piping 2.5-3'	1648306	Soil	01-Oct-01 13:50	10/01/01
202A-G/Duplicate 3.5-4'	1648307	Soil	01-Oct-01 14:15	10/01/01
Trip Blank	1648308	Methanol	01-Oct-01	10/01/01

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

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

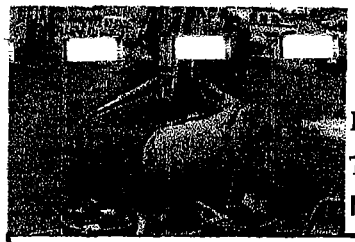
(QC and raw data not included for brevity)

10-19-01

Daniel Wright/Date
Laboratory Director

Table of Contents

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: 01-0001
Location: BLDG. 202A
UST# 90010-21

Samplers Name / Company : Frank Accorsi/TVS

Analysis Parameters: TPHC; % SOLIDS; # VOA+10; VOA ID #; PID Reading

* = Samples Kept <4°C

Lab Sample I.D.	Sample Location	Depth	Date	Time	Sample Type	# Bottles	TPHC	% SOLIDS	# VOA+10	VOA ID #	PID Reading	Remarks / Preservation Method
16483 01	202A-A, NORTH WALL	3.5-4.0	10-1-01	1310	SOIL	2	X	X	X	2848	3.2	ICE
02	202A-B, SOUTH WALL	3.5-4.0		1430		2	X	X	X	2849	0	
03	202A-C, EAST WALL	3.5-4.0		1325		2	X	X	X	2850	2.0	
04	202A-D, WEST WALL	3.5-4.0		1415		2	X	X	X	2851	22.8	
05	202A-E, PIPING	1.5-2.0		1350		2	X	X	X	2852	0	
06	202A-F, PIPING	2.5-3.0		1350		2	X	X	X	2853	0	
07	202A-G, DUPLICATE	3.5-4.0		1415		2	X	X	X	2854	30.0	
08	TRIP BLANK	—		—		1			X	2855	—	

OVM sn#580U-64455.343 was calibrated with zero air & w/ 245 ppm Isobutylene read 246 ppm. 1010 10-1-01 FA (time/date & initial)

Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	10-1-01 1536	J. Wright
Relinquished by (signature):	Date/Time:	Received by (signature):

Comments: # VO+10 ON 25% > 1,000 PPM TPHC, ON HIGHEST, MIN. ONE

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: ( )Standard 2 wks, (X)Rush 1 Days, ( )ASAP Verbal ___ Hrs.

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

000002

print legibly

USTcoc.xls6/22/01

Change of Chain of Custody

Lab Project ID#: 16483 Site/Project Name: Bldg 202A

Date Received: 10/1/01 Date of Change: 10/3

Requested by: *print* Hamer Sign: Hamer

Turnaround Time: 0 Stand.

1. Were the correct containers and/or preservatives used for the tests indicated? Yes No
2. Was a sufficient amount of sample sent for the tests indicated? Yes No
3. Are samples Within Holding time for new analysis? Yes No
4. Was the change documented in the sample receipt log book? Yes No

Received by: *print* Sign:

Sample ID#	New Analysis		Sample ID#	New Analysis	
164830 4	VOA +15			10.39	1945
07	"			10.41	21.84
08	"			—	—
	Reduced				

Comments:

METHOD SUMMARY

Method Summary

NJDEP Method 8260
Gas Chromatographic Determination of Volatiles in Soil

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 is purged and desorbed into a GC/MS system. Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture, methanol volume and concentration.

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

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

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

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 16483

Site: Bldg. 202A

	Date	Hold Time
Date Sampled	10/01/01	NA
Receipt/Refrigeration	10/01/01	NA
Extractions		
1. TPHC	10/02/01	14 days
Analyses		
1. Volatile Organics	10/05,09/01	14 days
2. TPHC	10/03/01	40 days

CONFORMANCE-
NON-
CONFORMANCE

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: — yes
   a. VOA Fraction Chlorobenzene 3J
   b. B/N Fraction NA
   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 NA
   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 Chlorobenzene % Rec low RPD high
   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 — NO
(If not met, list those compounds, which fall outside the acceptable range)

a. VOA Fraction IS3 high
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:

Laboratory Manager: _____ Date: 10-19-01

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).	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: _____

_____

_____

_____ 10-19-01

Laboratory Manager Date

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

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 10/05/01

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007190.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/5/01

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	32	J
100-41-4	Ethylbenzene	200	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 10/05/01

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007190.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/5/01

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.

MB 10/05/01

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007190.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/5/01

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

MB 10/09/01

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007224.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/9/01

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

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 10/09/01

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007224.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/9/01

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	44	J
106-46-7	1,4-Dichlorobenzene	45	J
95-50-1	1,2-Dichlorobenzene	300	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

MB 10/09/01

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

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

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007224.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/9/01

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

202A-D

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648304

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007195.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 19.45 Date Analyzed: 10/5/01

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	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	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	360	U
	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	26	J

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

202A-D

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648304

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007195.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 19.45 Date Analyzed: 10/5/01

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	110	J
1330-20-7	o-Xylene	74	J
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	46	J
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. **202A-D**

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648304

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007195.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 19.45 Date Analyzed: 10/5/01

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: 15

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown hydrocarbon	25.96	10000	J
2.	unknown hydrocarbon	29.00	35000	J
3.	unknown hydrocarbon	30.06	16000	J
4.	unknown hydrocarbon	30.45	11000	J
5.	unknown hydrocarbon	30.53	10000	J
6. 002847-72-5	Decane, 4-methyl-	30.90	11000	JN
7.	unknown	31.93	14000	J
8. 001678-93-9	Cyclohexane, butyl-	32.17	16000	JN
9. 000135-01-3	Benzene, 1,2-diethyl-	33.37	14000	JN
10. 000493-02-7	Naphthalene, decahydro-, trans-	33.67	16000	JN
11. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	34.44	15000	JN
12. 000527-84-4	Benzene, 1-methyl-2-(1-methylet	34.69	15000	JN
13.	unknown	34.86	19000	J
14. 002958-76-1	Naphthalene, decahydro-2-methyl	34.95	17000	JN
15.	unknown	35.22	9700	J

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

202A-D DL

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648304

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007226.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 19.45 Date Analyzed: 10/9/01

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 10.0

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	8300	U
107131	Acrylonitrile	8300	U
75650	tert-Butyl alcohol	15000	U
1634044	Methyl-tert-Butyl ether	3600	U
108203	Di-isopropyl ether	2400	U
75718	Dichlorodifluoromethane	4800	U
74-87-3	Chloromethane	1200	U
75-01-4	Vinyl Chloride	3600	U
74-83-9	Bromomethane	2400	U
75-00-3	Chloroethane	3600	U
75-69-4	Trichlorofluoromethane	2400	U
75-35-4	1,1-Dichloroethene	1200	U
67-64-1	Acetone	2400	U
75-15-0	Carbon Disulfide	1200	U
75-09-2	Methylene Chloride	2400	U
156-60-5	trans-1,2-Dichloroethene	2400	U
75-35-3	1,1-Dichloroethane	1200	U
108-05-4	Vinyl Acetate	3600	U
78-93-3	2-Butanone	3600	U
	cis-1,2-Dichloroethene	1200	U
67-66-3	Chloroform	1200	U
75-55-6	1,1,1-Trichloroethane	1200	U
56-23-5	Carbon Tetrachloride	2400	U
71-43-2	Benzene	1200	U
107-06-2	1,2-Dichloroethane	2400	U
79-01-6	Trichloroethene	1200	U
78-87-5	1,2-Dichloropropane	1200	U
75-27-4	Bromodichloromethane	1200	U
110-75-8	2-Chloroethyl vinyl ether	2400	U
10061-01-5	cis-1,3-Dichloropropene	1200	U
108-10-1	4-Methyl-2-Pentanone	2400	U
108-88-3	Toluene	1200	U
10061-02-6	trans-1,3-Dichloropropene	2400	U
79-00-5	1,1,2-Trichloroethane	2400	U
127-18-4	Tetrachloroethene	1200	U
591-78-6	2-Hexanone	2400	U
126-48-1	Dibromochloromethane	2400	U
108-90-7	Chlorobenzene	1200	U
100-41-4	Ethylbenzene	2400	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

202A-D DL

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648304

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007226.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 19.45 Date Analyzed: 10/9/01

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 10.0

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	3600	U
1330-20-7	o-Xylene	2400	U
100-42-5	Styrene	2400	U
75-25-2	Bromoform	2400	U
79-34-5	1,1,2,2-Tetrachloroethane	2400	U
541-73-1	1,3-Dichlorobenzene	3600	U
106-46-7	1,4-Dichlorobenzene	3600	U
95-50-1	1,2-Dichlorobenzene	3600	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

202A-G

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648307

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007196.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 21.84 Date Analyzed: 10/5/01

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	860	U
107131	Acrylonitrile	860	U
75650	tert-Butyl alcohol	1600	U
1634044	Methyl-tert-Butyl ether	370	U
108203	Di-isopropyl ether	250	U
75718	Dichlorodifluoromethane	490	U
74-87-3	Chloromethane	120	U
75-01-4	Vinyl Chloride	370	U
74-83-9	Bromomethane	250	U
75-00-3	Chloroethane	370	U
75-69-4	Trichlorofluoromethane	250	U
75-35-4	1,1-Dichloroethene	120	U
67-64-1	Acetone	250	U
75-15-0	Carbon Disulfide	120	U
75-09-2	Methylene Chloride	250	U
156-60-5	trans-1,2-Dichloroethene	250	U
75-35-3	1,1-Dichloroethane	120	U
108-05-4	Vinyl Acetate	65	J
78-93-3	2-Butanone	370	U
	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	250	U
71-43-2	Benzene	120	U
107-06-2	1,2-Dichloroethane	250	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	250	U
10061-01-5	cis-1,3-Dichloropropene	120	U
108-10-1	4-Methyl-2-Pentanone	250	U
108-88-3	Toluene	120	U
10061-02-6	trans-1,3-Dichloropropene	250	U
79-00-5	1,1,2-Trichloroethane	250	U
127-18-4	Tetrachloroethene	120	U
591-78-6	2-Hexanone	250	U
126-48-1	Dibromochloromethane	97	J
108-90-7	Chlorobenzene	18	JB
100-41-4	Ethylbenzene	250	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

202A-G

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648307

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007196.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 21.84 Date Analyzed: 10/5/01

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	370	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	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID.

202A-G

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648307

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007196.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 21.84 Date Analyzed: 10/5/01

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: 15

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown hydrocarbon	28.11	8400	J
2.	unknown hydrocarbon	28.53	8600	J
3.	unknown hydrocarbon	29.00	24000	J
4.	unknown hydrocarbon	30.06	9300	J
5. 000095-63-6	Benzene, 1,2,4-trimethyl-	31.92	13000	JN
6. 000526-73-8	Benzene, 1,2,3-trimethyl-	33.04	9300	JN
7. 000141-93-5	Benzene, 1,3-diethyl-	33.37	15000	JN
8.	unknown	33.55	15000	J
9. 000493-02-7	Naphthalene, decahydro-, trans-	33.67	17000	JN
10.	unknown	33.77	8000	J
11. 001074-55-1	Benzene, 1-methyl-4-propyl-	33.98	10000	JN
12. 000933-98-2	Benzene, 1-ethyl-2,3-dimethyl-	34.45	15000	JN
13.	unknown	34.69	13000	J
14. 002050-24-0	Benzene, 1,3-diethyl-5-methyl-	34.87	13000	JN
15.	unknown	34.95	12000	J

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

202A-G DL

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648307

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007227.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 21.84 Date Analyzed: 10/9/01

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 10.0

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	8600	U
107131	Acrylonitrile	8600	U
75650	tert-Butyl alcohol	16000	U
1634044	Methyl-tert-Butyl ether	3700	U
108203	Di-isopropyl ether	2500	U
75718	Dichlorodifluoromethane	4900	U
74-87-3	Chloromethane	1200	U
75-01-4	Vinyl Chloride	3700	U
74-83-9	Bromomethane	2500	U
75-00-3	Chloroethane	3700	U
75-69-4	Trichlorofluoromethane	2500	U
75-35-4	1,1-Dichloroethene	1200	U
67-64-1	Acetone	2500	U
75-15-0	Carbon Disulfide	1200	U
75-09-2	Methylene Chloride	2500	U
156-60-5	trans-1,2-Dichloroethene	2500	U
75-35-3	1,1-Dichloroethane	1200	U
108-05-4	Vinyl Acetate	3700	U
78-93-3	2-Butanone	3700	U
	cis-1,2-Dichloroethene	1200	U
67-66-3	Chloroform	1200	U
75-55-6	1,1,1-Trichloroethane	1200	U
56-23-5	Carbon Tetrachloride	2500	U
71-43-2	Benzene	1200	U
107-06-2	1,2-Dichloroethane	2500	U
79-01-6	Trichloroethene	1200	U
78-87-5	1,2-Dichloropropane	1200	U
75-27-4	Bromodichloromethane	1200	U
110-75-8	2-Chloroethyl vinyl ether	2500	U
10061-01-5	cis-1,3-Dichloropropene	1200	U
108-10-1	4-Methyl-2-Pentanone	2500	U
108-88-3	Toluene	1200	U
10061-02-6	trans-1,3-Dichloropropene	2500	U
79-00-5	1,1,2-Trichloroethane	2500	U
127-18-4	Tetrachloroethene	1200	U
591-78-6	2-Hexanone	2500	U
126-48-1	Dibromochloromethane	2500	U
108-90-7	Chlorobenzene	1200	U
100-41-4	Ethylbenzene	2500	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

202A-G DL

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648307

Sample wt/vol: 10.4 (g/ml) G Lab File ID: VC007227.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 21.84 Date Analyzed: 10/9/01

GC Column: Rtx502.2 ID: 0.25 (mm) Dilution Factor: 10.0

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	3700	U
1330-20-7	o-Xylene	740	JD
100-42-5	Styrene	2500	U
75-25-2	Bromoform	2500	U
79-34-5	1,1,2,2-Tetrachloroethane	2500	U
541-73-1	1,3-Dichlorobenzene	3700	U
106-46-7	1,4-Dichlorobenzene	3700	U
95-50-1	1,2-Dichlorobenzene	3700	U

1A

FIELD ID.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648308

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007225.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/9/01

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

Trip Blank

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648308

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007225.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/9/01

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.

Trip Blank

Lab Name: FMETL NJDEP # 13461

Project: 010001 Case No.: 16483 Location: 202A SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1648308

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VC007225.D

Level: (low/med) MED Date Received: 10/1/01

% Moisture: not dec. 0 Date Analyzed: 10/9/01

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

TPHC

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

Client :	U.S. Army	**Project # :**	16483
	DPW. SELFM-PW-EV	**Location :**	Bldg.202A
	Bldg. 173	**UST Reg. # :**	90010-21
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	**Date Received :**	01-Oct-01
Matrix :	Soil	**Date Extracted :**	02-Oct-01
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	03-Oct-01
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
1648301	202A-A	**1.00**	15.93	75.66	188	**ND**
1648302	202A-B	**1.00**	15.85	86.51	165	**ND**
1648303	202A-C	**1.00**	16.73	78.54	172	**239.64**
1648304	202A-D	**1.00**	14.92	80.55	188	**6642.99**
1648305	202A-E	**1.00**	16.51	97.01	141	**ND**
1648306	202A-F	**1.00**	16.16	83.61	168	**ND**
1648307	202A-G	**2.00**	16.13	78.16	180	**7974.87**
METHOD BLANK	MB-011002	**1.00**	15.00	100.00	151	**ND**

ND = Not Detected

MDL = Method Detection 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 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 _____

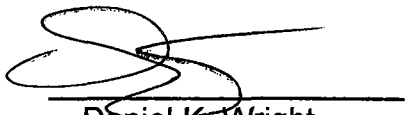
Date 10 / 19 / 01

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) 532-6224 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: UST Program

Bldg. 202A

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
202A-PX1/West Wall (N) 4-4.5'	1648901	Soil	03-Oct-01 14:10	10/03/01
202A-PX2/West Wall (S) 4-4.5'	1648902	Soil	03-Oct-01 14:30	10/03/01
202A-PX3/Bottom 5.5-6'	1648903	Soil	03-Oct-01 15:00	10/03/01
202A-PX4/Duplicate 4-4.5'	1648904	Soil	03-Oct-01 14:10	10/03/01

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

10-12-01
Daniel Wright/Date
Laboratory Director

Table of Contents

Method Summary

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

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.
Twenty-five milliliters (25mL) Methylene Chloride is added to the flask and it is secured on a orbital shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL-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 solid, sample weight and concentration.

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).	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

10-12-01
Date

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: 01-0001
Location: BLDG. 202A
UST# 900/0-21

Samplers Name / Company : Frank Accorsi/TVS

Analysis Parameters

Lab Sample I.D.	Sample Location	Depth	Date	Time	Sample Type	# Bottles	TPHC	% SOLIDS	* VOA+10	VOA ID #	PID Reading	Remarks / Preservation Method
16489 01	202A-PX1, WEST WALL(N)	4-4.5	10-3-01	1410	SOIL	2	X	X	X	2863	0	4° ICE
02	202A-PX2 WEST WALL(S)	4-4.5		1430		2	X	X	X	2864	0	
03	202A-PX3, BOTTOM	5.5-6		1500		2	X	X	X	2865	2.0	
04	202A-PX4, DUPLICATE	4-4.5		1410		2	X	X	X	2866	0	
05	TRIP BLANK	-		-	AQ.	1			X	2867	-	

* = Samples Kept <4°C

OVM sn#580U-64455.343 was calibrated with zero air & w/ 245 ppm Isobutylene read 245 ppm. 10-1-01 FA (time/date & initial)

Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	10-3-01 1525	Jackie Owens
Relinquished by (signature):	Date/Time:	Received by (signature):

Comments: * VO+10 on 25% > 1,000 ppm TPH, on highest, min. one

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

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

000003

print legibly

USTcoc.xls6/22/01

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	**Project # :**	16489
		Location :	Bldg.202A
		UST Reg. # :	90010-21
Analysis :	OQA-QAM-025	**Date Received :**	03-Oct-01
Matrix :	Soil	**Date Extracted :**	04-Oct-01
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	05-Oct-01
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
1648901	202A-PX1	**1.00**	15.37	77.31	191	**ND**
1648902	202A-PX2	**1.00**	15.02	82.99	182	**ND**
1648903	202A-PX3	**1.00**	15.17	81.58	183	**ND**
1648904	202A-PX4	**1.00**	15.10	76.12	197	**ND**
METHOD BLANK	MB-011004	**1.00**	15.00	100.00	151	**ND**

ND = Not Detected

MDL = Method Detection Limit

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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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 10/12/01

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 K

UST 202B File Review

PARSONS

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

Date: *February 20, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 202B*** Registration ID: *90010-22*

Recommended Status of Site: ***Case Closed (no change)***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***High (see below)***

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

NJDEP Release No. or DICAR (If applicable): *None*

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

Tank Description: [ ] Steel [X] Fiberglass Size: 1000 gals. Contents: Heating Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 10/1/2001

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

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

Brief Narrative

Bldg. 202 was formerly civilian quarters according to FTMM real property records. Two fiberglass (202A and 202B) and two steel (202C and 202D) tanks were removed from Bldg. 202.

Following tank 202B removal in October 2001, soil samples were collected from the tank excavation and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). The soil sample results were non-detected (ND) for TPH. The results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support the UST Case Status of "Case Closed." Although the ECP UHOT Addendum indicates a high probability of a tank being present, this seems unlikely since a steel tank was already removed (see file reviews for UST 202C and 202D).

Recommendations (if any): Request NFA from NJDEP

Signed: Kent A. Friesen

Kent A. Friesen, Parsons

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: UST Program

Bldg. 202B

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
202B-A/North Wall 4-4.5'	1648501	Soil	02-Oct-01 14:00	10/02/01
202B-B/South Wall 4-4.5'	1648502	Soil	02-Oct-01 14:20	10/02/01
202B-C/East Wall 4-4.5'	1648503	Soil	02-Oct-01 14:50	10/02/01
202B-D/West Wall 4-4.5'	1648504	Soil	02-Oct-01 14:35	10/02/01
202B-E/Piping 1-1.5'	1648505	Soil	02-Oct-01 14:10	10/02/01
202B-F/Duplicate 4-4.5'	1648506	Soil	02-Oct-01 14:00	10/02/01

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

10-12-01
Daniel Wright/Date
Laboratory Director

(QC and raw data not included for brevity)

Table of Contents

Method Summary

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

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.
Twenty-five milliliters (25mL) Methylene Chloride is added to the flask and it is secured on a orbital shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL-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 solid, sample weight and concentration.

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).	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

10-12-01
Date

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail: [illegible].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: 01-[illegible]
Location: BLDG. 202B
UST# 90010-22

Samplers Name / Company : Frank Accorsi/TVS

Lab Sample I.D.	Sample Location	Depth	Date	Time	Sample Type	# Bottles	TPHC	% SOLIDS *	VOA+10	VOA ID #	PID Reading	Remarks / Preservation Method
16485 01	202B-A, NORTH WALL	4-4.5	10-2-01	1400	SOIL	2	X	X	X	2856	0	ICE
02	202B-B, SOUTH WALL	4-4.5		1420		2	X	X	X	2857	0	
03	202B-C, EAST WALL	4-4.5		1450		2	X	X	X	2858	0	
04	202B-D, WEST WALL	4-4.5		1435		2	X	X	X	2859	0	
05	202B-E, PIPING	1-1.5'		1430		2	X	X	X	2860	0	
06	202B-F, DUPLICATE	4-4.5		1400		2	X	X	X	2861	0	
07	TRIP BLANK	—		—	AQ.	1			X	2862	—	

* = Samples Kept <4°C

OVM sn#580U-64455.343 was calibrated with zero air & w/ 245 ppm Isobutylene read 246 ppm. 1010 10-10-01 FA (time/date & initial)

Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	10-2-01 1510	
Relinquished by (signature):	Date/Time:	Received by (signature):

Comments: * VOA ON 25% >1,000 ppm TPHC, ON HIGHEST, MICR. ONE

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

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

000003

print legibly

USTcoc.xls6/22/01

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	**Project # :**	16485
		Location :	Bldg.202B
		UST Reg. # :	90010-22
Analysis :	OQA-QAM-025	**Date Received :**	02-Oct-01
Matrix :	Soil	**Date Extracted :**	03-Oct-01
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	05-Oct-01
Injection Volume :	1uL	**Analyst :**	B.Patel

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
1648501	202B-A	**1.00**	15.62	79.60	182	**ND**
1648502	202B-B	**1.00**	15.85	78.34	182	**ND**
1648503	202B-C	**1.00**	15.74	83.56	172	**ND**
1648504	202B-D	**1.00**	15.08	79.64	189	**ND**
1648505	202B-E	**1.00**	15.08	85.55	176	**ND**
1648506	202B-F	**1.00**	15.79	78.81	182	**ND**
METHOD BLANK	MB-011003	**1.00**	15.00	100.00	151	**ND**

ND = Not Detected

MDL = Method Detection 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 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 10/12/01

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 L

USTs 202C and 202D File Reviews and Report

Contents:

- Underground Storage Tank File Review for Bldg. 202C
- Underground Storage Tank File Review for Bldg. 202D
- Report: *Underground Storage Tank Closure and Remedial Investigation Report, Main Post – 400 Area (former) Building 202 (USTs No. 202C and 202D)*
- Analytical Data Report, Fort Monmouth Environmental Laboratory, Bldg. 202D/UST (collected 25-June-11)

PARSONS

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

Date: *February 20, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 202C*** Registration ID: *None*

Recommended Status of Site: ***Case Closed (no change)***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***High (see below)***

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

NJDEP Release No. or DICAR (If applicable): None

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: Heating Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 5/23/2005

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

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

Brief Narrative

Bldg. 202 was civilian quarters according to FTMM real property records. Two fiberglass (202A and 202B) and two steel (202C and 202D) tanks were removed from Bldg. 202. Removal of tanks 202C and 202D were addressed in the same December 2006 TVS report (*Underground Storage Tank Closure Report and Remedial Investigation Report, Main Post – 400 Area (former) Building 202 (USTs No. 202C and 202D).*

Following tank removal in May 2005, soil samples were collected from the 202C tank excavation and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). The soil sample results were non-detected (ND) for TPH. The results were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support the UST Case Status of "Case Closed." Although the ECP UHOT Addendum indicates a high probability of a tank being present, this seems unlikely since a steel tank was already removed.

Recommendations (if any): Request NFA from NJDEP

Signed: Kent A. Friesen

Kent A. Friesen, Parsons

PARSONS

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

Date: *March 12, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 202D*** Registration ID: *None*

Recommended Status of Site: ***Case Closed***

UST Probability (from May 2014 "Addendum 1 ECP UHOT Report"): ***High (see below)***

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

NJDEP Release No. or DICAR (If applicable): *05-05-23-1621-46*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 500 gals. Contents: Heating Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 5/23/2005

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

Comparison criteria: 5,100 mg/kg TPH, RDCSRS

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

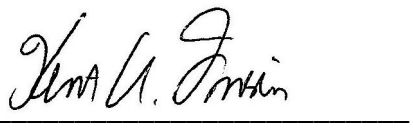
Brief Narrative

Former Bldg. 202 was civilian quarters according to FTMM real property records. Two fiberglass (202A and 202B) and two steel (202C and 202D) tanks were removed from Bldg. 202. Removal of tanks 202C and 202D were addressed in the same December 2006 TVS report (*Underground Storage Tank Closure Report and Remedial Investigation Report, Main Post – 400 Area (former) Building 202 (USTs No. 202C and 202D)* (attached).

Following tank removal in May 2005, soil samples were collected from the 202D tank excavation and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). The soil sample results were non-detected (ND) to 1212 mg/kg for TPH, which were less than 5,100 mg/kg for TPH, which is the current TPH remediation criterion. The sample with highest TPH was also analyzed for volatile organic compounds (VOCs); none were detected above the NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS). On June 25, 2011, additional sampling from the location with the highest TPH detected several SVOC hydrocarbons in soils but below the RDCSRS. In groundwater, the VOC benzene (1.61 ug/L) and SVOC 2-methylnaphthalene (at 233 ug/L) exceeded the Class IIA or interim Groundwater Quality Criteria of (1 ug/L or 30 ug/L, respectively).

In conclusion, the analytical results support the UST Case Status of "Case Closed" for soils. There is evidence of groundwater impacts (benzene and 2-methylnaphthalene). A "high probability" of a tank remaining seems unlikely since a steel tank was already removed.

Recommendations (if any): Change status from "Case Open" to "Case Closed", request NFA

Signed: 

Kent A. Friesen, Parsons

U.S. Army Garrison
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Remedial Investigation Report

Main Post – 400 Area (former) Building 202 (USTs No. 202C and 202D)

NJDEP UST Registration No. 90010
NJDEP Case No. 05-05-23-1621-46
USTs No. 202C and 202D

December 2006

UNDERGROUND STORAGE TANK CLOSURE AND REMEDIAL INVESTIGATION REPORT

MAIN POST - 400 AREA (USTS NO. 202C AND 202D)
NJDEP UST REGISTRATION NO. 081533
NJDEP CASE NO. 05-05-23-1621-46

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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APPENDICES

EXECUTIVE SUMMARY

UST Closure

On May 23, 2005, 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 USTs were located in a grass area on the east and west side of (former) Building 202, a residential building in the Main Post area of Fort Monmouth. USTs No. 202C and 202D were a 1,000-gallon and 500-gallon, respectively, No. 2 heating oil tanks. The fill port and vent pipe were not present in the excavation. The associated supply/return piping was still connected to the tanks coming from the former building. 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 and with air monitoring instruments for evidence of contamination. Following removal, the USTs were inspected. Holes were noted in UST No. 202D and potentially contaminated soils were observed surrounding the tank.

The results from the closure soil samples collected from UST No. 202C were all "Not Detected". Post-remediation soil samples were collected after the removal of UST No. 202D and approximately 20 cubic yards of potentially contaminated soils were excavated. Post-remediation samples 202D-1, 202D-2, 202D-3, 202D-4, 202D-5 and 202-duplicate were collected from a total of five (5) locations along the sidewalls and bottom of the excavation. All samples were analyzed for total petroleum hydrocarbons (TPH).

Groundwater was not encountered in the bottom of the excavation.

Findings

The closure and post-remediation soil samples collected from the UST excavations associated with former UST No. 202C and 202D contained no TPH concentrations above 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). The soils surrounding UST No. 202D exhibited signs of potential contamination and were removed. Subsequently, after excavation of the area, analytical results of samples 202D-3 and 202-duplicate had TPH concentrations of 1,212.8 mg/kg and 1,126.9 mg/kg, 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 TPH concentrations exceeding the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants 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. 202C and 202D located adjacent to Building 499.

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, were closed in the 400 area of Main Post at U.S. Army Garrison, Fort Monmouth, New Jersey on May 23, 2005. 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. The UST No. 202C was a 1,000-gallon single-walled steel tank and UST No. 202D was a 500-gallon single-walled steel tank. Both USTs were used to store No. 2 heating oil at residential Building 202. The tanks were discovered during demolition of the building.

Decommissioning activities for USTs No. 202C and 202D 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

Building 202, was located in the eastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. USTs No. 202C and 202D were located next to the foundation on the east side and west side of Building 202. The fill port and vent pipe were not encountered in the excavation. The associated supply/return piping was still connected to the tanks coming from the former building. 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 800 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. 202C and 202D were located approximately 150 feet north 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 Building 202 is anticipated to be to the south.

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 THE UNDERGROUND STORAGE TANKS

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 USTs. The tanks were emptied of all liquids prior to removal from the ground. Approximately 300 gallons of liquid was pumped out of the USTs by Lorco Petroleum Services, Inc. into a 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. NHZ-49685).

After the USTs were removed from the excavations, they were staged on an impervious surface, labeled and examined for holes. Holes in tank No. 202D were observed during the inspection by the Subsurface Evaluator. Soils surrounding the UST 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, in which Case No. 05-05-23-1621-46 was assigned.

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 USTs 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 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 tanks were then transported by TVS to Red Bank Recycling, Inc., Central Ave., Red Bank, 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 20 cubic yards of potentially contaminated soil was excavated from the area surrounding UST No. 202D. 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 an 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

- Used Oil 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. Soils were removed from the excavation surrounding UST No. 202D until no evidence of contamination remained.

2.3 SOIL SAMPLING

On May 23, 2005, closure soil samples 202C-1, 202C-2, 202C-3, 202C-4, were collected from a total of four (4) locations along the tank centerline bottom of UST No. 202C excavation. On May 24, 2005, post-remediation soil samples 202D-1, 202D-2, 202D-3, 202D-4, 202D-5 and 202D-duplicate were collected from a total of five (5) locations along the sidewalls and the bottom of UST No. 202D excavation. Groundwater was not encountered in the excavation. Refer to soil sampling location map in Figure 3. All samples were analyzed for TPH. Samples 202D-3 and 202D-duplicate had concentrations exceeding 1,000 mg/kg and were further analyzed for volatile organic compounds with a forward library search for 15 tentatively identified compounds (VO+ 15).

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 and 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

Closure soil samples for UST No. 202C were collected from a total of four locations on May 23, 2005. Post-remediation soil samples for UST No. 202D were collected from a total of five locations on May 24, 2005. These samples were collected to evaluate soil conditions following removal of the USTs. All samples were analyzed for TPH. The 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 C.

The results from the closure soil samples collected on May 23, 2005 from UST No. 202C were "Not Detected". Post-remediation soil samples collected on May 24, 2005 from UST No. 202D remedial excavation contained concentrations of TPH, but below the NJDEP soil cleanup criteria. Post-remediation samples 202D-3 and 202-duplicate contained TPH concentrations of 1,212.8 mg/kg and 1,126.9 mg/kg, respectively. These two samples were further analyzed for VO+15. The results indicated the compounds were "Not Detected".

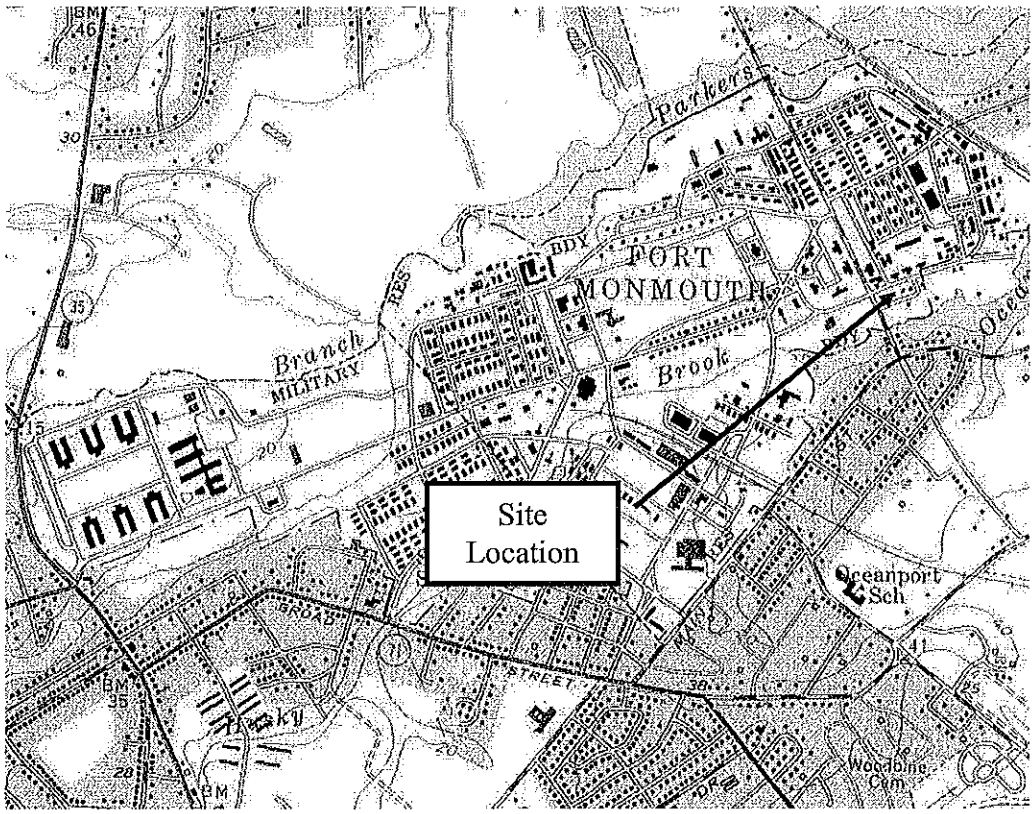
3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all closure and post-remediation soil samples collected from the closure excavation at USTs No. 202C and 202D were below the NJDEP soil cleanup criteria for total organic contaminants and volatile organic compounds.

Based on the post-remediation soil sampling results, soils with TPH concentrations exceeding the NJDEP soil cleanup criterion for total organic contaminants of 10,000 mg/kg have been excavated from the location of former UST No. 202D.

No Further Action is proposed in regard to the closure and remedial investigation of USTs No.202C and 202D at (former) Building 202.

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

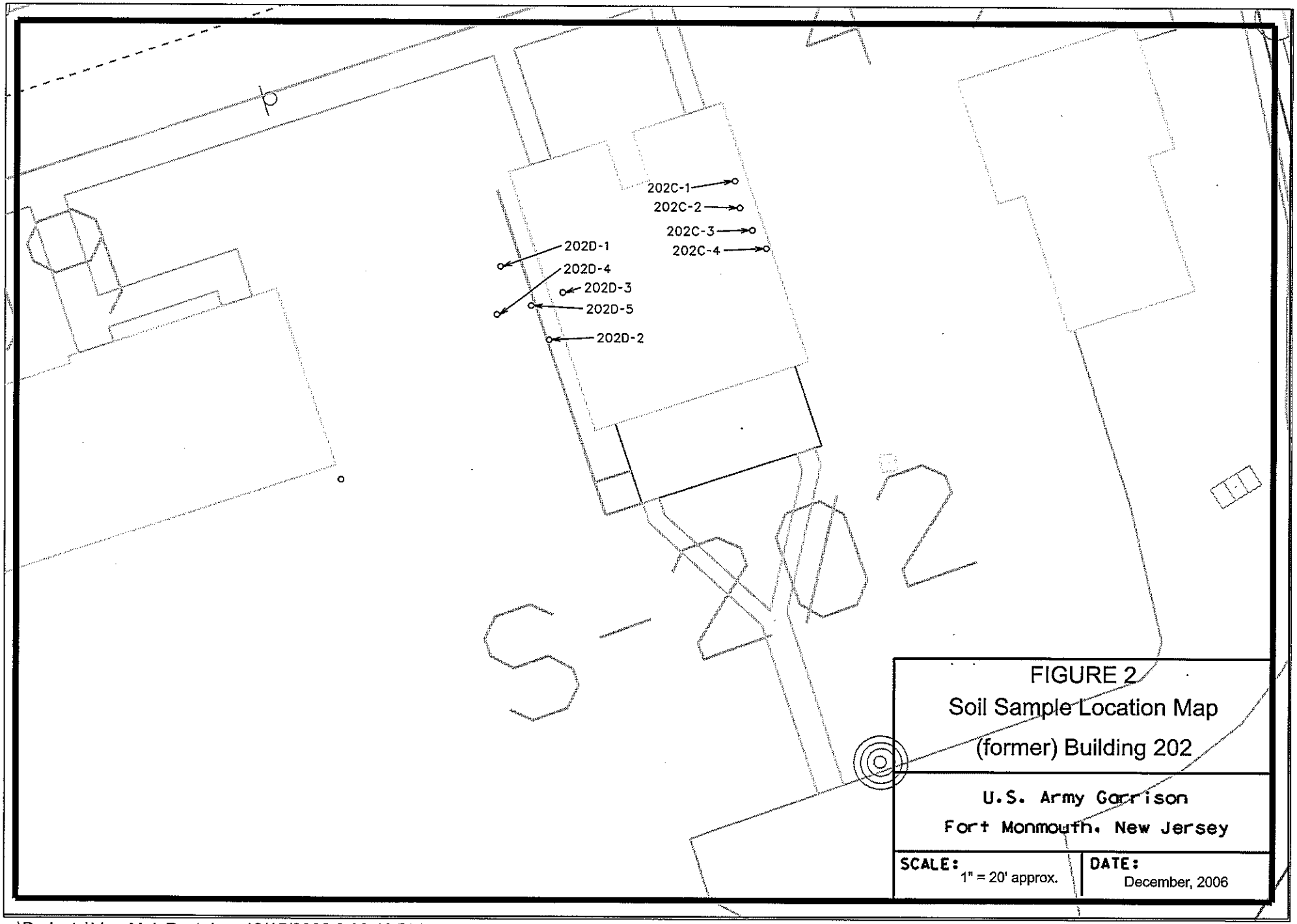


FIGURE 2
Soil Sample Location Map
(former) Building 202

U.S. Army Garrison
Fort Monmouth, New Jersey

SCALE: 1" = 20' approx.

DATE: December, 2006

...\Projects\bim_MainPost.dgn 12/15/2006 3:33:42 PM

TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, (former) BUILDING 202, USTs No. 202C and 202D
23 May 2005, 24 May 2005

SAMPLE ID	LAB SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
202C-1	5027201	23-May-05	SOIL	TPH	OQA-QAM-25
202C-2	5027202	23-May-05	SOIL	TPH	OQA-QAM-25
202C-3	5027203	23-May-05	SOIL	TPH	OQA-QAM-25
202C-4	5027204	23-May-05	SOIL	TPH	OQA-QAM-25
202D-1	5027205	24-May-05	SOIL	TPH	OQA-QAM-25
202D-2	5027206	24-May-05	SOIL	TPH	OQA-QAM-25
202D-3	5027207	24-May-05	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
202D-4	5027208	24-May-05	SOIL	TPH	OQA-QAM-25
202D-5	5027209	24-May-05	SOIL	TPH	OQA-QAM-25
202-duplicate	5027210	24-May-05	SOIL	TPH, VOA	OQA-QAM-25; SW-846, 8260
Trip Blank	5027211	23-May-05	METHANOL	VOA	SW-846, 8260

ABBREVIATIONS:
TPH = Total Petroleum Hydrocarbons, NJDEP Method OQA-QAM-025 (10/97)
VOA = Volatile Organic Analysis, EPA SW-846 Method 8260

TABLE 2

SUMMARY OF LABORATORY ANALYTICAL RESULTS

FT. MONMOUTH, (former) BUILDING 202, USTs No. 202C and 202D
23 May 2005, 24 May 2005

TOTAL PETROLEUM HYDROCARBONS

SAMPLE ID	LAB SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH	MATRIX	TPH RESULT S
			(in feet)		mg/kg
202C-1	5027201	NORTH END UST	4.5 – 5.0	Soil	ND
202C-2	5027202	NORTH END UST + 5 FT.	4.5 – 5.0	Soil	ND
202C-3	5027203	NORTH END UST + 10 FT.	4.5 – 5.0	Soil	ND
202C-4	5027204	SOUTH END UST	4.5 – 5.0	Soil	ND
202D-1	5027205	NORTH WALL	5.0 – 5.5	Soil	ND
202D-2	5027206	SOUTH WALL	5.0 – 5.5	Soil	ND
202D-3	5027207	EAST WALL	5.0 – 5.5	Soil	1,212.8*
202D-4	5027208	WEST WALL	5.0 – 5.5	Soil	104.1
202D-5	5027209	BOTTOM	5.5 – 6.0	Soil	ND
202-duplicate	5027210	EAST WALL	5.0 – 5.5	Soil	1,126.9*
Trip Blank	5027211	---	---	Methanol	--

ABBREVIATIONS:
mg/kg = milligrams per kilogram = parts per million (ppm)
ND = Compound Not Detected
NA = Compound Not Analyzed
*= Further Analyzed for Volatile Organic Compounds

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, (former) BUILDING 202, USTs No. 202C and 202D
24 May 2005

VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	SAMPLE DATE	Benzene	Toluene	Ethylbenzene	Xylenes (total)
UNITS		ug/kg	ug/kg	ug/kg	ug/kg
202D-3	24 May 2005	ND	ND	ND	ND
202D-duplicate	24 May 2005	ND	ND	ND	ND
Trip Blank	24 May 2005	ND	ND	ND	ND
NJDEP Criteria	Residential	3	1,000	1,000	410

ABBREVIATIONS:
ug/kg = micrograms per kilogram = parts per billion (ppb)
ND = Compound Not Detected
NA = Compound Not Analyzed

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

APPENDIX A

CERTIFICATIONS

Site Remediation Program
UST Site Remedial Investigation Report

A. Facility Name: (former) Building 202

Facility Street Address: 202 Riverside Ave.

Municipality: Oceanport County: Monmouth

Block: NA Lot(s): NA Telephone Number: Redacted - Privacy Act

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: 90010-202C, 90010-202D (7 digits)

- Incident Report Number: 05-05-23-1621-46 (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

WASTE MANIFEST

APPENDIX C

UST DISPOSAL CERTIFICATE

732-747-7784 BLDG. 202 UST'S
732-747-7779 (1) 1000 GAL. STEEL UST
(1) 500 GAL. STEEL UST

Red Bank Recycling Auto Wreckers, Inc.

64 Central Avenue, Red Bank, New Jersey 07701

Date 5/24 20 5

M Ft Monmouth

263

		AMOUNT	CWT	TOTAL 80
	LIGHT IRON	2820	4.00	112
✓	NO 1 STEEL			
	NO. 2 STEEL			
	D. M. B.			
	CAST IRON			
	COPPER			
	BRASS			
	ALUMINUM			
	RADIATORS			
	BATTERIES			
	1000 gal			
	CARS 500 tank			

All [illegible] oil [illegible]

I am the owner of said vehicle(s) and I release it to Red Bank Recycling Auto Wreckers, Inc.

Signature of Owner [signature]

APPENDIX C

SOIL ANALYTICAL DATA PACKAGE

(QC and raw data not included for brevity)

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. 202

Bldg. 202/ USTs C & D

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
202C-1, North End	5027201	Soil	23-May-05 14:10	05/24/05
202C-2, North End + 5 ft.	5027202	Soil	23-May-05 14:23	05/24/05
202C-3, North End + 10 ft.	5027203	Soil	23-May-05 14:48	05/24/05
202C-4, South End	5027204	Soil	23-May-05 15:13	05/24/05
202D-1, North Wall	5027205	Soil	24-May-05 10:35	05/24/05
202D-2, South Wall	5027206	Soil	24-May-05 10:50	05/24/05
202D-3, East Wall	5027207	Soil	24-May-05 11:15	05/24/05
202D-4, West Wall	5027208	Soil	24-May-05 11:30	05/24/05
202D-5, Bottom	5027209	Soil	24-May-05 11:48	05/24/05
Duplicate	5027210	Soil	24-May-05 11:15	05/24/05
Trip Blank	5027211	Methanol	24-May-05	05/24/05

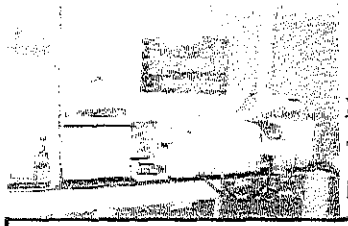
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, TPHC, % SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

6-13-05
Daniel Wright/Date
Laboratory Director

Table of Contents

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: DOUG GUENTHER
Phone: X20986
( )DERA ( )OMA (X)Other:_____
Project No:
Location: BLDG. 202
UST's C + D
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOTIS*				PID (ppm)	DEPTH (FT)	VOA #	Remarks / Preservation Method
50232 01	202C-1, NORTH END	5-23-05	1410	SOIL	2	X	X				10	4.5-5.5	4263	ICE
02	202C-2, N. END + 5 FT.		1423		2	X	X				6	4.5-5.0	4264	
03	202C-3, N. END + 10 FT.		1438		2	X	X				3	4.5-5.0	4265	
04	202C-4, SOUTH END		1513		2	X	X				4	4.5-5.0	4266	
05	202D-1, NORTH WALL	5-24-05	1035		2	X	X				13	5-5.5	4267	
06	202D-2, SOUTH WALL		1050		2	X	X				4	5-5.5	4268	
07	202D-3, EAST WALL		1115		2	X	X				30	5-5.5	4271	
08	202D-4, WEST WALL		1130		2	X	X				3	5-5.5	4272	
09	202D-5, ~~DUPLICATE~~ BOTTOM		1148		2	X	X				4	5.5-6	4273	
10	DUPLICATE		1115		2	X	X				26	5-5.5	4269	
11	TRIP BLANK	5-23-05	—	AQ.	1		X				—	—	4270	

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	5-24-05 1310				
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 2 Days, ( )ASAP Verbal ____ Hrs.

Remarks: *VOTIS ON 25% > 1,000 PPM TPH, ON HIGHEST, MIN. ONE

Change of Chain of Custody

Lab Project ID#: 50272
Date Received: 5/24
Requested by: *(print)* D Guenther
Turnaround Time: ASAP

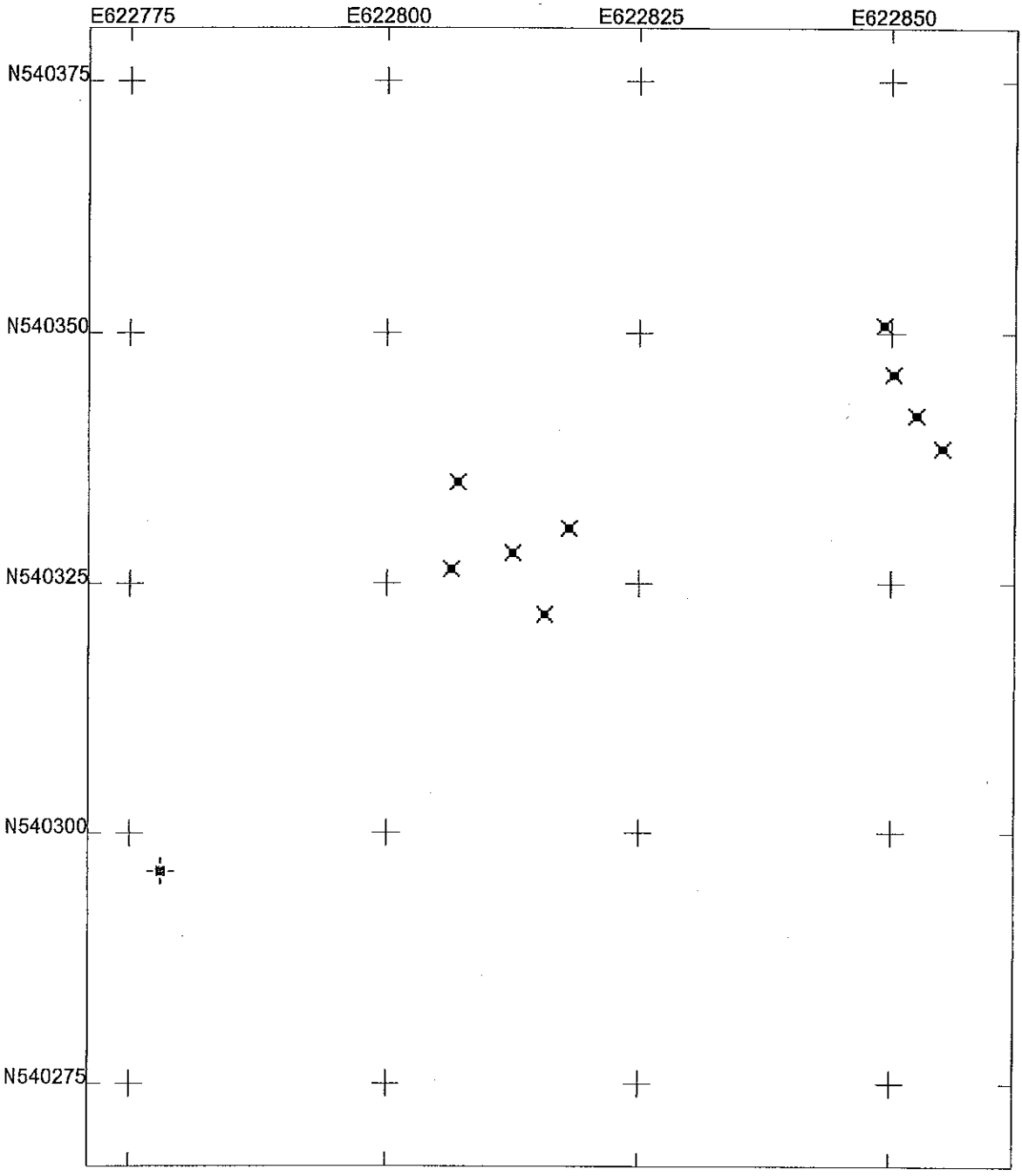
Site/Project Name: Bldg 202
Date of Change: 5/26
Sign: _____

1.	Were the correct containers and/or preservatives used for the tests indicated?	Yes	No
2.	Was sufficient amount of sample sent for the tests indicated?	Yes	No
3.	Are samples within holding time for new analysis?	Yes	No
4.	Was the change documented in the receipt logbook?	Yes	No

Received by: *(print)* _____ Sign: _____

Sample ID#	New Analysis	Sample ID#	New Analysis
5027207	VOA+15		
10	1		
11			

Comments: _____



U.S. Army-Ft. Monmouth, NJ Bldg.202
USTs # C, D Soil Sample GPS Map

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

N

Scale 1:200
0 0.004
Miles

BLDG202.cor
6/10/2005
GPS Pathfinder
Trimble

#600006

U.S. ARMY - FT. MONMOUTH, NJ

BUILDING 202 -USTs # C & D
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)
202C1 NORTH END UST	540350.885	622849.233
202C2 NORTH END PLUS 5 FT.	540345.972	622850.114
202C3 NORTH END PLUS 10 FT.	540341.898	622852.361
202C4 SOUTH END UST	540338.594	622854.889
202D1 NORTH WALL	540335.198	622806.917
202D2 SOUTH WALL	540321.978	622815.631
202D3 EAST WALL	540330.582	622818.041
202D4 WEST WALL	540326.515	622806.284
202D5 BOTTOM	540328.158	622812.409

REFERENCE POINT

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
BLDG499 SOUTHEAST CORNER	540296.146	622778.025

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.

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.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 50272

Site: Bldg. 202
USTs C & D

	Date	Hold Time
Date Sampled	05/23,24/05	NA
Receipt/Refrigeration	05/24/05	NA
Extraction		
1. TPHC	05/24/05	14 days
Analyses		
1. VOA	05/26,31/05	14 days
2. TPHC	05/26/05	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 — 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 — yes

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

   a. VOA Fraction
   b. B/N Fraction — NA
   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 — 1,1-DCE MS 56% MSD 58%
   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:

Laboratory Manager: _____ Date: 6-13-05

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	N/A
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: 6-13-05

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.

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 26May05

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: MB 26May05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019451.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/26/2005

GC Column: RTX502. 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

CAS NO.	COMPOUND	UG/KG	Q
107028	Acrolein	1000	U
107131	Acrylonitrile	1000	U
75650	tert-Butyl alcohol	1000	U
1634044	Methyl-tert-Butyl ether	100	U
108203	Di-isopropyl ether	100	U
75718	Dichlorodifluoromethane	100	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	100	U
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	100	U
75-69-4	Trichlorofluoromethane	100	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
108-05-4	Vinyl Acetate	100	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	100	U
67-66-3	Chloroform	100	U
71-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	100	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	100	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	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 26May05

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: MB 26May05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019451.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/26/2005

GC Column: RTX502. 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	200	U
95-47-6	o-Xylene	100	U
100-42-5	Styrene	100	U
75-25-2	Bromoform	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-50-1	1,2-Dichlorobenzene	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 26May05**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: MB 26May05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019451.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/26/2005

GC Column: RTX502. 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: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	5.08	470	J

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 31May05

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: MB 31May05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019529.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/31/2005

GC Column: RTX502. 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	1000	U
107131	Acrylonitrile	1000	U
75650	tert-Butyl alcohol	1000	U
1634044	Methyl-tert-Butyl ether	100	U
108203	Di-isopropyl ether	100	U
75718	Dichlorodifluoromethane	100	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	100	U
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	100	U
75-69-4	Trichlorofluoromethane	100	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
108-05-4	Vinyl Acetate	100	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	100	U
67-66-3	Chloroform	100	U
71-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	100	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	100	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	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 31May05

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: MB 31May05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019529.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/31/2005

GC Column: RTX502. 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	200	U
95-47-6	o-Xylene	100	U
100-42-5	Styrene	100	U
75-25-2	Bromoform	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-50-1	1,2-Dichlorobenzene	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 31May05**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: MB 31May05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019529.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/31/2005

GC Column: RTX502. 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

202D-3

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027207

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VB019455.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 19.13 Date Analyzed: 5/26/2005

GC Column: RTX502. 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	1200	U
107131	Acrylonitrile	1200	U
75650	tert-Butyl alcohol	1200	U
1634044	Methyl-tert-Butyl ether	120	U
108203	Di-isopropyl ether	120	U
75718	Dichlorodifluoromethane	120	U
74-87-3	Chloromethane	120	U
75-01-4	Vinyl Chloride	120	U
74-83-9	Bromomethane	120	U
75-00-3	Chloroethane	120	U
75-69-4	Trichlorofluoromethane	120	U
75-35-4	1,1-Dichloroethene	120	U
67-64-1	Acetone	860	
75-15-0	Carbon Disulfide	120	U
75-09-2	Methylene Chloride	120	U
156-60-5	trans-1,2-Dichloroethene	120	U
75-34-3	1,1-Dichloroethane	120	U
108-05-4	Vinyl Acetate	120	U
78-93-3	2-Butanone	3100	
156-59-2	cis-1,2-Dichloroethene	120	U
67-66-3	Chloroform	120	U
71-55-6	1,1,1-Trichloroethane	120	U
56-23-5	Carbon Tetrachloride	120	U
71-43-2	Benzene	120	U
107-06-2	1,2-Dichloroethane	120	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	120	U
10061-01-5	cis-1,3-Dichloropropene	120	U
108-10-1	4-Methyl-2-Pentanone	120	U
108-88-3	Toluene	120	U
10061-02-6	trans-1,3-Dichloropropene	120	U
79-00-5	1,1,2-Trichloroethane	120	U
127-18-4	Tetrachloroethene	120	U
591-78-6	2-Hexanone	120	U
124-48-1	Dibromochloromethane	120	U
108-90-7	Chlorobenzene	120	U
100-41-4	Ethylbenzene	120	U

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

202D-3

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027207

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VB019455.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 19.13 Date Analyzed: 5/26/2005

GC Column: RTX502. 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	240	U
95-47-6	o-Xylene	120	U
100-42-5	Styrene	120	U
75-25-2	Bromoform	120	U
79-34-5	1,1,2,2-Tetrachloroethane	120	U
541-73-1	1,3-Dichlorobenzene	120	U
106-46-7	1,4-Dichlorobenzene	120	U
95-50-1	1,2-Dichlorobenzene	120	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **202D-3**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027207

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VB019455.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 19.13 Date Analyzed: 5/26/2005

GC Column: RTX502. 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: 10

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	28.14	6600	J
2. 002847-72-5	Decane, 4-methyl-	28.78	4300	JN
3.	unknown	29.37	6300	J
4. 000493-02-7	Naphthalene, decahydro-, trans-	30.36	4700	JN
5.	unknown	30.53	3800	J
6.	unknown	30.88	4500	J
7.	unknown	31.62	15000	J
8.	unknown	32.02	7100	J
9.	unknown	33.09	11000	J
10.	unknown	34.43	5600	J

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Duplicate

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027210

Sample wt/vol: 10.3 (g/ml) G Lab File ID: VB019456.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 20.29 Date Analyzed: 5/26/2005

GC Column: RTX502. 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	1200	U
107131	Acrylonitrile	1200	U
75650	tert-Butyl alcohol	1200	U
1634044	Methyl-tert-Butyl ether	120	U
108203	Di-isopropyl ether	120	U
75718	Dichlorodifluoromethane	120	U
74-87-3	Chloromethane	120	U
75-01-4	Vinyl Chloride	120	U
74-83-9	Bromomethane	120	U
75-00-3	Chloroethane	120	U
75-69-4	Trichlorofluoromethane	120	U
75-35-4	1,1-Dichloroethene	120	U
67-64-1	Acetone	950	
75-15-0	Carbon Disulfide	120	U
75-09-2	Methylene Chloride	120	U
156-60-5	trans-1,2-Dichloroethene	120	U
75-34-3	1,1-Dichloroethane	120	U
108-05-4	Vinyl Acetate	120	U
78-93-3	2-Butanone	3500	
156-59-2	cis-1,2-Dichloroethene	120	U
67-66-3	Chloroform	120	U
71-55-6	1,1,1-Trichloroethane	120	U
56-23-5	Carbon Tetrachloride	120	U
71-43-2	Benzene	120	U
107-06-2	1,2-Dichloroethane	120	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	120	U
10061-01-5	cis-1,3-Dichloropropene	120	U
108-10-1	4-Methyl-2-Pentanone	120	U
108-88-3	Toluene	120	U
10061-02-6	trans-1,3-Dichloropropene	120	U
79-00-5	1,1,2-Trichloroethane	120	U
127-18-4	Tetrachloroethene	120	U
591-78-6	2-Hexanone	120	U
124-48-1	Dibromochloromethane	120	U
108-90-7	Chlorobenzene	120	U
100-41-4	Ethylbenzene	120	U

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Duplicate

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027210

Sample wt/vol: 10.3 (g/ml) G Lab File ID: VB019456.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 20.29 Date Analyzed: 5/26/2005

GC Column: RTX502. 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	240	U
95-47-6	o-Xylene	120	U
100-42-5	Styrene	120	U
75-25-2	Bromoform	120	U
79-34-5	1,1,2,2-Tetrachloroethane	120	U
541-73-1	1,3-Dichlorobenzene	120	U
106-46-7	1,4-Dichlorobenzene	120	U
95-50-1	1,2-Dichlorobenzene	120	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Duplicate**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027210

Sample wt/vol: 10.3 (g/ml) G Lab File ID: VB019456.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 20.29 Date Analyzed: 5/26/2005

GC Column: RTX502. 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: 10

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	28.15	7300	J
2. 001678-93-9	Cyclohexane, butyl-	29.37	8300	JN
3. 000493-02-7	Naphthalene, decahydro-, trans-	30.36	5600	JN
4.	unknown	30.67	4600	J
5.	unknown	31.61	15000	J
6.	unknown	32.02	8400	J
7.	unknown	32.25	4500	J
8.	unknown	33.10	8300	J
9.	unknown	33.87	4800	J
10.	unknown	34.43	5500	J

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027211

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019530.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/31/2005

GC Column: RTX502. 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	1000	U
107131	Acrylonitrile	1000	U
75650	tert-Butyl alcohol	1000	U
1634044	Methyl-tert-Butyl ether	100	U
108203	Di-isopropyl ether	100	U
75718	Dichlorodifluoromethane	100	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	100	U
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	100	U
75-69-4	Trichlorofluoromethane	100	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	830	
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
108-05-4	Vinyl Acetate	100	U
78-93-3	2-Butanone	2300	
156-59-2	cis-1,2-Dichloroethene	100	U
67-66-3	Chloroform	100	U
71-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	100	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	100	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	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027211

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019530.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/31/2005

GC Column: RTX502. 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	200	U
95-47-6	o-Xylene	100	U
100-42-5	Styrene	100	U
75-25-2	Bromoform	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-50-1	1,2-Dichlorobenzene	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50272 Location: Bldg 20 SDG No.: UST C+D

Matrix: (soil/water) SOIL Lab Sample ID: 5027211

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB019530.D

Level: (low/med) MED Date Received: 5/24/2005

% Moisture: not dec. 0 Date Analyzed: 5/31/2005

GC Column: RTX502. 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: 4

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000554-12-1	Propanoic acid, methyl ester	17.80	560	JN
2.	unknown	17.91	1100	J
3. 000623-42-7	Butanoic acid, methyl ester	21.70	310	JN
4. 000124-18-5	Decane	28.14	640	JN

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 :** **UST Reg. # :**	50272 Bldg.202
Analysis :	OQA-QAM-025	**Date Received :**	24-May-05
Matrix :	Soil	**Date Extracted :**	24-May-05
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	26-May-05
Injection Volume :	1uL	**Analyst :**	B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
5027201	202C-1	1.00	15.08	75.02	85	442	ND
5027202	202C-2	1.00	15.09	72.31	88	458	ND
5027203	202C-3	1.00	15.13	67.77	94	488	ND
5027204	202C-4	1.00	15.05	82.10	78	405	ND
5027205	202D-1	1.00	15.02	80.24	80	415	ND
5027206	202D-2	1.00	15.06	84.25	76	394	ND
5027207	202D-3	1.00	15.03	80.87	79	411	1212.80
5027208	202D-4	1.00	15.20	84.50	75	389	104.10
5027209	202D-5	1.00	15.20	75.80	84	434	ND
5027210	Duplicate	1.00	15.09	79.71	80	416	1126.95
METHOD BLANK	MB-052405-01	1.00	15.00	100.00	64	333	ND

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

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

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

1.	Cover Page, Title Page listing Lab Certification #, facility name and address, & date of report submitted.	✓
2.	Table of Contents submitted.	✓
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	✓
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 

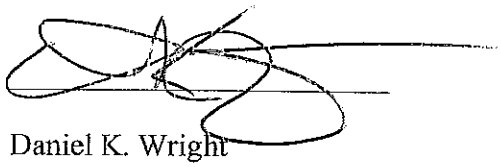
Date: 6/15/05

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

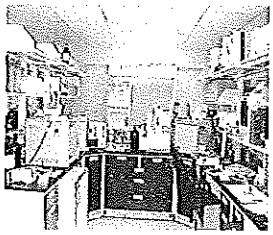
I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information 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

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: 11-124965

Bldg. 202D/UST

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
202D-3A	1126501	Soil	25-Jun-11 10:15	06/27/11
202D-3A-DUP.	1126502	Aqueous	25-Jun-11 10:45	06/27/11
202D-3A-Field Blank	1126503	Aqueous	25-Jun-11 10:35	06/27/11
202D-3A	1126504	Aqueous	25-Jun-11 10:40	06/27/11

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

ACCUTEST LABORATORIES
BN+15

6/30/11

Dean Tardiff/Date:
Laboratory Manager

Table of Contents

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
Phone #: X26223
( )DERA ( )OMA (X)Other: BRAC

Project No: 11-124965
(FORMER) **Location:** BLDG. 202

Samplers Name / Company: FRANK ACCORSI / TVS

Comments:

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	VOA+15	SVOC+15	% Solids				PID (PPM)	DEPTH (FT)	Remarks / Preservation Method
11265.01	2020-3A	6-25-11	1015	SOIL	1	X	X	X				144	5-5.5	ICE
.02	2020-3A DUPLICATE	↓	1045	AQ	1	X	X					–	–	↓
.03	2020-3A FIELD BLANK	↓	1035	AQ	3	X	X					–	–	↓
.04	2020-3A	↓	1040	AQ	3	X	X					–	–	↓

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	~~1615~~ 1615 6-25-11	[signature] 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: Duplicate Machined w/ 11264

000002

print legibly

COC .xls5/11/2011

SAMPLE RECEIPT FORM

Date Received: 6-27-11 Work Order ID#: 11265

Site/Proj. Name: B. 202 Cooler Temp (°C): 4°

Received By: Shannon Burk Sign:
(Print name)

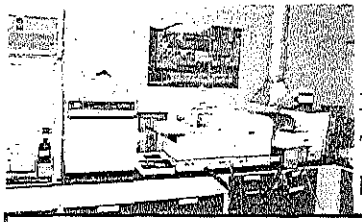
Check the appropriate box

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
11265.02-.04	NA	HCl			

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 | Project No:
Phone #: (732)532-6352 | Location: Bldg. 202D
( )DERA ( )OMA ( )Other:_____

Samplers Name / Company:

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: BN+15	SIMS							Comments: Remarks / Preservation Method
1126501	202D-3A	06/25/411	10:15	Soil	X	X	X							
1126502	202D-3A-DUP.	06/25/411	10:45	AQ	X	X	X							
1126503	202D-3A-Field Blank	06/25/411	10:35	AQ	X	X	X							
1126504	202D-3A	06/25/411	10:40	AQ	X	X	X							

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	6-28-11 13:10	[signature]			
[signature]		[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. 202 11265.xls6/27/2011

GPS POINTS

U.S. ARMY-FT. MONMOUTH, NJ

SITE 202D

SOIL SAMPLING GPS POSITIONS & COORDINATES

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

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
202D-3A	540334-64	622818.86

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 11265

Site: Bldg. 202

The Field Duplicate was performed on 202D-3A (1126501).

CONFORMANCE/ NON-CONFORMANCE SUMMARY

1265 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: _____ Date: _____

7/6/11

ACCUTEST LABORATORIES

2

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Fort Monmouth Environmental Testing Lab.	**Job No**	JA79584
Site:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, F	**Report Date**	7/11/2011 11:43:20 A

On 06/28/2011, 3 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 JA79584 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:** OP50500

- All samples were extracted within the recommended method holding time.
- Sample(s) JA79390-1MS, JA79390-1MSD were used as the QC samples indicated.
- Sample(s) JA79584-2, JA79584-3 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- Matrix Spike Duplicate Recovery(s) for Diethyl phthalate, Dimethyl phthalate are outside control limits. Outside control limits due to matrix interference.
- RPD(s) for MSD for Diethyl phthalate, Dimethyl phthalate are outside control limits for sample OP50500-MSD. Outside control limits due to matrix interference.

Matrix: SO **Batch ID:** OP50507

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA79614-10AMS, JA79614-10AMSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Butyl benzyl phthalate, Hexachlorocyclopentadiene are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Butyl benzyl phthalate are outside control limits.
- RPD(s) for MSD for Hexachlorocyclopentadiene are outside control limits for sample OP50507-MSD.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ **Batch ID:** OP50500A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA79390-1MS, JA79390-1MSD were used as the QC samples indicated.

Wet Chemistry By Method SM18 2540G

Matrix: SO **Batch ID:** GN52627

- The data for SM18 2540G meets quality control requirements.

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: 11196 **Site:** Bldg. 202D

	Date	Hold Time
Date Sampled	06/25/11	NA
Receipt/Refrigeration	06/25/11	NA

Analyses

1. Volatiles	06/27/11	14 Days
2. Semi-Volatiles (Accutest)	06/30-07/01,02/11	7 Days

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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7/5/2011 1:38 PM

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB06271101**

Lab Name: FMETL NJDEP# 13461

Project: _____ Case No: _____ Location: 202 SDG No.: 11265

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	VA10103.D	Sample Name	1126503
Operator	ROBERTS	Field ID	FIELD BLANK
Date Acquired	27 Jun 2011 5:09 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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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **FIELD BLANK**

Lab Name: FMETL NJDEP# 13461

Project: Case No: Location: 202 SDG No.: 11265

Matrix: (soil/water) WATER Lab Sample ID: 1126503

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA10103.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	VA10106.D	Sample Name	1126504
Operator	ROBERTS	Field ID	202 D-3A
Date Acquired	27 Jun 2011 6:57 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	58653	1.61	ug/L	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	15.82	2694889	59.31	ug/L	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	16.87	19226	0.52	ug/L	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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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **202D-3A**

Lab Name: FMETL NJDEP# 13461

Project: Case No: Location: 202 SDG No.: 11265

Matrix: (soil/water) WATER Lab Sample ID: 1126504

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA10106.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.	000103-65-1	Benzene, propyl-	18.36	47	JN
2.		C3 alkyl benzene	20.27	160	J
3.		C4 alkyl benzene	20.53	29	J
4.	000496-11-7	Indane	20.69	130	JN
5.		C4 alkyl benzene	21.34	82	J
6.		1H-Indene-dihydro-methyl-	21.59	76	J
7.		C4 alkyl benzene	21.84	39	J
8.		C4 alkyl benzene	21.96	55	J
9.		1H-Indene-dihydro-methyl-	22.49	73	J
10.		C4 alkyl benzene	22.70	79	J
11.		1H-Indene-dihydro-methyl-	22.75	140	J
12.	000119-64-2	Naphthalene, 1,2,3,4-tetrahydro-	23.03	76	JN
13.		1H-Indene-dihydro-dimethyl-	23.18	51	J
14.		1H-Indene-dihydro-dimethyl-	23.43	59	J
15.	000091-20-3	Naphthalene	23.79	120	JN

SEMI-VOLATILE ORGANICS

(ACCUTEST)

Report of Analysis

Client Sample ID:	1126501 202D-3A		
Lab Sample ID:	JA79584-1	**Date Sampled:**	06/25/11
Matrix:	SO - Soil	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.1
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z64757.D	1	06/30/11	KLS	06/29/11	OP50507	EZ3431
Run #2	Z64771.D	5	06/30/11	KLS	06/29/11	OP50507	EZ3431

	Initial Weight	Final Volume
Run #1	33.4 g	1.0 ml
Run #2	33.4 g	1.0 ml

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	817	38	11	ug/kg	
208-96-8	Acenaphthylene	ND	38	12	ug/kg	
98-86-2	Acetophenone	ND	190	6.7	ug/kg	
120-12-7	Anthracene	96.5	38	13	ug/kg	
1912-24-9	Atrazine	ND	190	7.5	ug/kg	
56-55-3	Benzo(a)anthracene	21.6	38	12	ug/kg	J
50-32-8	Benzo(a)pyrene	ND	38	12	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	38	13	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	38	14	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	38	14	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	76	14	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	76	22	ug/kg	
92-52-4	1,1'-Biphenyl	ND	76	4.4	ug/kg	
100-52-7	Benzaldehyde	ND	190	8.7	ug/kg	
91-58-7	2-Chloronaphthalene	ND	76	12	ug/kg	
106-47-8	4-Chloroaniline	ND	190	12	ug/kg	
86-74-8	Carbazole	ND	76	18	ug/kg	
105-60-2	Caprolactam	ND	76	12	ug/kg	
218-01-9	Chrysene	21.2	38	13	ug/kg	J
111-91-1	bis(2-Chloroethoxy)methane	ND	76	15	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	76	11	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	76	11	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	76	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	76	17	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	76	14	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	190	9.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	38	13	ug/kg	
132-64-9	Dibenzofuran	491	76	11	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	76	8.4	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	76	18	ug/kg	
84-66-2	Diethyl phthalate	ND	76	13	ug/kg	
131-11-3	Dimethyl phthalate	ND	76	13	ug/kg	

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:	1126501 202D-3A		
Lab Sample ID:	JA79584-1	**Date Sampled:**	06/25/11
Matrix:	SO - Soil	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.1
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Compound	Result	RL	MDL	Units	Q
117-81-7	bis(2-Ethylhexyl)phthalate	ND	76	33	ug/kg	
206-44-0	Fluoranthene	39.8	38	17	ug/kg	
86-73-7	Fluorene	1080	38	12	ug/kg	
118-74-1	Hexachlorobenzene	ND	76	12	ug/kg	
87-68-3	Hexachlorobutadiene	ND	38	11	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	760	39	ug/kg	
67-72-1	Hexachloroethane	ND	190	11	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	38	13	ug/kg	
78-59-1	Isophorone	ND	76	10	ug/kg	
91-57-6	2-Methylnaphthalene	5400 [a]	380	110	ug/kg	
88-74-4	2-Nitroaniline	ND	190	17	ug/kg	
99-09-2	3-Nitroaniline	ND	190	15	ug/kg	
100-01-6	4-Nitroaniline	ND	190	15	ug/kg	
91-20-3	Naphthalene	1010	38	10	ug/kg	
98-95-3	Nitrobenzene	ND	76	11	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	76	9.2	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	190	23	ug/kg	
85-01-8	Phenanthrene	2120	38	17	ug/kg	
129-00-0	Pyrene	209	38	15	ug/kg	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	190	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%	55%	21-122%
321-60-8	2-Fluorobiphenyl	75%	80%	30-117%
1718-51-0	Terphenyl-d14	73%	67%	31-129%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	cycloalkane/alkene	6.13	7700	ug/kg	J
	alkane	6.43	17000	ug/kg	J
	unknown	6.61	6900	ug/kg	J
	Naphthalene dimethyl	6.72	19000	ug/kg	J
	Naphthalene dimethyl	6.86	6400	ug/kg	J
	unknown	6.88	7100	ug/kg	J
	alkane	7.16	13000	ug/kg	J
101-81-5	Diphenylmethane	7.45	6100	ug/kg	JN
	Naphthalene trimethyl	7.54	8700	ug/kg	J
	Naphthalene trimethyl	7.72	5400	ug/kg	J
	Naphthalene trimethyl	7.77	9900	ug/kg	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

Report of Analysis

Client Sample ID:	1126501 202D-3A		
Lab Sample ID:	JA79584-1	**Date Sampled:**	06/25/11
Matrix:	SO - Soil	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3550B	**Percent Solids:**	79.1
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

BN TCL List (SOM0 1.1)

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Naphthalene trimethyl	7.89	6800	ug/kg	J
	Naphthalene trimethyl	8.04	11000	ug/kg	J
	alkane	9.05	16000	ug/kg	J
	alkane	9.77	8900	ug/kg	J
	Total TIC, Semi-Volatile		149900	ug/kg	J

(a) Result is from Run# 2

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:	1126502 202D-3A-DUP		
Lab Sample ID:	JA79584-2	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R88355.D	1	06/30/11	KLS	06/29/11	OP50500	ER3377
Run #2	R88377.D	5	07/01/11	LP	06/29/11	OP50500	ER3378

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

BN TCL11 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	2.3	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	4.5	5.0	0.30	ug/l	J
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	25.3	2.0	0.33	ug/l	B
86-73-7	Fluorene	9.0	1.0	0.27	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	109 [a]	5.0	3.3	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	

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:	1126502 202D-3A-DUP		
Lab Sample ID:	JA79584-2	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

BN TCL11 List

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	35.1	1.0	0.43	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.25	ug/l	
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	
85-01-8	Phenanthrene	11.7	1.0	0.21	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%	72%	38-129%
321-60-8	2-Fluorobiphenyl	83%	76%	42-117%
1718-51-0	Terphenyl-d14	26%	23%	14-132%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	4.59	37	ug/l	J
	unknown	8.22	18	ug/l	J
	unknown	9.73	34	ug/l	J
	1H-Indene-dihydro-dimethyl	10.46	17	ug/l	J
	unknown	11.00	16	ug/l	J
	Naphthalene tetrahydro-methyl	11.46	40	ug/l	J
90-12-0	Naphthalene, 1-methyl-	12.13	78	ug/l	JN
	unknown	12.20	17	ug/l	J
	Naphthalene ethyl	13.23	34	ug/l	J
	Naphthalene dimethyl	13.38	59	ug/l	J
	Naphthalene dimethyl	13.58	63	ug/l	J
	Naphthalene dimethyl	13.62	47	ug/l	J
	Naphthalene dimethyl	13.83	26	ug/l	J
	Naphthalene trimethyl	14.97	21	ug/l	J
	alkane	16.20	27	ug/l	J
	unknown	16.84	38	ug/l	J
	Total TIC, Semi-Volatile		535	ug/l	J

(a) Result is from Run# 2

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:	1126502 202D-3A-DUP		
Lab Sample ID:	JA79584-2	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M26503.D	1	06/30/11	NAP	06/29/11	OP50500A	E4M1145
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	4.50	0.10	0.014	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.016	ug/l	
120-12-7	Anthracene	0.348	0.10	0.010	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.015	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.0049	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.016	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.010	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.013	ug/l	
218-01-9	Chrysene	ND	0.10	0.023	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.0096	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.0080	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.011	ug/l	
129-00-0	Pyrene	0.435	0.10	0.0081	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	55%		32-135%
321-60-8	2-Fluorobiphenyl	50%		31-121%
1718-51-0	Terphenyl-d14	17%		10-130%

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:	1126503 202D-3A-FIELD BLANK		
Lab Sample ID:	JA79584-3	**Date Sampled:**	06/25/11
Matrix:	AQ - Field Blank Water	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R88356.D	1	06/30/11	KLS	06/29/11	OP50500	ER3377
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN TCL11 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	10.1	2.0	0.33	ug/l	B
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:	1126503 202D-3A-FIELD BLANK		
Lab Sample ID:	JA79584-3	**Date Sampled:**	06/25/11
Matrix:	AQ - Field Blank Water	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

BN TCL11 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	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	86%		38-129%
321-60-8	2-Fluorobiphenyl	85%		42-117%
1718-51-0	Terphenyl-d14	82%		14-132%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact/aldol-condensation	4.59	56	ug/l	J
	unknown	26.60	7.8	ug/l	J
	Total TIC, Semi-Volatile		7.8	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

Report of Analysis

Client Sample ID:	1126503 202D-3A-FIELD BLANK		
Lab Sample ID:	JA79584-3	**Date Sampled:**	06/25/11
Matrix:	AQ - Field Blank Water	**Date Received:**	06/28/11
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M26504.D	1	06/30/11	NAP	06/29/11	OP50500A	E4M1145
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	0.014	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.016	ug/l	
120-12-7	Anthracene	ND	0.10	0.010	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.10	0.015	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.0049	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.016	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.010	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.013	ug/l	
218-01-9	Chrysene	ND	0.10	0.023	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.0096	ug/l	
86-73-7	Fluorene	ND	0.10	0.015	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.0080	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.011	ug/l	
91-20-3	Naphthalene	ND	0.10	0.016	ug/l	
85-01-8	Phenanthrene	ND	0.10	0.016	ug/l	
129-00-0	Pyrene	ND	0.10	0.0081	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		32-135%
321-60-8	2-Fluorobiphenyl	63%		31-121%
1718-51-0	Terphenyl-d14	58%		10-130%

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:	1126504 202D-3A		
Lab Sample ID:	JA79584-4	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R88357.D	1	06/30/11	KLS	06/29/11	OP50500	ER3377
Run #2	R88378.D	5	07/01/11	LP	06/29/11	OP50500	ER3378

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2	1000 ml	1.0 ml

BN TCL11 List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	6.8	1.0	0.37	ug/l	
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	4.0	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	7.2	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	2.8	2.0	0.33	ug/l	
86-73-7	Fluorene	15.2	1.0	0.27	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	233 [a]	5.0	3.3	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	

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:	1126504 202D-3A		
Lab Sample ID:	JA79584-4	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
Method:	SW846 8270C SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

BN TCL11 List

CAS No.	Compound	Result	RL	MDL	Units	Q
100-01-6	4-Nitroaniline	ND	5.0	0.18	ug/l	
91-20-3	Naphthalene	59.5	1.0	0.43	ug/l	
98-95-3	Nitrobenzene	ND	2.0	0.25	ug/l	
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	
85-01-8	Phenanthrene	23.0	1.0	0.21	ug/l	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	2.0	0.48	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%	86%	38-129%
321-60-8	2-Fluorobiphenyl	75%	85%	42-117%
1718-51-0	Terphenyl-d14	24%	27%	14-132%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	9.74	62	ug/l	J
	alkane	11.47	63	ug/l	J
90-12-0	Naphthalene, 1-methyl-	12.15	84	ug/l	JN
	Naphthalene ethyl	13.24	60	ug/l	J
	Naphthalene dimethyl	13.40	87	ug/l	J
	Naphthalene dimethyl	13.60	100	ug/l	J
	Naphthalene dimethyl	13.65	100	ug/l	J
	Naphthalene dimethyl	13.85	47	ug/l	J
	alkane	13.99	42	ug/l	J
	Naphthalene trimethyl	14.99	39	ug/l	J
	unknown	15.78	40	ug/l	J
	alkane	16.22	74	ug/l	J
	alkane	16.86	110	ug/l	J
	9H-Fluorene methyl	17.05	38	ug/l	J
	unknown	23.16	77	ug/l	J
	Total TIC, Semi-Volatile		1023	ug/l	J

(a) Result is from Run# 2

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:	1126504 202D-3A		
Lab Sample ID:	JA79584-4	**Date Sampled:**	06/25/11
Matrix:	AQ - Ground Water	**Date Received:**	06/28/11
Method:	SW846 8270C BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Fort Monmouth Env Testing Lab, Building 173, SELFM-PW-EV, Fort Monmouth, NJ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M26505.D	1	06/30/11	NAP	06/29/11	OP50500A	E4M1145
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
208-96-8	Acenaphthylene	ND	0.10	0.016	ug/l	
120-12-7	Anthracene	0.930	0.10	0.010	ug/l	
56-55-3	Benzo(a)anthracene	0.113	0.10	0.015	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.0049	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.10	0.016	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.010	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.013	ug/l	
218-01-9	Chrysene	0.146	0.10	0.023	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.023	ug/l	
206-44-0	Fluoranthene	0.178	0.10	0.0096	ug/l	
118-74-1	Hexachlorobenzene	ND	0.020	0.0080	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.011	ug/l	
129-00-0	Pyrene	1.83	0.10	0.0081	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	63%		32-135%
321-60-8	2-Fluorobiphenyl	65%		31-121%
1718-51-0	Terphenyl-d14	22%		10-130%

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 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 [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 M

UST 401 Report

U.S. Army Garrison
Fort Monmouth, New Jersey

Underground Storage Tank Closure Report

Main Post – former Bldg.401
Frazer Ave.

NJDEP UST Registration No. 90010-26

February 2007

UNDERGROUND STORAGE TANK REPORT

MAIN POST –FORMER BUILDING 401
NJDEP UST REGISTRATION NO. 90010-26

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 on May 28, 1990. The UST was located on the north side of former Building 401 in the Main Post area of Fort Monmouth. UST No. 90010-26 was a 1,000-gallon No. 2 heating oil tank.

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 UST removal, no closure soil samples were collected. Soil sampling was not required at the time. However, in order to confirm that the tank did not leak, a subsurface investigation was conducted. On December 12, 2005, a Geoprobe was utilized to collect samples 401-A, 401-B, 401-C and 401-D-Duplicate 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 7.5 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. 90010-26, 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. A groundwater sample was analyzed for volatile organics and semi volatile organics. This sample did not contain compounds that exceed the NJDEP Class II Ground Water Quality Criteria.

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. Based on the closure groundwater sample there is no volatile organic or semi volatile organic contamination in the location of the former UST.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-26 at former Building 401.

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. 90010-26, was closed at former Building 401 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 on May 28, 1990.

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

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

1.2 SITE DESCRIPTION

Former Building 401, Frazer Ave., was located in the eastern portion (400 Area) of the Main Post of Fort Monmouth, as shown on Figure 1. UST No. 90010-26 was located on the north side of Building 401. Historical maps were used to determine the exact location of the former building and tank. A historical site location map is provided on Figure 2.

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.

Former Building 401 was located approximately 450 feet south of Parkers 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 401 is anticipated to be to the north.

1.3 HEALTH AND SAFETY

Work site health and safety hazards were minimized during all site investigation activities. All areas which posed a vapor hazard were monitored by a qualified individual utilizing a calibrated photo-ionizer detector : Thermo Instruments Organic Vapor Monitor (OVM) – Model #580-B. 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. During the field investigation no potentially contaminated material was found.

2.3 SOIL SAMPLING

On December 12, 2005, closure soil samples 401-A, 401-B, 401-C and 401-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 seven and one half feet (7.5) below ground surface in the borings. All soil samples were analyzed for TPH. A soil sample site location map is provided on Figure 3.

The site assessment was performed by TVS personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* and the NJDEP *Field Sampling Procedures Manual.* A summary of sampling activities including parameters analyzed is provided on Table 1. The 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 12, 2005, sample 401-Groundwater was collected from soil borehole 401-B to assess the groundwater quality in the location of the former tank. A temporary piezometer was installed in the borehole for sample collection. 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 12, 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 12, 2005 from UST 90010-26 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 401-B. Bis(2-Ethylhexyl)phthalate was detected in sample 401-Groundwater at 3.94 ug/L. This is below the NJDEP Class II Ground Water Quality Criteria of 30 ug/L. This compound is a common laboratory contaminant.

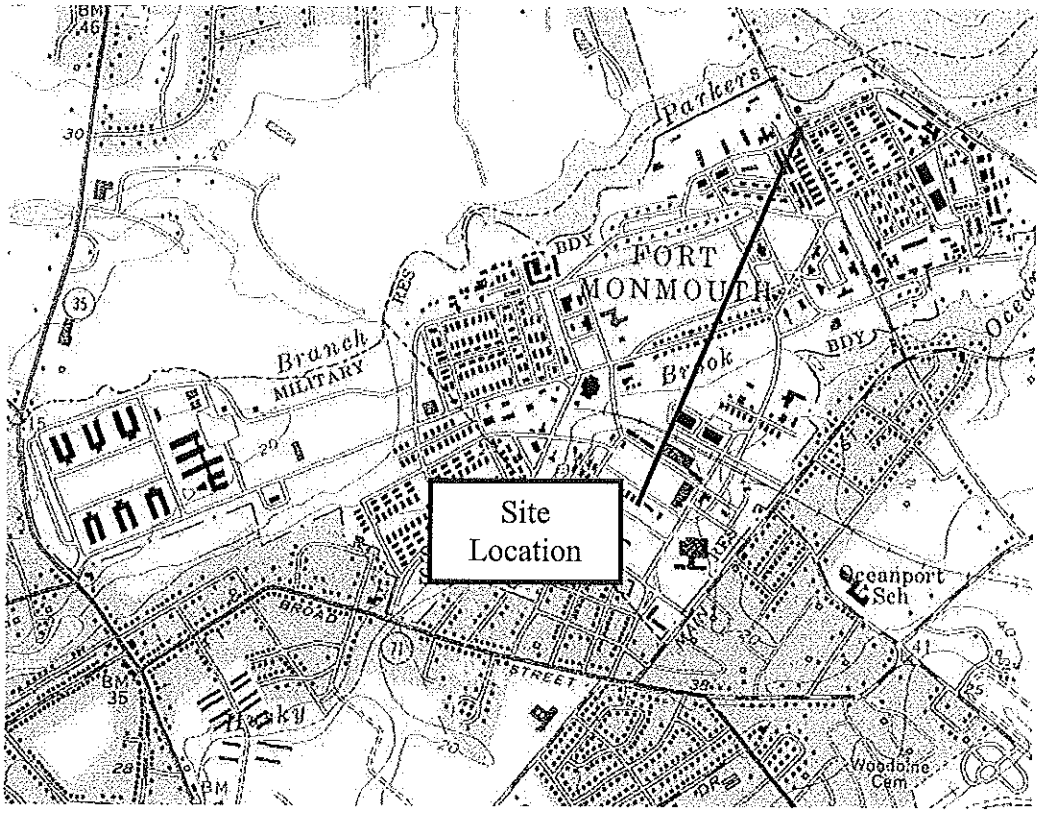
3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all soil samples collected from the UST closure assessment at UST No. 90010-26 were Not Detected. The analytical results for the groundwater sample are below the NJDEP Class II Ground Water Quality Criteria.

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. 90010-26.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-26 at former Building 401.

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

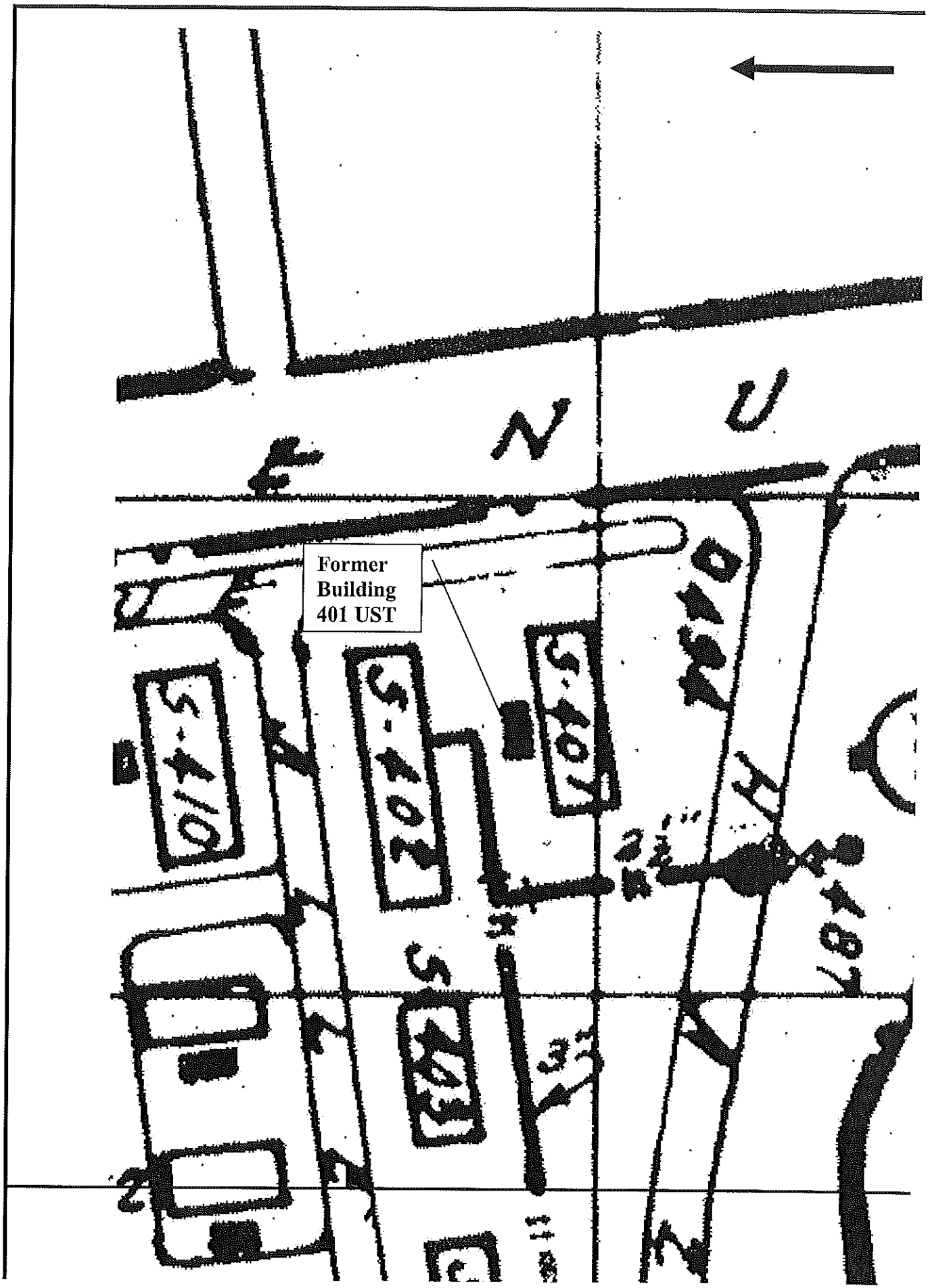
N

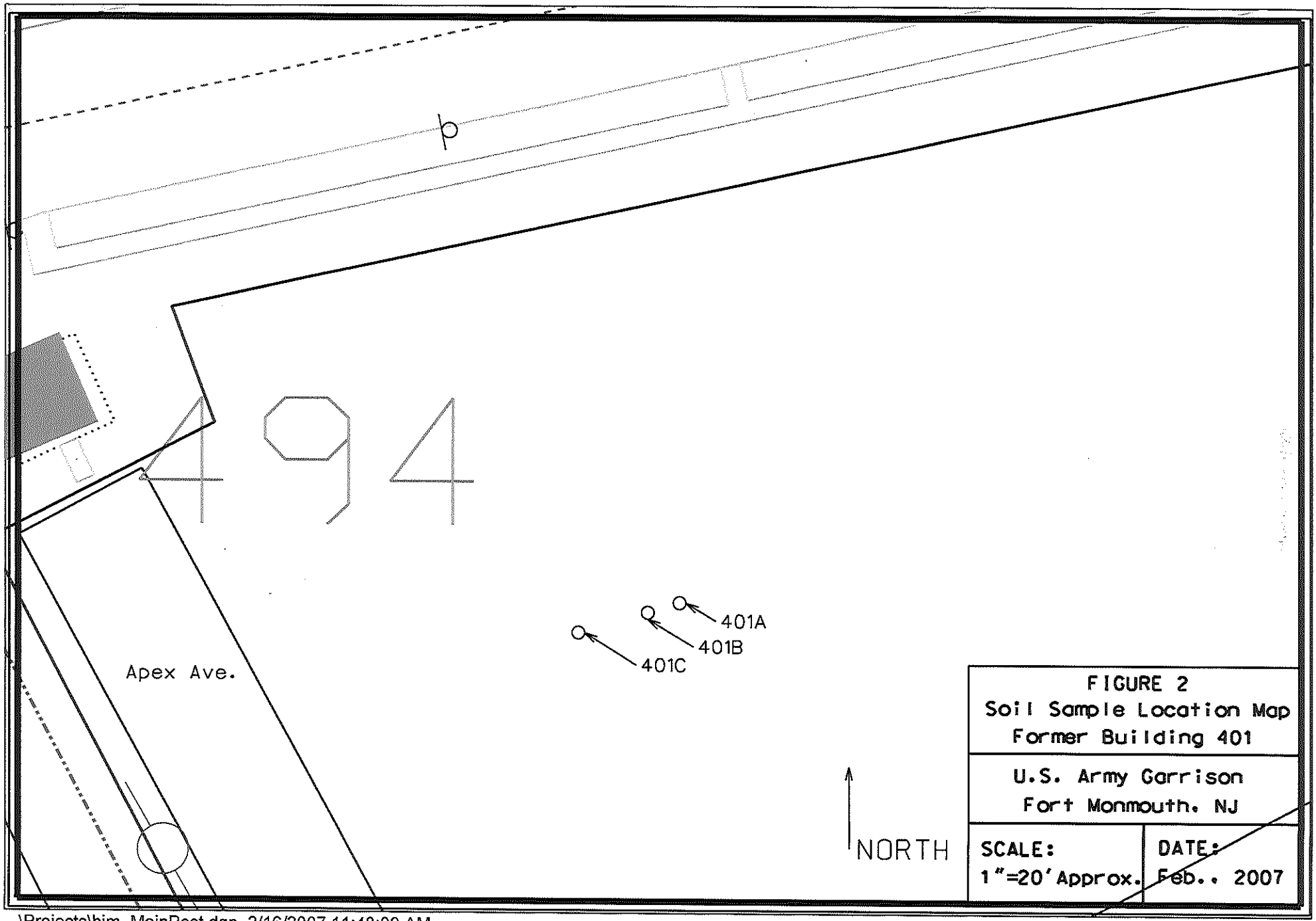
SOURCE: USGS 7½-MINUTE SERIES (TOPOGRAPHIC)
LONG BRANCH QUADRANGLE, NEW JERSEY, 1981.

FIGURE 1

SITE LOCATION MAP
(FORMER)BUILDING 401
UST NO. 90010-26
FT. MONMOUTH, NJ

FIGURE 2 – SITE LOCATION MAP





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TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, BUILDING 401, UST No. 90010-26
12 December 2005

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
401-A	5063701	12-Dec-05	SOIL	TPH	OQA-QAM-25
401-B	5063702	12-Dec-05	SOIL	TPH	OQA-QAM-25
401-C	5063703	12-Dec-05	SOIL	TPH	OQA-QAM-25
401-D (dupl. C)	5063704	12-Dec-05	SOIL	TPH	OQA-QAM-25
TRIP BLANK	5063705	12-Dec-05	METHANOL	VOA	SW-846, 8260
401-Groundwater	5063706	12-Dec-05	AQUEOUS	VOA, SVOA	SW-846, 8260 SW-846, 8270
TRIP BLANK	5063707	12-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 401, UST No. 90010-26
12 December 2005

TOTAL PETROLEUM HYDROCARBONS

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH	MATRIX	TPH RESULT S
			(in feet)		mg/kg
401-A	5063701	WEST END UST	7.0 – 7.5	Soil	ND
401-B	5063702	CENTER	7.0 – 7.5	Soil	ND
401-C	5063703	EAST END UST	7.0 – 7.5	Soil	ND
401-D (dupl. C)	5063704	DUPLICATE (EAST END)	7.0 – 7.5	Soil	ND
Trip Blank	5063705	---	---	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

TABLE 3

SUMMARY OF LABORATORY ANALYTICAL RESULTS-GROUNDWATER

FT. MONMOUTH, BUILDING 401, UST No. 90010-26

12 December 2005

VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Bis(2-Ethylhexyl)phthalate
	UNITS	ug/L
401-Groundwater	5063706	3.94
Trip Blank	5063705	ND
Trip Blank	5063707	ND
NJDEP Criteria	Ground Water Quality Crireria	30

ABBREVIATIONS:
ug/L = Micrograms Per Liter = parts per billion
ND = Compound Not Detected
NA = Compound Not Analyzed

Notes:
Gray shading indicates exceedance of NJDEP Class II Ground Water Quality Criteria

APPENDIX A

CERTIFICATIONS

Site Remediation Program
UST Site Remedial Investigation Report

A. Facility Name: (former) Building 401

Facility Street Address: Frazer Ave.

Municipality: Oceanport County: Ft. Monmouth

Block: NA Lot(s): NA Telephone Number: Redacted - Privacy Act

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: 90010-26 (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: _____ 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: _____

APPENDIX B

SOIL AND GROUNDWATER ANALYTICAL DATA PACKAGE

(QC and raw data not included for brevity)

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. 401

Bldg. 401

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
401-A, West End	5063701	Soil	12-Dec-05 09:30	12/13/05
401-B, Center	5063702	Soil	12-Dec-05 10:40	12/13/05
401-C, East End	5063703	Soil	12-Dec-05 13:15	12/13/05
401-D, (Duplicate)	5063704	Soil	12-Dec-05 13:15	12/13/05
Trip Blank	5063705	Methanol	12-Dec-05	12/13/05
401-GW	5063706	Aqueous	12-Dec-05 14:00	12/13/05
Trip Blank	5063707	Aqueous	12-Dec-05	12/13/05

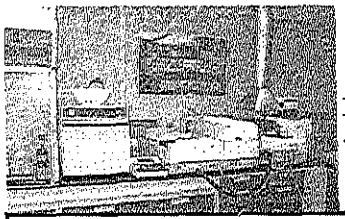
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15, TPHC

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

12-30-05
Daniel Wright/Date
Laboratory Director

Table of Contents

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

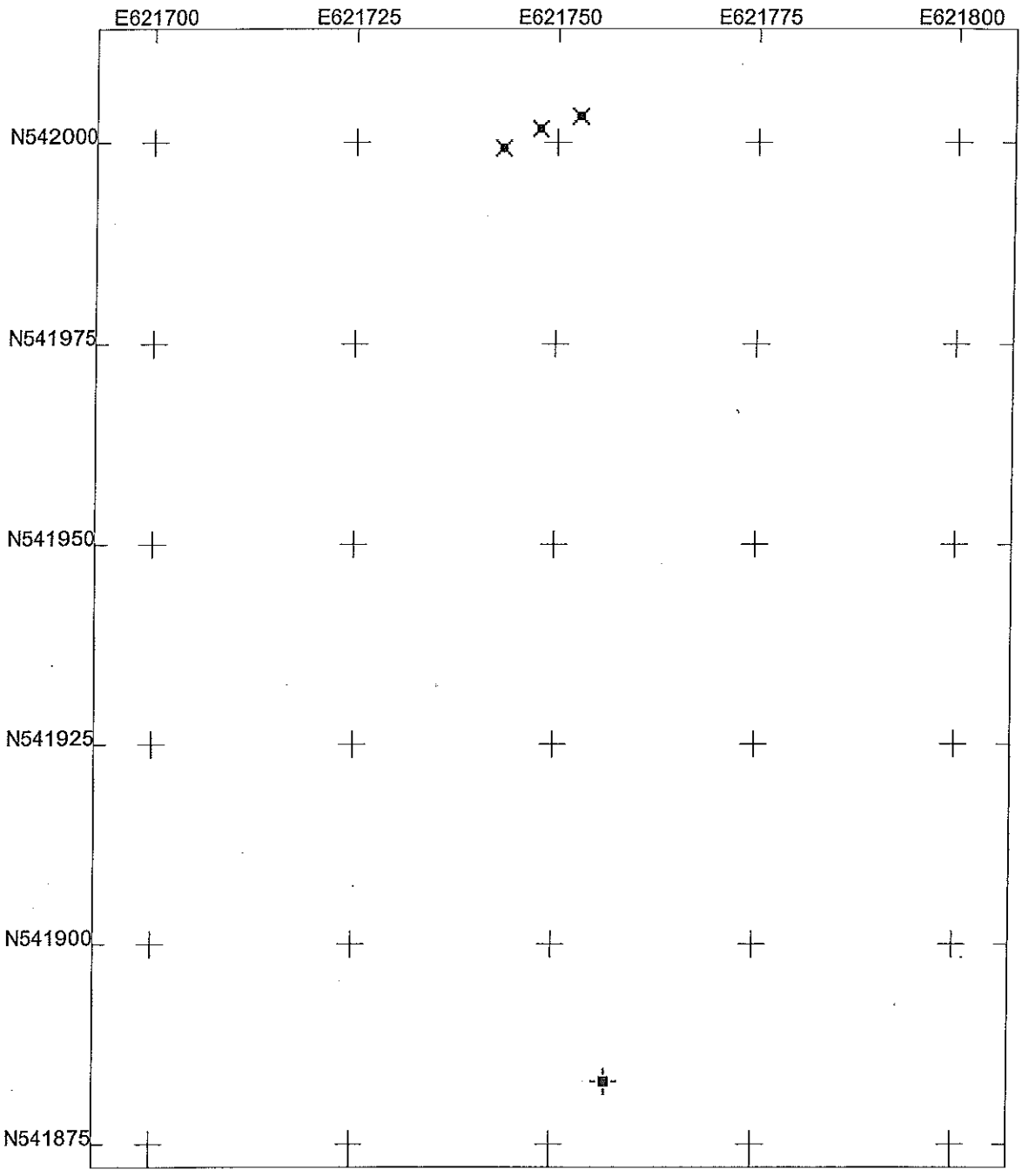
Customer: JOHN MC CARTHY
Phone:
( )DERA ( )OMA (X)Other:_____
Project No: 06-34880
Location: (FORMER) BLDG. 401 UST
Samplers Name / Company: FRANK ACCORSI/TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOA+10	BN+15				DEPTH (FT)	VOA #	Remarks / Preservation Method
501037 01	401-A, WEST END	12-12-05	0930	SOIL	2	X	*					7-7.5	4364	ICE
02	401-B, CENTER	12-12-05	1040		2	X	*					7-7.5	4365	
03	401-C, EAST		1315		2	X	*					7-7.5	4366	
04	401-D, DUPLICATE		1315		2	X	*					7-7.5	4367	
05	401-GW TRIP BLANK		-	AQ	1		X					-	4368	
06	401-GW		1400		3		X	X				9	-	
07	TRIP BLANK		-		1		X					-	-	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	12-12-05 1515	[signature] 12/13/05 730			
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: * VO+10 ON 25% > 1,000 PPM TPH, ON HIGHEST, MIN. ONE



U.S. Army - Ft. Monmouth (former)Bldg. 401 UST Soil Sample GPS Map

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

N

Scale 1:250

0 0.006

Miles

BLDG401.cor
12/20/2005
GPS Pathfinder
Trimble

U.S. ARMY - FT. MONMOUTH, NJ

(former)BLDG. 401 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)
401A WEST END UST	541999.38	621743.021
401B CENTER UST	542001.791	621747.731
401C EAST END UST	542003.303	621752.712

REFERENCE POINT

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
BLDG410 NW CORNER	541882.789	621756.737

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: 50637

Site: UST
Bldg. 401

	Date	Hold Time
Date Sampled	12/12/05	NA
Receipt/Refrigeration	12/13/05	NA
Extractions		
1. BN	12/15/05	7 days
2. TPHC	12/15/05	14 days
Analyses		
1. VOA	12/14,15/05	14 days
2. BN	12/19/05	40 days
3. TPHC	12/16/05	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 — NO

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

   a. VOA Fraction _____
   b. B/N Fraction Terphenyl low in mrk + reanal of 4016W
   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 1,1,1TCE + Naph 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 NA

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	VB021036.D	Sample Name	MB 14Dec2005
Operator	Skelton	Field ID	MB 14Dec2005
Date Acquired	14 Dec 2005 2:32 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 14Dec2005**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: MB 14Dec2005

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021036.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: not dec. _____ Date Analyzed: 12/14/2005

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	VB021058.D	Sample Name	5063707
Operator	Skelton	Field ID	Trip Blank
Date Acquired	15 Dec 2005 5:17 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

C:\HPCHEM\Custrpt\Volatile\624FY05NEWLIST.CRT

000018

12/29/2005 10:18 AM

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5063707

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021058.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: not dec. Date Analyzed: 12/15/2005

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	**VB021057.D**	Sample Name	**5063706**
Operator	**Skelton**	Field ID	**401-GW**
Date Acquired	**15 Dec 2005 4:36 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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **401-GW**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5063706

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021057.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: not dec. Date Analyzed: 12/15/2005

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	**BNA11411.D**	Sample Name	**MB-121505-01**
Operator	**BPatel**	Misc Info	**MB-121505-01**
Date Acquired	**19-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	**BNA11411.D**	Sample Name	**MB-121505-01**
Operator	**BPatel**	Misc Info	**MB-121505-01**
Date Acquired	**19-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.

MB-121505-01

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50637 Location: BI.401 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-121505-01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11411.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005

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	**BNA11413.D**	Sample Name	**5063706**
Operator	**BPatel**	Misc Info	**401-GW**
Date Acquired	**19-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	**BNA11413.D**	Sample Name	**5063706**
Operator	**BPatel**	Misc Info	**401-GW**
Date Acquired	**19-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	27.70	122488	3.94 ug/L	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.

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA11416.D**	Sample Name	**5063706 RE**
Operator	**BPatel**	Misc Info	**401-GW Re**
Date Acquired	**19-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
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Data File Name	**BNA11416.D**	Sample Name	**5063706 RE**
Operator	**BPatel**	Misc Info	**401-GW Re**
Date Acquired	**19-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	27.69	140047	4.23 ug/L	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.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

401-GW

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50637 Location: Bl.401 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5063706

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11413.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005

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 # :**	50637
		Location :	Bldg.401
		UST Reg. # :	
Analysis :	OQA-QAM-025	**Date Received :**	12-Dec-05
Matrix :	Soil	**Date Extracted :**	15-Dec-05
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	16-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)
5063701	401-A	1.00	15.14	81.90	78	403	ND
5063702	401-B	1.00	15.31	93.30	67	350	ND
5063703	401-C	1.00	15.08	79.25	81	418	ND
5063704	401-D	1.00	15.09	80.28	79	413	ND
METHOD BLANK	MB-121505-01	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 

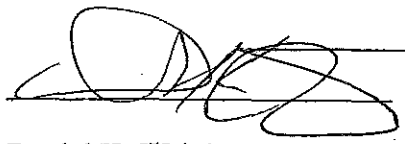
Date: 12/30/05

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 N

UST 416 Report

U.S. Army Garrison
Fort Monmouth, New Jersey

Underground Storage Tank Closure Report

Main Post – former Bldg.416
Apex Ave.

NJDEP UST Registration No. 90010-32

February 2007

UNDERGROUND STORAGE TANK REPORT

MAIN POST –FORMER BUILDING 416
NJDEP UST REGISTRATION NO. 90010-32

MARCH 2007

PREPARED FOR:

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

PROJECT NO. 06-34880

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. The UST was located on the east side of former Building 416 in the Main Post area of Fort Monmouth. UST No. 90010-32 was a 1,000-gallon No. 2 heating oil tank.

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 UST removal, no closure soil samples were collected. Soil sampling was not required at the time. However, in order to confirm that the tank did not leak, this subsurface investigation was conducted. On December 13, 2005, a Geoprobe was utilized to collect samples 416-A, 416-B, 416-C and 416-D (Duplicate-A) 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 seven (7) 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. 90010-32, 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 organic analysis and semi-volatile organic analysis. This 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. 90010-32 at former Building 416.

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. 90010-32, was closed at former Building 416 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 date of the closure of the UST is unknown.

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

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

1.2 SITE DESCRIPTION

Former Building 416, Apex Ave., was located in the eastern portion (400 Area) of the Main Post of Fort Monmouth, as shown on Figure 1. UST No. 90010-32 was located on the east side of Building 416. Historical maps were used to determine the exact location of the former building and tank. A historical 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 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.

Former Building 416 was located approximately 450 feet south of Parkers 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 416 is anticipated to be to the north.

1.3 HEALTH AND SAFETY

Work site health and safety hazards were minimized during all site investigation activities. All areas which posed a vapor hazard were monitored by a qualified individual utilizing a calibrated photo-ionizer detector : Thermo Instruments Organic Vapor Monitor (OVM) – Model #580-B. 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) 532-6223

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

- Analytical Laboratory: Fort Monmouth Environmental Testing Laboratory
  Contact Person: 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 13, 2005, closure soil samples 416-A, 416-B, 416-C and 416-D (Duplicate A) were collected from a total of three (3) locations along the tank centerline bottom of the former UST. Groundwater was encountered at approximately seven (7) below surface grade in the borings. All samples were analyzed for TPH. A soil sample location map is provided on Figure 3.

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

2.4 GROUNDWATER SAMPLING

On December 13, 2005, sample 416-Groundwater was collected from soil borehole 416-B to assess the groundwater quality in the location of the former tank. A temporary piezometer was installed in the borehole for sample collection. The sample was collected into laboratory prepared glassware using properly decontaminated disposable bailer. The sample was analyzed for volatile organic analysis (VOA) and semi-volatile organic analysis (SVOA).

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

Closure soil samples were collected from a total of three locations on December 13, 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 13, 2005 from UST 90010-32 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 416-B. There were no compounds detected above the method detection limits for either the volatile organic analysis or the semi-volatile organic analysis.

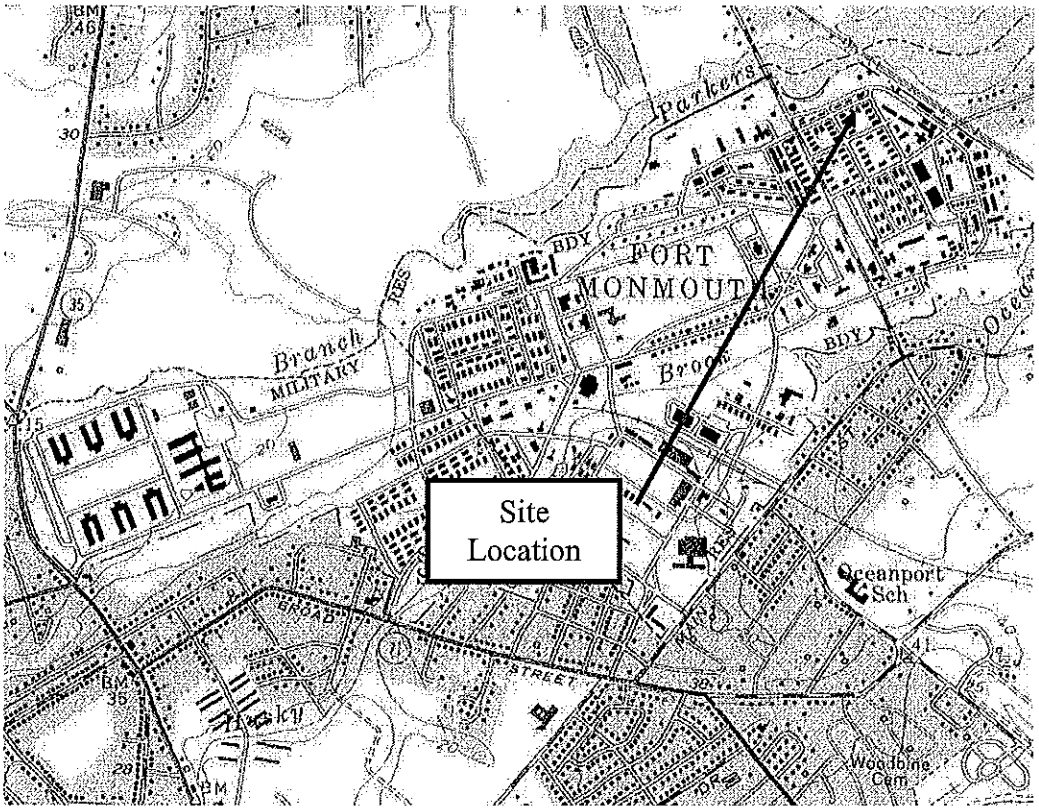
3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all soil samples collected from the UST closure assessment at UST No. 90010-32 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. 90010-32.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-32 at former Building 416.

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

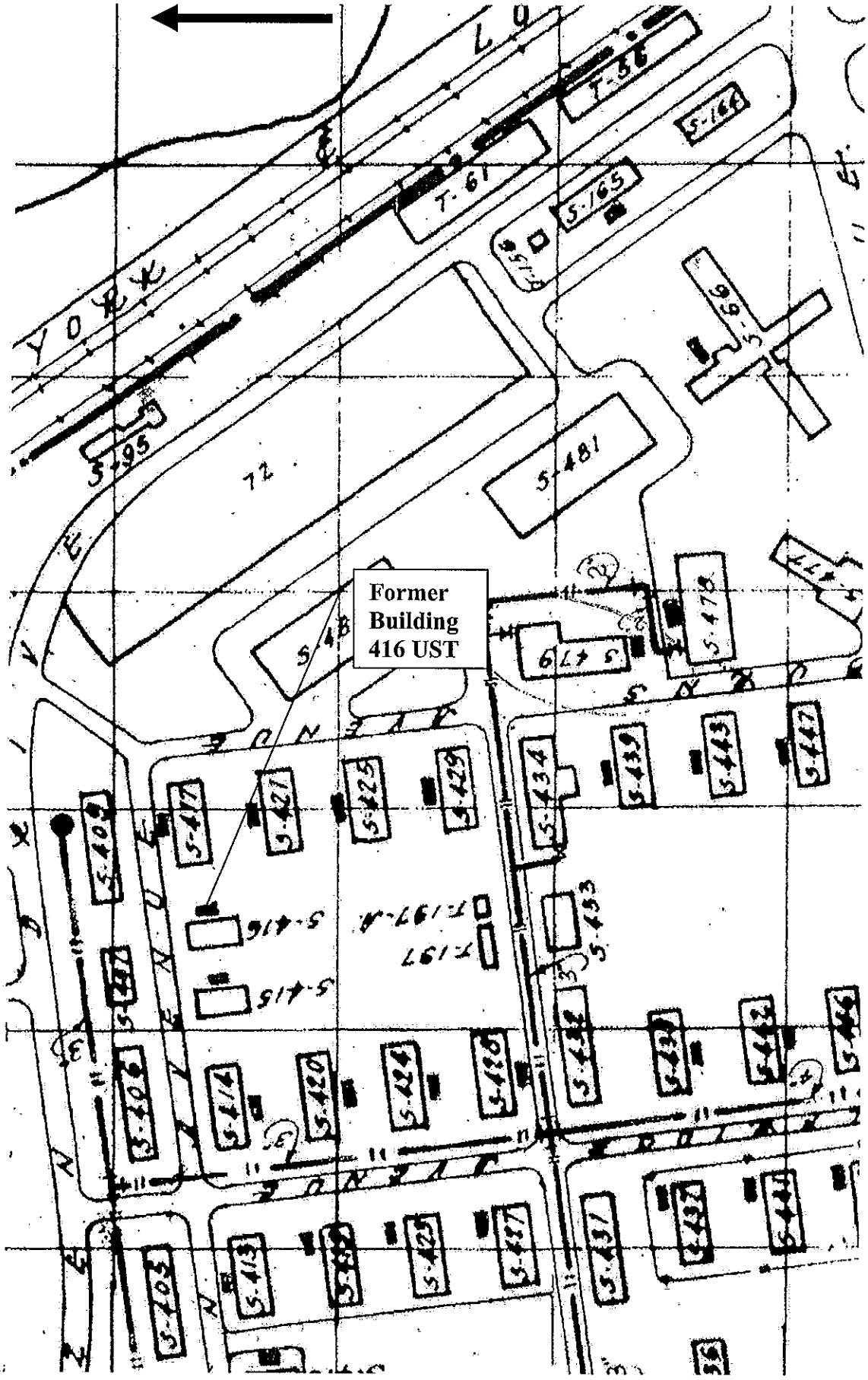
N

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

FIGURE 1

SITE LOCATION MAP
(FORMER)BUILDING 416
UST NO. 90010-32
FT. MONMOUTH, NJ

FIGURE 2-SITE LOCATION MAP



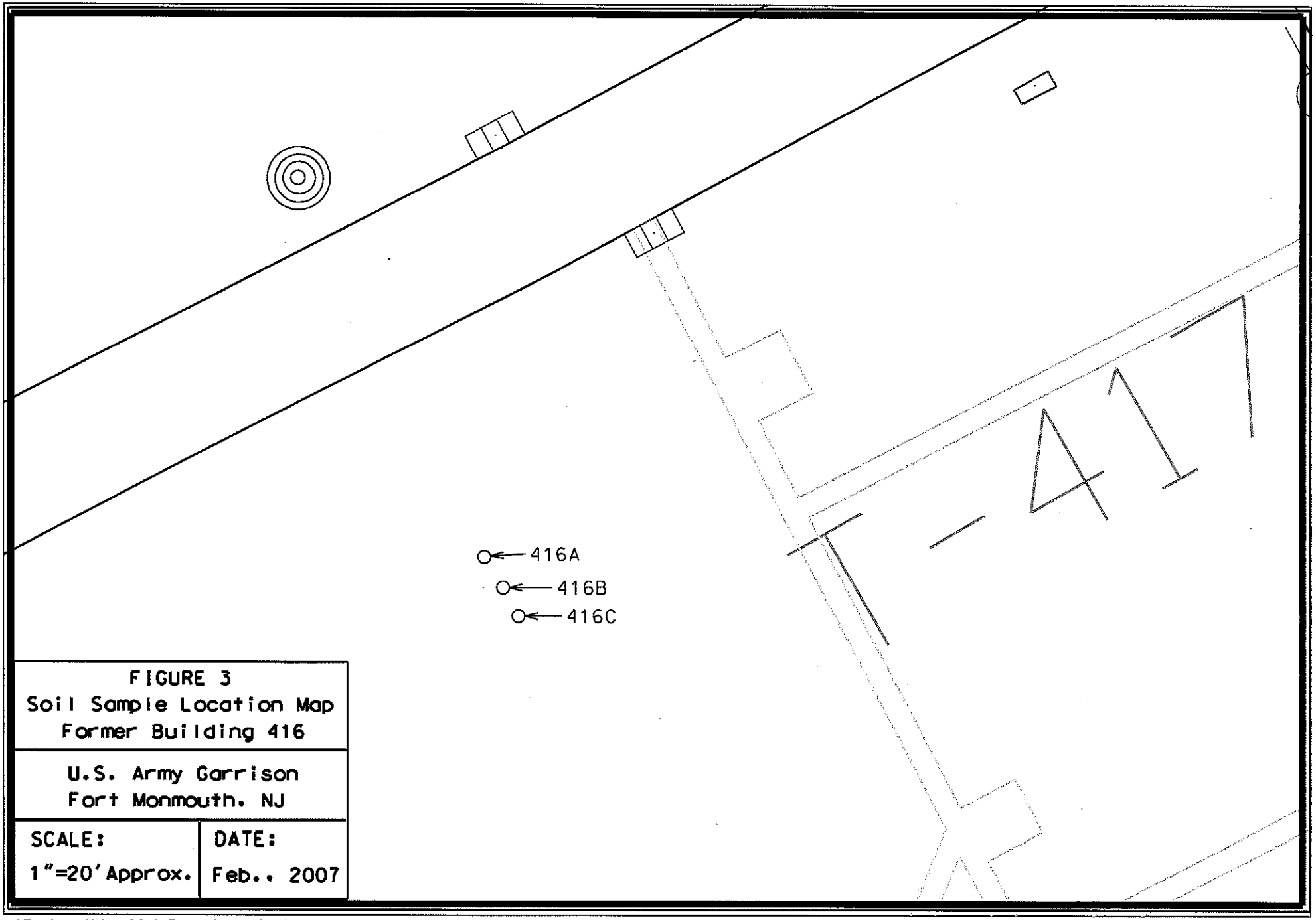


FIGURE 3
Soil Sample Location Map
Former Building 416

U.S. Army Garrison
Fort Monmouth, NJ

SCALE:	DATE:
1"=20' Approx.	Feb., 2007

...\Projects\bim_MainPost.dgn 2/20/2007 1:03:45 PM

TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, BUILDING 416, UST No. 90010-32
13 December 2005

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
416-A	5063901	13-Dec-05	SOIL	TPH	OQA-QAM-25
416-B	5063902	13-Dec-05	SOIL	TPH	OQA-QAM-25
416-C	5063903	13-Dec-05	SOIL	TPH	OQA-QAM-25
416-D (dupl. A)	5063904	13-Dec-05	SOIL	TPH	OQA-QAM-25
TRIP BLANK	5063905	13-Dec-05	METHANOL	VOA	SW-846, 8260
416-Groundwater	5063906	13-Dec-05	AQUEOUS	VOA, SVOA	SW-846, 8260 SW-846, 8270
TRIP BLANK	5063907	13-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 416, UST No. 90010-32
13 December 2005

TOTAL PETROLEUM HYDROCARBONS

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH	MATRIX	TPH RESULT S
			(in feet)		mg/kg
416-A	5063901	NORTH END UST	6.5 – 7.0	Soil	ND
416-B	5063902	CENTER	6.5 – 7.0	Soil	ND
416-C	5063903	SOUTH END UST	6.5 – 7.0	Soil	ND
416-D (dupl. A)	5063904	DUPLICATE (NORTH END)	6.5 – 7.0	Soil	ND
Trip Blank	5063905	---	---	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 416, UST No. 90010-32

13 December 2005

VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	SVOA
	UNITS	ug/L	ug/L	ug/L	ug/L	ug/L
416-Groundwater	5063106	ND	ND	ND	ND	ND
Trip Blank	5063105	ND	ND	ND	ND	ND
Trip Blank	5063107	ND	ND	ND	ND	ND
NJDEP Criteria	Ground Water Quality Crireria	1	1,000	700	40	--

ABBREVIATIONS:
ug/L = Micrograms Per Liter = parts per billion
ND = Compound Not Detected
NA = Compound Not Analyzed

Notes:
Gray shading indicates exceedance of NJDEP Class II Ground Water Quality Criteria

APPENDIX A

CERTIFICATIONS

Site Remediation Program
UST Site Remedial Investigation Report

A. Facility Name: (former) Building 416

Facility Street Address: Apex Avenue

Municipality: Oceanport County: Fort Monmouth

Block: NA Lot(s): NA Telephone Number: Redacted - Privacy Act

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

Street Address: 173 Riverside Avenue City: Fort 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: 90010-32 (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: _____ UST Cert. No.: 0010042

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

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

State: NJ Zip: 07703 Telephone Number: (732) 532-2577

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

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

SOIL AND GROUNDWATER ANALYTICAL DATA PACKAGE

(QC and raw data not included for brevity)

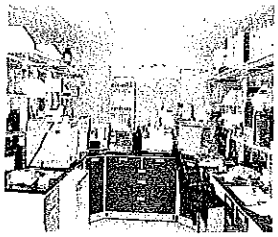
FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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. 416

Bldg. 416

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
416-A, North End	5063901	Soil	13-Dec-05 10:05	12/13/05
416-B, Center	5063902	Soil	13-Dec-05 11:00	12/13/05
416-C, South End	5063903	Soil	13-Dec-05 11:45	12/13/05
416-D, (Duplicate)	5063904	Soil	13-Dec-05 10:05	12/13/05
Trip Blank	5063905	Methanol	13-Dec-05	12/13/05
416-Groundwater	5063906	Aqueous	13-Dec-05 11:55	12/13/05
Trip Blank	5063907	Aqueous	13-Dec-05	12/13/05

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

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

12-30-05
Daniel Wright/Date
Laboratory Director

Table of Contents

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: JOHN McCARTHY
Phone: X
( )DERA ( )OMA (X)Other:________

Project No: 06-34880
Location: (FORMER) BLDG. 416 UST

Comments:

Samplers Name / Company: FRANK ACCORSI /TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VO+10	BN+15				DEPTH(FT)	VOA #	Remarks / Preservation Method
5D0839 01	416-A, NORTH END	12-13-05	1005	SOIL	2	X	*						4369	ICE
02	416-B, CENTER	↓	1100	↓	↓	X	*						4370	↓
03	416-C, SOUTH END	↓	1145	↓	↓	X	*						4371	↓
04	416-D, DUPLICATE	↓	1005	↓	↓	X	*						4372	↓
05	TRIP BLANK	↓	–	MeOH	1		X						4373	↓
06	416-GROUNDWATER	↓	1155	AQ	3		X	X					–	↓
07	TRIP BLANK	↓	–	AQ.	1		X						–	↓

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	12-13-05 1317	J. [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: (X)Standard 3 wks, ( )Rush___Days, ( )ASAP Verbal ____Hrs.

Remarks: * VO+10 ON 25% > 1,000 PPM TPH, ON HIGHEST, MIN. ONE

print legibly

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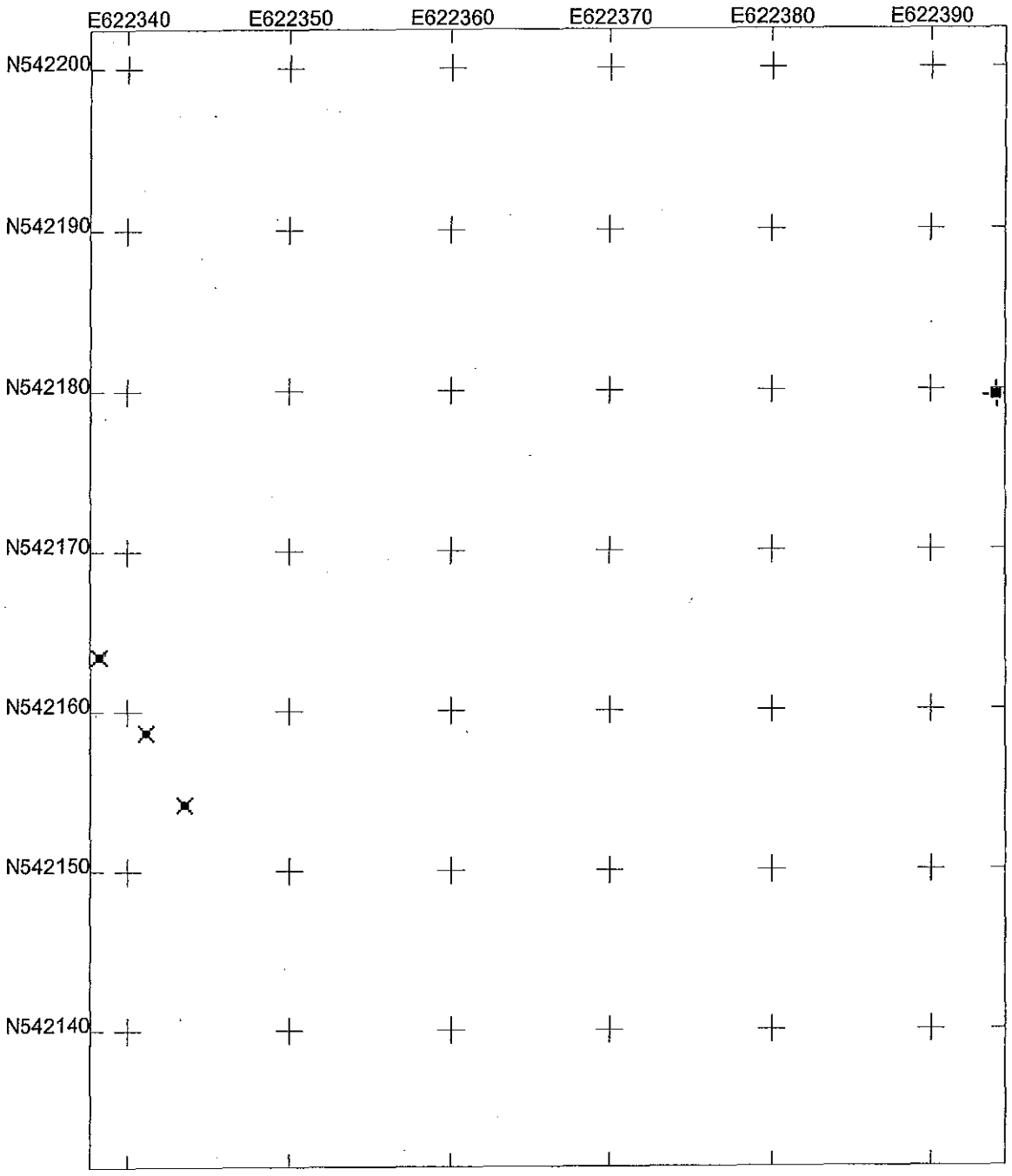

U.S. Army - Ft. Monmouth (former)Bldg. 416 UST Soil Sample GPS Map

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

N

Scale 1:125

0 0.003

Miles

BLDG416.cor
12/20/2005
GPS Pathfinder
Trimble

U.S. ARMY - FT. MONMOUTH, NJ

(former)BLDG. 416 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)
416A NORTH END UST	542163.482	622338.195
416B CENTER UST	542158.69	622341.107
416C SOUTH END UST	542154.214	622343.493

REFERENCE POINT

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
BLDG417 SW CORNER	542179.639	622394.126

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: 50639

Site: UST
Bldg. 416

	Date	Hold Time
Date Sampled	12/13/05	NA
Receipt/Refrigeration	12/13/05	NA
Extractions		
1. BN	12/15/05	7 days
2. TPHC	12/15/05	14 days
Analyses		
1. VOA	12/14,15/05	14 days
2. BN	12/19/05	40 days
3. TPHC	12/16/05	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 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) — no
   a. VOA Fraction 1,1,1-TCE MS/MSD low Naphthalene MS/MSD low, RPD high
   b. B/N Fraction Benzidine MSD low RPD high
   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 NA

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	VB021036.D	Sample Name	MB 14Dec2005
Operator	Skelton	Field ID	MB 14Dec2005
Date Acquired	14 Dec 2005 2:32 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

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 14Dec2005**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: MB 14Dec2005

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021036.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: not dec. Date Analyzed: 12/14/2005

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	**VB021060.D**	Sample Name	**5063907**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Acquired	**15 Dec 2005 6:38 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

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12/29/2005 10:18 AM

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5063907

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021060.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: not dec. Date Analyzed: 12/15/2005

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	**VB021059.D**	Sample Name	**5063906**
Operator	**Skelton**	Field ID	**416-GW**
Date Acquired	**15 Dec 2005 5:57 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: **416-GW**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5063906

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021059.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: not dec. Date Analyzed: 12/15/2005

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	**BNA11411.D**	Sample Name	**MB-121505-01**
Operator	**BPatel**	Misc Info	**MB-121505-01**
Date Acquired	**19-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	**BNA11411.D**	Sample Name	**MB-121505-01**
Operator	**BPatel**	Misc Info	**MB-121505-01**
Date Acquired	**19-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
RL= Reporting Limit. The values between the MDL and RL are considered estimated.
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-121505-01

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: BI.416 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-121505-01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11411.D

Level: (low/med) LOW Date Received: 12/13/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 0 (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	**BNA11414.D**	Sample Name	**5063906**
Operator	**BPatel**	Misc Info	**416-Ground Water**
Date Acquired	**19-Dec-05**	Sample Multiplier	**1.428571**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.61	14.29	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.86	14.29	ug/L	
62-53-3	Aniline			not detected	NLE	3.40	14.29	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.01	14.29	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.46	14.29	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.41	14.29	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.94	14.29	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.37	14.29	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	1.26	14.29	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	1.09	14.29	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.37	14.29	ug/L	
98-95-3	Nitrobenzene			not detected	10	1.23	14.29	ug/L	
78-59-1	Isophorone			not detected	100	1.09	14.29	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.13	14.29	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.27	14.29	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.09	14.29	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.96	14.29	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	1.41	14.29	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.44	14.29	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.31	14.29	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.03	14.29	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.10	14.29	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.11	14.29	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	14.29	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	1.01	14.29	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.69	14.29	ug/L	
83-32-9	Acenaphthene			not detected	400	1.04	14.29	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.99	14.29	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.16	14.29	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.37	14.29	ug/L	
86-73-7	Fluorene			not detected	300	1.01	14.29	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.04	14.29	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.59	14.29	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.89	14.29	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.03	14.29	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.31	14.29	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.36	14.29	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.16	14.29	ug/L	
120-12-7	Anthracene			not detected	2000	1.09	14.29	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.31	14.29	ug/L	
206-44-0	Fluoranthene			not detected	300	1.17	14.29	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA11414.D**	Sample Name	**5063906**
Operator	**BPatel**	Misc Info	**416-Ground Water**
Date Acquired	**19-Dec-05**	Sample Multiplier	**1.428571**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	50	1.40	14.29	ug/L	
129-00-0	Pyrene			not detected	200	1.13	14.29	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.23	14.29	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.17	14.29	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.87	14.29	ug/L	
218-01-9	Chrysene			not detected	20	1.10	14.29	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.83	14.29	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.46	14.29	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.40	14.29	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.31	14.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.01	14.29	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	1.09	14.29	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.09	14.29	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	1.14	14.29	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.

416-Gr. Water

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: Bl.416 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5063906

Sample wt/vol: 700 (g/ml) ML Lab File ID: BNA11414.D

Level: (low/med) LOW Date Received: 12/13/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005

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	**Project # :**	50639
	DPW. SELFM-PW-EV	**Location :**	Bldg.416
	Bldg. 173	**UST Reg. # :**	
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	**Date Received :**	13-Dec-05
Matrix :	Soil	**Date Extracted :**	15-Dec-05
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	16-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)
5063901	416-A	1.00	15.78	78.90	77	402	ND
5063902	416-B	1.00	15.50	83.14	75	388	ND
5063903	416-C	1.00	15.17	84.80	75	389	ND
5063904	416-D	1.00	15.33	82.40	76	396	ND
METHOD BLANK	MB-121505-01	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 O

UST 430B Report

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 430B
Main Post

NJDEP UST Registration No. 0090010-45
NJDEP Closure Approval No. C-93-3897
Spill Case No. 94-7-27-1344

February 1997

SMITH
TECHNOLOGY CORPORATION

SMITH

UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 430B

MAIN POST
NJDEP UST REGISTRATION NO. 0090010-45
NJDEP CLOSURE APPROVAL NO. C-93-3897
SPILL CASE NO. 94-7-27-1344

FEBRUARY 1997

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:

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

SMITH

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EXECUTIVE SUMMARY

UST Closure

On July 26, 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-93-3897 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0090010-45, was located immediately adjacent to Building 430B in the Main Post area of U.S. Army, Fort Monmouth. UST No. 0090010-45 was a 550-gallon No. 2 fuel oil UST. The UST fill port was located directly above the tank. The tank closure was performed by Cleaning Up The Environment Inc. (CUTE).

Site Assessment - Soil

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. 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. Several holes were noted in the UST and evidence of potentially contaminated soils was observed surrounding the tank.

On July 27, 1994, following removal of the UST, approximately 18 cubic yards of potentially contaminated soil was removed from the excavation. Post-excavation soil samples A, B, C, D, E, F, and DUP F were collected from a total of six (6) locations along the sidewalls of the excavation. The samples were collected at a depth of 5.0 feet below ground surface (bgs). Following removal of the UST fuel lines, sample H was collected along the former piping length of the excavation, which was approximately 7 feet in length. The piping sample was collected at a depth of 1.0 foot bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC).

Based on an inspection of the UST, and field screening of subsurface soils the Directorate of Public Works (DPW) concluded that an historical discharge was associated with the UST. On July 27, 1994, a spill was reported to the NJDEP "Hotline" for UST No. 0090010-45 and was assigned Spill Case No. 94-7-27-1344.

Findings - Soil

All post-excavation soil samples collected from the UST excavation and from below piping associated with the former UST at Building 430B 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, B, C, D, E, F, DUP F, and H, contained levels of TPHC ranging in concentration from 43.7 mg/kg to 957.0 mg/kg.

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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 for Site Remediation.*

Site Assessment - Groundwater

In response to the observation of potentially contaminated soil near the shallow water table, one shallow overburden monitoring well (MW-1) was installed at the Building 430B area on August 16, 1995. It was installed approximately 5 feet north of the UST excavation in the assumed downgradient direction. It was screened in the 2.5-to 12.5 foot depth interval, across the water table, which is approximately 4.0 feet below grade surface.

On November 27, 1995, and December 18, 1995, MW-1 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOCs), methyl tertiary butyl ether, tertiary butyl alcohol, and semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation.*

Findings - Groundwater

All groundwater analytical results were either below the detection limit or in compliance with the New Jersey Ground Water Quality Standard (GWQS). No product or sheen was observed in MW-1 on either of the sampling dates.

The depth to the water table was 2.78 feet below grade on November 27, 1995, and 2.49 feet below grade on December 18, 1995.

Discrepancies

The removal contractor collected soil samples using polystyrene scoops instead of NJDEP approved stainless steel scoops. The results of the soil samples were therefore evaluated at 50% of the actual value to compensate for any potential loss due to absorbency of the polystyrene scoop.

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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 exist in the former location of the UST or associated piping.

Based on the analytical results of the groundwater samples collected on November 27, 1995 and December 18, 1995, groundwater quality at the Building 430B UST closure site complies with the New Jersey Groundwater Quality Standard for volatile organic compounds and semivolatile organic compounds.

No further action is proposed in regard to the closure and site assessment of UST No. 0090010-45 at Building 430B.

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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. 0090010-45, was closed at Building 430B at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on July 26, 1994. Refer to site location map on Figure 1. This report presents the results of the Directorate of Public Work's (DPW's) implementation of the UST Decommissioning/Closure Plan submitted to the NJDEP on August 2, 1993. The plan was approved on September 7, 1993 and assigned TMS No. C-93-3897. The UST was a steel 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 0090010-45 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. 0090010-45 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. 0090010-45 are included in Appendices A and B, respectively.

Based on an inspection of the UST, and field screening of subsurface soils the DPW has concluded that an historical discharge was associated with the UST. On July 27, 1994, a spill was reported to the NJDEP "Hotline" for UST No. 0090010-45 and was assigned Spill Case No. 94-7-27-1344.

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.

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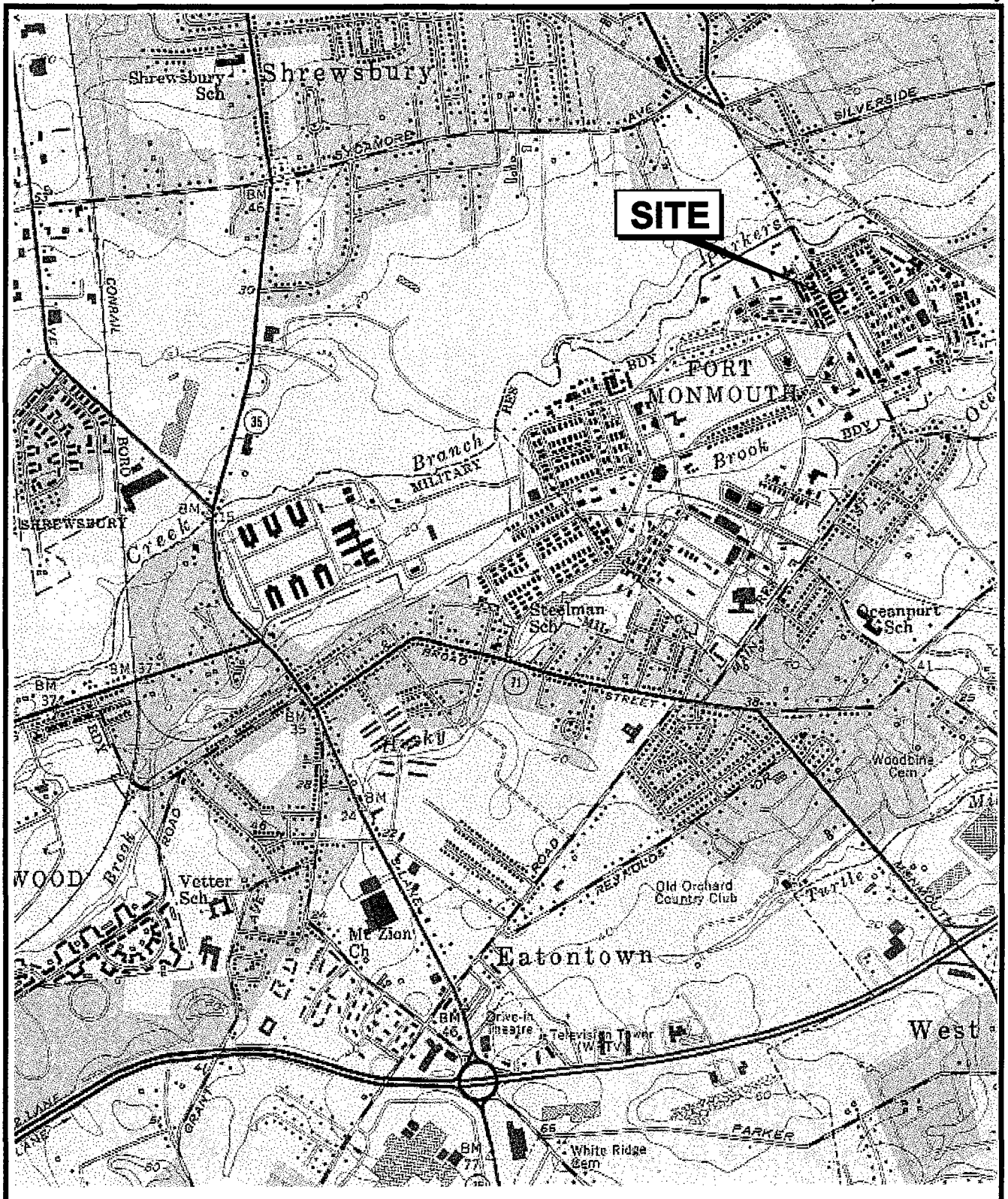
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



N

SCALE
0 2000 FT.

NEW JERSEY

QUADRANGLE LOCATION

Source: Long Branch, New Jersey Quadrangle

Project No. 09-5004-08

Figure 1
Site Location Map
Building 430B

1.2 SITE DESCRIPTION

Building 430B is located in the northeastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 0090010-45 was located north of Building 430B and appurtenant piping ran approximately 7 feet southwest from the excavation to Building 430B. The fill port area was located directly above the tank. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 430B. 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-

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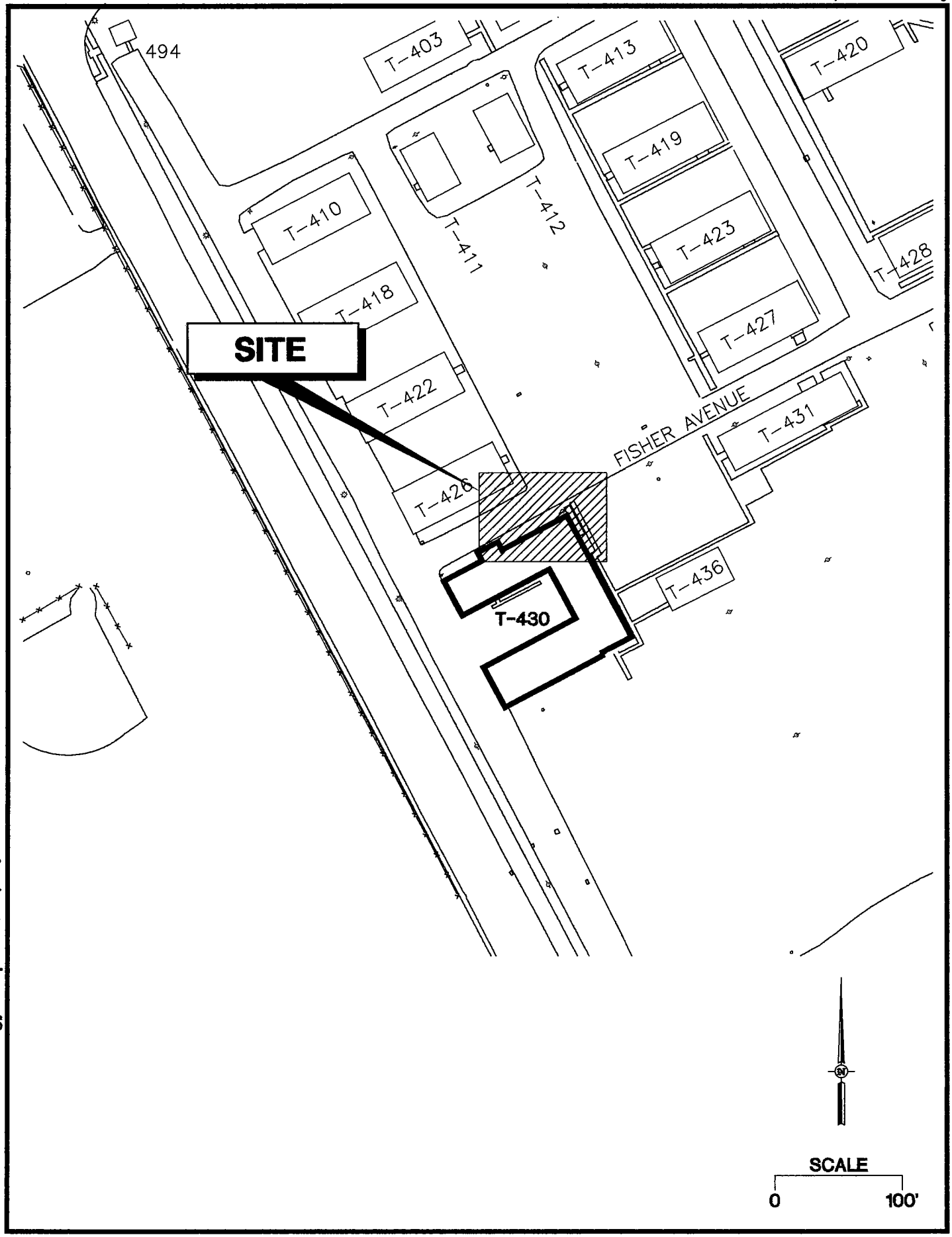

Source: Smith Technology Corporation (114)

Project No. 09-5004-07

Figure 2
Building 430B
Site Map

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 TANK

1.4.1 General Procedures

- All underground obstructions (utilities, etc.) were marked out by the contractor performing the closure prior to excavation activities.
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all Site Assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose 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 550 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix C for the waste manifest (NJA-1603180).

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. Several holes 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. Evidence of contamination was observed.

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 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, approximately 18 cubic yards of potentially contaminated soils were excavated from the UST excavation. Potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were transported to T-80 on Main Post for storage prior to ultimate disposal at Soil Remediation of Philadelphia. Soils that did not exhibit signs of contamination were used as backfill following removal of the UST.

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2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All 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: Cleaning Up The Environment Inc. (CUTE)
  Closure Supervisor: George Bernotsky
  Phone Number: (201)427-2881
  NJDEP Certification No.: 3249

- 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)721-0900
  NJDEP Hazardous Waste Hauler No.: 2265

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA and visual observations to identify potentially contaminated material. Additional soils were removed from the excavation surrounding UST No. 090010-45 until no evidence of contamination remained.

2.3 SOIL SAMPLING

On July 27, 1994, post-excavation soil samples A, B, C, D, E, F, and DUP F were collected from a total of six (6) locations along the sidewalls of the excavation, at a depth of 5.0 feet below ground surface (bgs). Following removal of the UST fuel lines, sample H was collected along the former piping length of the excavation, which was approximately 7 feet in length. The piping sample was collected at a depth of 1.0 foot 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 %, the highest soil contaminant would have been 1,914.0 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 430B area on August 16, 1995. It was installed approximately 5 feet north 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 4.0 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 E.

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

The borehole was tremie-grouted with bentonite-cement grout from the top of the sand pack to 0.5 inches bgs. The well was secured with a water-tight, flush-mounted locking road box. The road box was set in place with concrete, which was placed in the remaining open borehole. The elevation of the well riser was surveyed to the nearest 0.01 feet by a New Jersey-licensed surveyor. The well permit number was marked on the well casing as required.

TABLE 1

PAGE 1 OF 1

SUMMARY OF SAMPLING ACTIVITIES

BUILDING 430B, MAIN POST

FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
Dup F	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H	7/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
MW-1	11/27/95	Aqueous	Groundwater	VOCs, SVOCs	Teflon Bottom Bailer
MW-1	12/18/95	Aqueous	Groundwater	VOCs, SVOCs	Teflon Bottom Bailer

* Note:

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

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

SVOCs Semivolatile Organic Compounds plus 15 tentativley identified compounds (Method 625 / aqueous)

Smith Technology Corporation (Project No. 09-5004-08)

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

2.4.2 Monitoring Well Sampling

On November 27, 1995 and December 18, 1995, MW-1 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOCs), methyl tertiary butyl ether, tertiary butyl alcohol, and semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation.*

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 s dedicated decontaminated Teflon bottom-filled bailer 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 UST and associated piping, post-excavation soil samples were collected from a total of seven (7) locations on July 27, 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 E.

All post-excavation soil samples collected on July 27, 1994, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. Post-excavation soil samples A, B, C, D, E, F, DUP F, and H collected on July 27, 1994 contained levels of TPHC ranging in concentration from 43.7 mg/kg to 957.0 mg/kg.

3.2 GROUNDWATER SAMPLING RESULTS

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

The sample collected from MW-1 on November 27, 1995, contained non-detectable concentrations of contaminants.

The sample collected from MW-1 on December 18, 1995, contained methylene chloride at 0.90 ug/l. No other compounds were detected.

No product or sheen was observed in MW-1 on either of the sampling dates. The depth to the water table was 2.78 feet below grade surface on November 27, 1995 and 2.49 feet below grade surface on December 18, 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.

TABLE 2
PAGE 1 OF 1

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 430B
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/5.0-5.5'	1592.1	7/27/94	8/08/94	Total Solid	--	--	81 %	--	--
				TPHC	6.6	yes	90.1	10,000	--
B/5.0-5.5'	1592.2	7/27/94	8/08/94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	48.4	10,000	--
C/5.0-5.5'	1592.3	7/27/94	8/08/94	Total Solid	--	--	89 %	--	--
				TPHC	6.6	yes	82.0	10,000	--
D/5.0-5.5'	1592.4	7/27/94	8/08/94	Total Solid	--	--	84 %	--	--
				TPHC	6.6	yes	54.9	10,000	--
E/5.0-5.5'	1592.5	7/27/94	8/08/94	Total Solid	--	--	82 %	--	--
				TPHC	6.6	yes	957.0	10,000	--
F/5.0-5.5'	1592.6	7/27/94	8/08/94	Total Solid	--	--	85 %	--	--
				TPHC	6.6	yes	91.1	10,000	--
Dup F/5.0-5.5'	1592.7	7/27/94	8/08/94	Total Solid	--	--	85 %	--	--
				TPHC	6.6	yes	80.6	10,000	--
H/1.0-1.5'	1592.8	7/27/94	8/08/94	Total Solid	--	--	85 %	--	--
				TPHC	6.6	yes	43.7	10,000	--

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

Actual soil TPHC values may be higher than reported due to absorbency by polystyrene scoops. If absorbency resulted in reducing the actual soil TPHC concentration by 50%, the highest soil contaminant would be 1,914.0 mg/kg.

Smith Technology Corporation (Project No. 09-5004-08)

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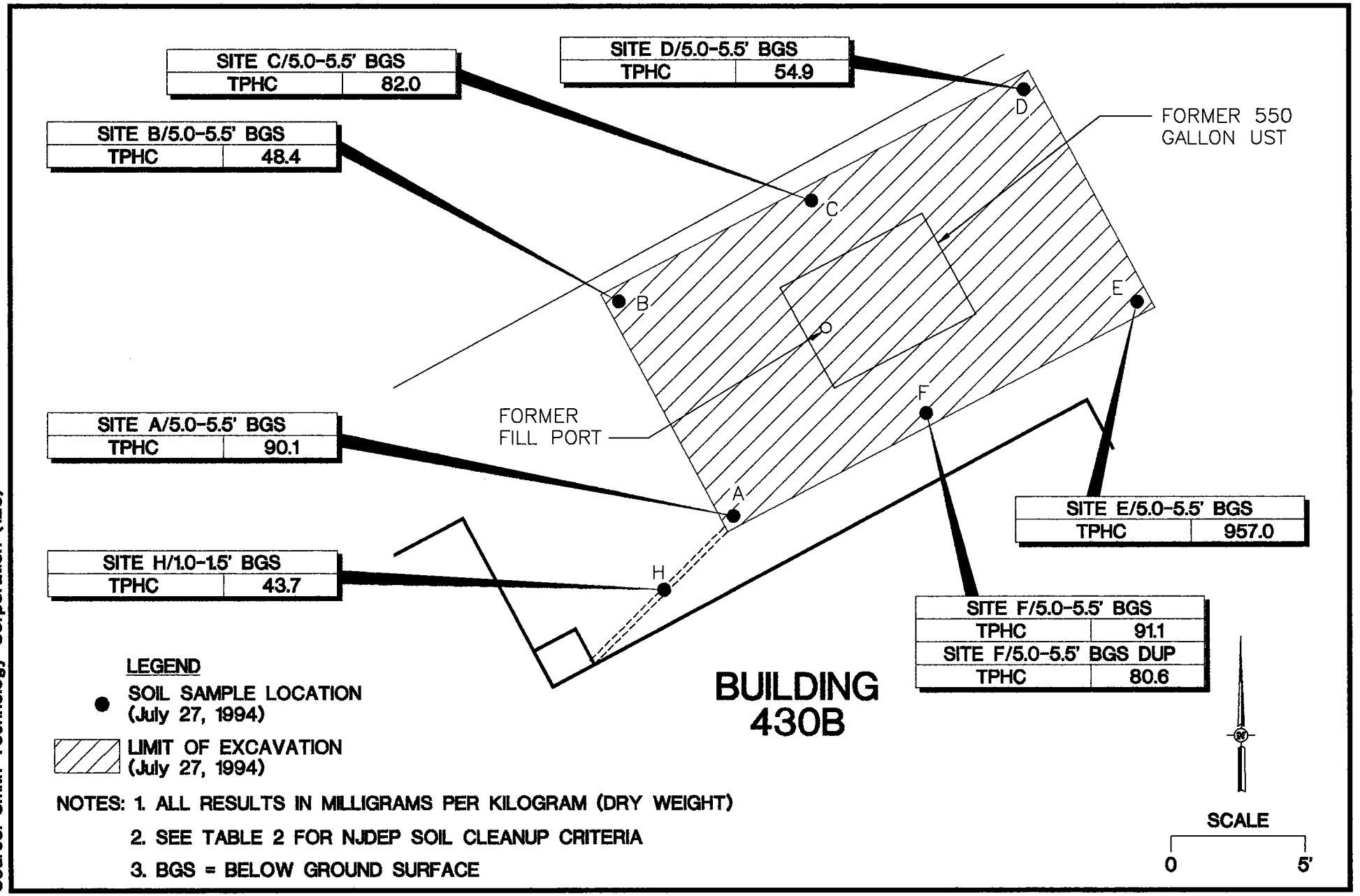
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: Smith Technology Corporation (125)

Project No. 09-5004-08

Figure 3
Building 430B
Soil Sampling Results

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/5/95	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	0.50	--	ND	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	--
			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	--	--

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GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/5/95	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	--
			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	--	--
			Methy-tertiary butyl ether	0.50	--	ND	--	--
			tertiary-Butyl alcohol	2.0	--	ND	--	--
TENTATIVELY IDENTIFIED COMPOUNDS:			Benzene, 1-methyl-2-propyl-	--	--	1 J	--	--
			Unknown	--	--	1 J	--	--
			Unknown	--	--	1 J	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/8/95	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	--
			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	--

TABLE 3

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	11/27/95	12/8/95	Indeno(1,2,3-cd)pyrene	2	--	ND	NA	--
			Dibenzo(a,h)anthracene	3	--	ND	NA	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--
TENTATIVELY IDENTIFIED COMPOUNDS:			NONE FOUND	--	--	--	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/5/95	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	0.70	--	0.70 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	--
			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	--	--

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GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/5/95	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	--
			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	--	--
			Methy-tertiary butyl ether	0.50	--	ND	--	--
			tertiary-Butyl alcohol	2.0	--	ND	--	--
TENTATIVELY IDENTIFIED COMPOUNDS:			Furan, tetraydro-	--	--	3 J	--	--
			Column Bleed	--	--	1 J	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/5/95	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	0.60 B	--	0.60 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	--
			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	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/5/95	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	--
			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	--	--
			Methy-tertiary butyl ether	0.50	--	ND	--	--
			tertiary-Butyl alcohol	2.0	--	ND	--	--
TENTATIVELY IDENTIFIED COMPOUNDS:			Column Bleed	--	--	1 J	--	--
			Furan, tetrahydro-	--	--	3 J	--	--
			Column Bleed	--	--	1 J	--	--
			Unknown Hydrocarbon	--	--	2 J	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	11/27/95	12/8/95	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	--
			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	--

TABLE 3
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GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	11/27/95	12/8/95	Indeno(1,2,3-cd)pyrene	2	--	ND	NA	--
			Dibenzo(a,h)anthracene	3	--	ND	NA	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--
TENTATIVLEY IDENTIFIED COMPOUNDS:			Unkown Hydrocarbon	--	--	5 J		
			Hexadecanoic acid	--	--	2 J		

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/29/95	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	0.90	--	0.90 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	--
			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	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/29/95	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	--
			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	--	--
			Methy-tertiary butyl ether	0.50	--	ND	--	--
			tertiary-Butyl alcohol	2.0	--	ND	--	--
TEMTATIVELY IDENTIFIED COMPOUNDS:			Column Bleed	--	--	2 J		
			Benzene, (1-methylpropyl)-	--	--	1 J		
			Benzene, 1,4-diethyl-	--	--	1 J		
			Benzene, 1,3-dietyhl-	--	--	1 J		
			Benzene, 1-methyl-3-(methy	--	--	2 J		
			Unknown	--	--	1 J		
			Unknown	--	--	1 J		
			Unknown	--	--	3 J		
			Benzene, 1,2,3,5-tetramethyl	--	--	1 J		
			Unknown Hydrocarbon	--	--	1 J		
			Unknown	--	--	1 J		
			Unknown	--	--	2 J		
			Unknown	--	--	2 J		
			Unknown	--	--	1 J		
			Unknown	--	--	1 J		

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/26/95	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	--
			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	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (Continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQC (ug/l)	Exceeds Criteria
MW-1	12/18/95	12/26/95	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	--
TENTATIVELY IDENTIFIED COMPOUNDS:			Naphthalene, 2,7-dimethyl-	--	--	1 J	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/29/95	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	1.4	--	1.4 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	--
			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	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/29/95	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	--
			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	--	--
			Methy-tertiary butyl ether	0.50	--	ND	--	--
			tertiary-Butyl alcohol	2.0	--	ND	--	--
TENTATAIVELY IDENTIFIED COMPOUNDS:			Furan, tetraydro-	--	--	2 J	--	--
			Column Bleed	--	--	2 J	--	--
			Column Bleed	--	--	1 J	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/29/95	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	1.4	--	1.4 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	--
			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	--	--

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/29/95	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	--
			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	--	--
			Methy-tertiary butyl ether	0.50	--	ND	--	--
			tertiary-Butyl alcohol	2.0	--	ND	--	--
TENTATIVELY IDENTIFIED COMPOUNDS:			Column Bleed	--	--	2 J		
			Furan, tetrahydro-	--	--	1 J		

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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	12/18/95	12/26/95	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	--	--
			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	--	--

TABLE 3
PAGE 20 OF 21

GROUNDWATER SAMPLING RESULTS
BUILDING 430B, 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)	GWQC (ug/l)	Exceeds Criteria
Field Blank	12/18/95	12/26/95	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	--
			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	--
TENTATIVELY IDENTIFIED COMPOUNDS:			Unkown Hydrocarbon	--	--	6 J	--	--

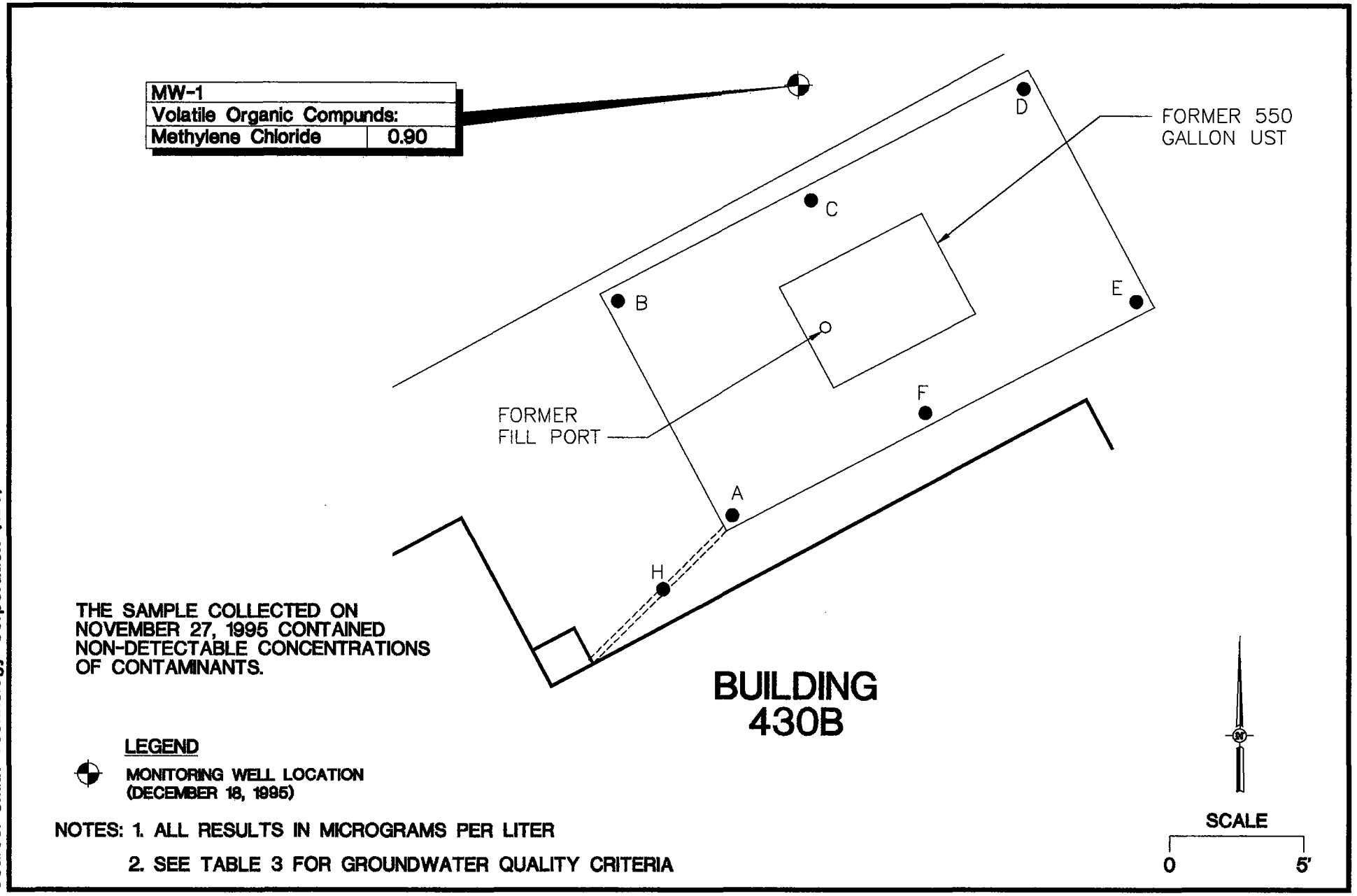
GROUNDWATER SAMPLING RESULTS
BUILDING 430B, MAIN POST
FORT MONMOUTH, NEW JERSEY
DATA QUALIFIERS

--	Not applicable / does not exceed criteria
ND	Indicated compound not detected
NA	Not available for this constituent
J	Indicates detected below sample quantitation limit
B	Indicates also present in blank
GWQC	Groundwater Quality Criteria

Smith Technology Corporation (Project No. 09-5004-08)

SMITH

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



Source: Smith Technology Corporation (130)

Project No. 09-5004-08

Figure 4
Building 430B
Monitoring Well Location

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 430B were below the NJDEP soil cleanup criteria for total organic contaminants.

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

Based on the analytical results of the groundwater samples collected on November 27, 1995 and December 18, 1995, groundwater quality at the Building 430B UST closure site complies with the New Jersey Groundwater Quality Standard for VOCs and SVOCs.

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

No further action is proposed in regard to the closure and site assessment of UST No. 0090010-45 at Building 430B.

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 #	UST #
C-93-3897	0090010

US Army
BLDG. 430
Ft. Monmouth, NJ

Monmouth

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

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

Fred D'Amore

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

SMITH

APPENDIX B

CERTIFICATIONS

UNDERGROUND STORAGE TANK (UST) CLOSURE CERTIFICATION

BUILDING NO. 430

NJDEP UST REGISTRATION NO. 90010-45

DATE TANK REMOVED 7/26/94

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) George Bernotsky

SIGNATURE [signature]

NJDEP UST CLOSURE CERTIFICATE NO. 0003249

COMPANY PERFORMING TANK DECOMMISSIONING CUTE Inc

NJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128

DATE OF SUBMITTAL 8/16/94

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 028
Trenton, NJ 08625-0028
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
Commissioner

Karl J. Delane
Directo

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_____

0090010-45
FACILITY REGISTRATION #

Bldg. 430B

I. FACILITY NAME AND ADDRESS

US Army Fort Monmouth, New Jersey
Directorate of Public Works, 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. 94-7-27-1344
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) #2 fuel oil

C. Have any vapor hazards been mitigated? ___Yes ___No X N/A

III. DECOMMISSIONING OF TANK SYSTEMS Closure Approval No. C-93-3897

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

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

the horizontal or vertical
sideration has been given
f contaminant migration).
f _____feet.

f path of the plume(s) (as
_____feet from the source.

the potential path of the
_____feet deep and

X N/A

elevations for each well.

r values at the property

han MCLs.

has been denied

C. 7:14B-8.3(b) &9.5(a)3]

ned in N.J.A.C.7:14B-1.6)
in N.J.A.C. 7:14B-8.3(a) &

nent is true, accurate,
.C. 7:14B-8 and 9.1
curate, or incomplete

_____

_____

02266

_____

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

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. 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. 957.0 ppm TPHC
   4. N/A ppb _____ (for non-petroleum substance)

   (Refer to 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 As pertains to this site
   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 It did at one tim but not after removal.

I. 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:

   (Refer to Table 3 for other parameters)

   1. ND ppb total BTEX, 0.90 ppb total non-targeted VOC
   2. ND ppb total B/N, ND ppb total non-targeted B/N
   3. ND ppb total MTBE, ND 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 X No ___ N/A

      Well search is currently on file at Env. Office.

   2. The number of these wells identified is 0.

D. Proximity of wells and contaminant plume N/A

1. The shallowest depth of any well noted in the well search which may be in the horizontal or verti potential path(s) of the contaminant plume(s) is _____ feet below grade (consideration has been giv for the effects of pumping, subsurface structures, etc. on the direction(s) of contaminant migratio 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) described in D1 above) is _____ feet below grade. This well is located _____ feet from the sou

3. The closest horizontal distance of a private, commercial or municipal well in the potential path of plume (as determined in D1) is _____ feet from the source. This well is _____ feet deep screening begins at a depth of _____ 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 wel ___ Yes ___ No X N/A

G. Delineation of contamination N/A

1. The ground water contaminants have been delineated to MCLs or lower values at the prop 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

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C.7:14E responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:14B-8.3 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, accu and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-8 an am aware that there are significant penalties for submitting false, inaccurate, or incom information, including fines and/or imprisonment."

NAME (Print or Type) Dinkerrai M. Desai SIGNATURE _____

COMPANY NAME US Army Fort Monmouth DATE _____
(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) See Appendix B 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 US 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 _____

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 9-30-93

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJ3210020517 / 05180
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address: MainPost c/o USArmy Communications Electronics Cmd James Shirghio Blg 2504 Att. SELFM-DL-EMSMS Fort Monmouth, NJ 07703
4. Generator's Phone (908) 532-6223
A. State Manifest Document Number: NJA 1603180
B. State Generator's ID: MainPost
5. Transporter 1 Company Name: Freehold Cartage Inc
6. US EPA ID Number: NJD054126124
C. State Trans. ID: NJDEP 12851
D. Transporter's Phone (908) 462-1001
7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Trans. ID
F. Transporter's Phone ( )
9. Designated Facility Name and Site Address: Lionetti Oil Recovery Co Inc Runyon + Cheesequake R.D. Old Bridge, NJ 08857
10. US EPA ID Number: NJD084044066
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.	Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT	05550	G	X727
b.	Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT	05597	G	X727
c.	Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT	04167	G	X727
d.	Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	X	001	TT			

J. Additional Descriptions for Materials Listed Above
a. oil 60% water 40% LT
b. oil 60% water 40% LT
c. oil 60% water 40% L.T
d.

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

15. Special Handling Instructions and Additional Information
Not EPA Regulated - NJ Hazardous
24hr Emg ID 427-2881
DEC # 53404
a) NJDEPE 0090010-45
b) NJDEPE 0090010-54
c) NJDEPE 0090010-71

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

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

Printed/Typed Name: Joseph M. Fallon Signature: Joseph M Fallon Month Day Year: 07 13 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: PAULO R. MEDEIROS Signature: [signature] Month Day Year: 07 13 94

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

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Signature Month Day Year

NJA 1603180

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

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

1 — TSD MAIL TO - TSD'S STATE

SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

Bldg [illegible]
411 - UST-009001008
491 - 009001071
430 - 009001045
1426 - No UST 009001013
Fort Monmouth
Eatontown, NJ

MAZZA & SONS, INC.

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

NO. _____

DATE 1 Aug 94

Customer's Name Cute Inc

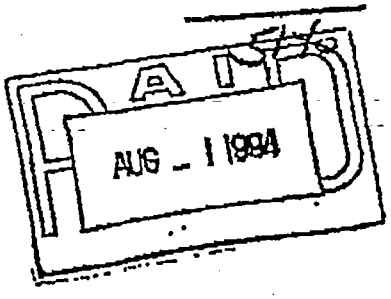
Address _____

Make of Autos

Tires
Tank
Price

43520 LB S

38380 LB S



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

Weigher _____ Customer Don Ellis

SMITH

APPENDIX E

MONITORING WELL PERMIT AND CONSTRUCTION LOG

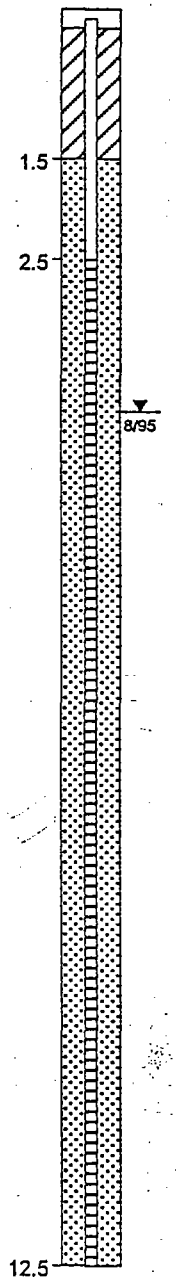
U.S. ARMY
FORT MONMOUTH
SELFM-PW-EV

LOG OF BORING 430-MW1

Produced for Charles Appleby

Project Name	: BLDG 430	Completion Date	: 8/16/95
NJDEP Case #	: 94-07-27-1344	Northing	: N 541935.340
Logged By	: Shore Drilling	Easting	: E 2176220.538
Start Date	: 8/16/95	Driller	: R. Barnes

29-33756
ELEV: 10.50



Depth In Feet	DESCRIPTION	GRAPHIC	USCS	Samples	Blows/Ft	TPHC
0 – 1.5	Gray-black gravel; Dry road base		14	1	7	
1.5 – 4	Brown and green layers of green clay and brown sand, 1/4 to 1" layers moist		SC	2	6	
4 – 6	Brown coarse fine sand, small coarse fine gravel, wet at 5'.5"		SP	3	16	
6 – 8	Green medium fine sand, silty clay, wet		SM	4	6	
8 – 10	Brown coarse-fine sand, gravel, wet		SM	5	5	
10 – 12	Green medium-fine sand, silty clay, wet		SM	6	8	
12 – 14	Brown coarse-fine sand, small coarse		SW	7	8	

Well Construction Information

Well Construction

Date Completed	: 8/16/95
Hole Diameter	: 8 in
Drill Method	: HSA
Company Rep	: R. Barnes

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

Well Screen

Material	: PVC
Diameter	: 4 in
Cap	:

NOTES

Well # 1 is 430 MW-1
Flushmount
Water level 4'

3-20-199... c:\mtech3\1\mwells\geo\430mw1.ge3

SMITH

APPENDIX F

SOIL ANALYTICAL DATA PACKAGE

(QC and raw data not included for brevity)

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

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

Lab. ID #: 1592.1-.8
Sample Rec'd: 07/27/94
Analysis Start: 08/08/94
Analysis Comp: 08/08/94

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

NJDEPE UST Reg.#:
Closure #:
DICAR #: 94-7-27-1344-00
Location #: Bldg. 430

Lab ID.	Description		%Solid	Result (mg/Kg)	MDL
1592.1	Site A, SE	OVA= 9.	81	90.1	6.6
1592.2	Site B, NW	OVA= 2.	86	48.4	6.6
1592.3	Site C, North	OVA= ND	89	82.0	6.6
1592.4	Site D, NE	OVA= ND	84	54.9	6.6
1592.5	Site E, SE	OVA= ND	82	957.	6.6
1592.6	Site F, South	OVA= 3.	85	91.1	6.6
1592.7	Site G, F dup	OVA= ND	85	80.6	6.6
1592.8	Site H, PIPE	OVA= ND	85	43.7	6.6
M. Bl.	Method Blank		100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
Batch dup= 101% Batch sp= 100% Batch spd= 104% 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-PW-EV
Bldg. 167
Ft. Monmouth, NJ 07703

Lab. ID #: 1592.1-.8
Sample Rec'd: 07/27/94
Analysis Start: 08/08/94
Analysis Comp: 08/08/94

Analysis: Munsel

Lab ID#	Soil Color
1592.1	2.5Y 3/2 Very Dark Grayish Brown
1592.2	2.5Y 2.5/1 Black
1592.3	5Y 3/2 Dark Olive Gray
1592.4	5Y 4/4 Olive
1592.5	5Y 4/4 Olive
1592.6	5Y 5/3 Olive
1592.7	5Y 4/3 Olive
1592.8	5Y 3/2 Dark Olive Gray

Brian K. McKee
Laboratory Director

U.S. ARMY FORT MONMOUTH

P.O. #:

Chain of Custody

Project #:	Sampler:	Date / Time	Analysis Parameters	Start:
Customer: DICAH 94-7-27-1344-00 Dimen Desai	Site Name: BLDG 430	7/27 12-10	TPHC; Volatile Organics; OVA level	Finish:
Phone:				Preservation Method

Lab Sample Number	Date	Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles							OVA level	Remarks
1592.1	7/27	11-30	Site A SE	Soil	1							9	
.2	"	11-35	Site B NW	"	1							2	
.3	"	11-41	Site C North	"	1							ND	
.4	"	11-45	Site D NG	"	1							ND	
.5	"	11-49	Site E SE	"	1							ND	
.6	"	11-53	Site F South	"	1							3	OVA Calibrated
.7	"	11-55	Site G (DUP)	"	1							ND	7-27-94 By
.8	"	1201	Site H (pipe)	"	1							ND	D. Desai
	"				1								95 ppm CH4 + Ø Air
													Re

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

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
[signature]	7/27 14-00	[signature]	7-27-94 1400

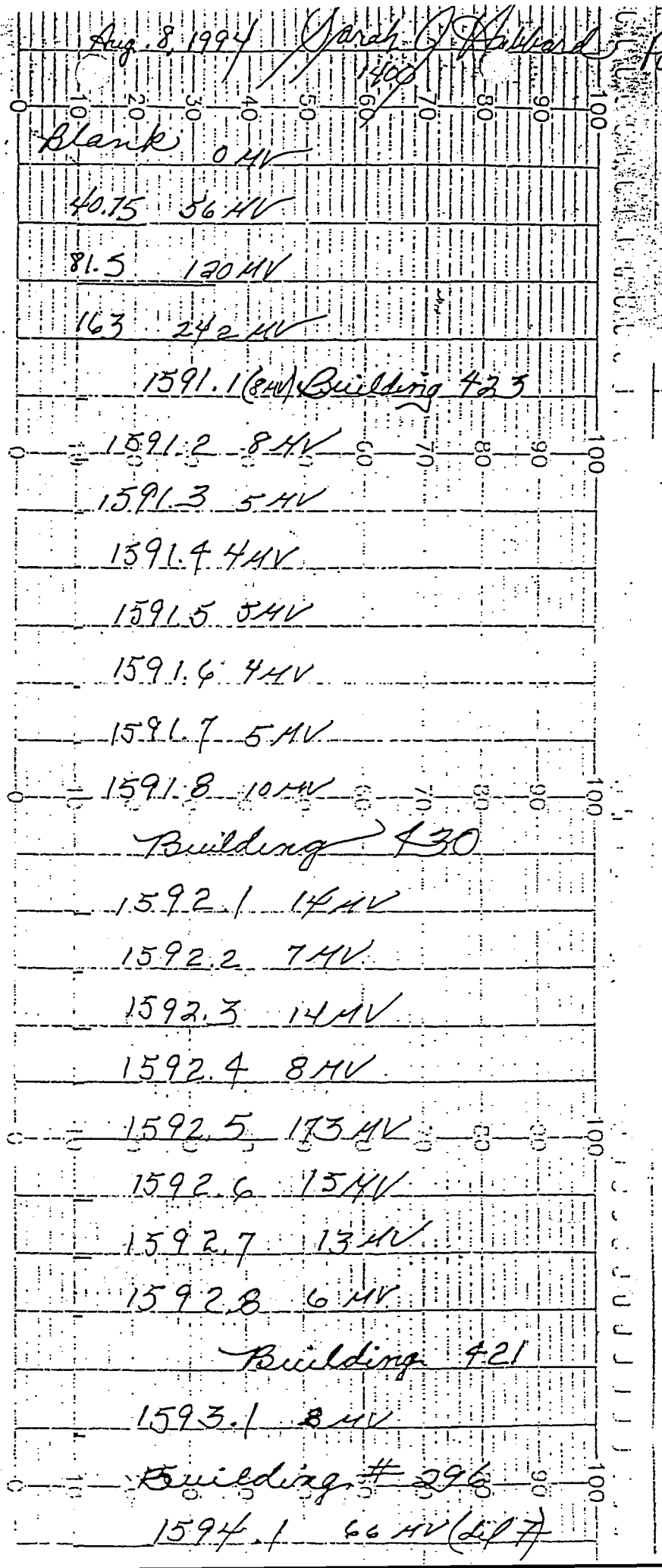
Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody.

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

Enviornmental Laboratory

Certification Number 13461

Aug. 8, 1994 / Sarah C. Howard / Page 1 of 2



1591.3 10 HV

Building 430

1592.1 14 HV

1592.2 7 HV

1592.3 14 HV

1592.4 8 HV

1592.5 173 HV

1592.6 15 HV

1592.7 13 HV

1592.8 6 HV

Building 421

1593.1 8 HV

Building # 296

1594.1 66 HV (lift)

Building 287

1596.1 36 (lift)

Building 491

1595.1 115 HV

1595.1 Dup 116 HV

1595.1 (Spk) 221

1595.1 Spk Dup 225

1595.2 65 HV

1595.3 9 HV

1595.4 13 HV

1595.5 21 HV

1595.6 23 HV

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 #1592

Brian K. McKee
Laboratory Manager

SMITH

APPENDIX G

GROUNDWATER ANALYTICAL DATA PACKAGE

(QC and raw data not included for brevity)

Bldg. 430 MW Anal. 001
11/27/95

EMSL ANALYTICAL, INC.

Asbestos - Lead - Environmental - Materials

New Jersey

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

3 Cooper Street
Westmont, NJ 08108
(609) 858-4800

1056 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

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

Florida

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

Georgia

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

Michigan

212 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

ANALYTICAL DATA REPORT
FOR
E-SYSTEMS
P.O. Box 360
Fort Monmouth, NJ 07703

PROJECT : **Bldg. 430, MW Sampling**

EMSL Project: # 95118847

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection	Date Received
1983.1, MW1-2933756	**95-54558**	**Aqueous**	**11/27/95 @ 1214**	**11/27/95**
1980.2, Trip Blank	**95-54553**	**Aqueous**	**11/27/95 @ 0645**	**11/27/95**
1980.3, Field Blank	**95-54554**	**Aqueous**	**11/27/95 @ 1415**	**11/27/95**

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	1-18-96

EMSL

TABLE OF CONTENTS

SAMPLE DATA SUMMARY PACKAGE

EMSL

Date of Report: 12/21/95
Project Number: 95118844
Lab ID: 95-0054553
Date Collected: 11/27/95 06:45
Collected By: Client
Date Received: 11/27/95 17:30

Attention: Barbara O'Toole
E-Systems
P.O. Box 360
Fort Monmouth NJ 07703

Client Project: MW Sampling,Bldg.482

Client 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
Xylenes	see attached	ug/l

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1980.2 Trip Blank

005

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

Project No.: FT. MONMOUTH NJ Bldg#: 482 NJDEP MW#: TB

Matrix: (soil/water) WATER Lab Sample ID: 9554553V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0475.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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	.50	U
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	.70	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1986.2 Trip Blank 006

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

Project No.: FT. MONMOUTH NJ Bldg#: 482 NJDEP MW#: TB

Matrix: (soil/water) WATER Lab Sample ID: 9554553V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0475.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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
1634-04-4	Methy-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FMETL# 1980.2 Trip Blank 007

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

Project No. FT. MONMOUTH NJ Bldg: 482 NJDEP MW#: TB Group:

Matrix: (soil/water) WATER Lab Sample ID: 9554553V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0475.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 109-99-9	Furan, tetrahydro-	10.74	3	J
2.	Column Bleed	23.11	1	J
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EMSL

Date of Report: 12/21/95
Project Number: 95118844
Lab ID: 95-0054554
Date Collected: 11/27/95 14:15
Collected By: Client
Date Received: 11/27/95 17:30

Attention: Barbara O'Toole
E-Systems
P.O. Box 360
Fort Monmouth NJ 07703

Client Project: MW Sampling,Bldg.482

Client Designation: Field Blank

	Conc.	Unit
ORGANIC		
Semi-Volatiles		
BN by 625 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
Xylenes	see attached	ug/l

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1980-3
9554554B
Field Blank

003

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: Bldg 482 Location: FB Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9554554B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9312.D

Level: (low/med) _____ Date Received: 11/27/95

% Moisture: 0 decanted: (Y/N): N Date Extracted: 12/4/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/8/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 010

19960.3
9554554B
Field Blank

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: BHG482 Location: FB Group:

Matrix: (soil/water) WATER Lab Sample ID: 9554554B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9312.D

Level: (low/med) Date Received: 11/27/95

% Moisture: 0 decanted: (Y/N): N Date Extracted: 12/4/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/8/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
1980.3
9554554B
Field Blank

011

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Bldg 48C Location: FB Group:

Matrix: (soil/water) WATER Lab Sample ID: 9554554B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B9312.D

Level: (low/med) Date Received: 11/27/95

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/4/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/8/95

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 Hydrocarbon	8.14	5	J
2. 57-10-3	Hexadecanoic acid	23.52	2	J
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VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1980.3 Field Blank 012

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

Project No.: FT. MONMOUTH NJ Bldg#: 482 NJDEP MW#: FB

Matrix: (soil/water) WATER Lab Sample ID: 9554554V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0476.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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	.50	U
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	.60	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1980.3 Field Blank

013

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

Project No.: FT. MONMOUTH NJ Bldg#: 482 NJDEP MW#: FB

Matrix: (soil/water) WATER Lab Sample ID: 9554554V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0476.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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
1634-04-4	Methy-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

IE

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FMETL# 1980.3 Field Blank 014

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

Project No. FT. MONMOUTH NJ Bldg: 482 NJDEP MW#: FB Group:

Matrix: (soil/water) WATER Lab Sample ID: 9554554V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0476.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Column Bleed	10.19	1	J
2. 109-99-9	Furan, tetrahydro-	10.75	3	J
3.	Column Bleed	19.71	1	J
4.	Unknown Hydrocarbon	23.10	2	J
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EMSL

Date of Report: 12/14/95
Project Number: 95118847
Lab ID: 95-0054558
Date Collected: 11/27/95 12:14
Collected By: Client
Date Received: 11/27/95 17:30

Attention: Barbara O'Toole
E-Systems
P.O. Box 360
Fort Monmouth NJ 07703

Client Project: MW Sampling Bldg.430

Client Designation: MW1-2933756

	Conc.	Unit
ORGANIC		
Semi-Volatiles		
BN by 625 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
Xylenes	see attached	ug/l

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

1983.1
9554558B
MW1-2933756

016

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: BKG430 Location: MW#1 Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9554558B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9316.D

Level: (low/med) _____ Date Received: 11/27/95

% Moisture: 0 decanted: (Y/N): N Date Extracted: 12/4/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/8/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

19831
9554558B
MW1-2933756

017

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: Bldg 430 Location: mw #1 Group: _____

Matrix: (soil/water) WATER Lab Sample ID: 9554558B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9316.D

Level: (low/med) _____ Date Received: 11/27/95

% Moisture: 0 decanted: (Y/N): N Date Extracted: 12/4/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/8/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
19831
9554558B
MW1-2933756

018

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Bldg 430 Location: MW#1 Group:

Matrix: (soil/water) WATER Lab Sample ID: 9554558B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B9316.D

Level: (low/med) Date Received: 11/27/95

% Moisture: 0 decanted: (Y/N) N Date Extracted: 12/4/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/8/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS Number	Compound Name	RT	Est. Conc	Q
1.	NONE FOUND			
2.				
3.				
4.				
5.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1983.1 NWI-2933756 019

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

Project No.: FT. MONMOUTH NJ Bldg#: 430 NJDEP MW#: 1

Matrix: (soil/water) WATER Lab Sample ID: 9554558V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0484.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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	.50	U
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	.50	U
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 1983.1

MW1-2933756

02(

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

Project No.: FT. MONMOUTH NJ Bldg#: 430 NJDEP MW#: 1

Matrix: (soil/water) WATER Lab Sample ID: 9554558V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0484.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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

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

CAS No.	Compound		Q
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
1634-04-4	Methy-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FMETL# 1983.1 MW1-2933756 021

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

Project No. FT. MONMOUTH NJ Bldg: 430 NJDEP MW#: 1 Group:

Matrix: (soil/water) WATER Lab Sample ID: 9554558V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0484.D

Level: (low/med) LOW Date Received: 11/27/95

% Moisture: not dec. NA Date Analyzed: 12/5/95

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 1074-17-5	Benzene, 1-methyl-2-propyl-	21.19	1	J
2.	Unknown	23.10	1	J
3.	Unknown	23.12	1	J
4.				
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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 USEPA CLP.	X
12	Non-Conformance Summary	X

Laboratory Manager or Environmental Consultant's Signature

1-18-96
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.
29-30	8.	The reference for the method used (e.g., EPA Method 625, 40 CFR Part 136).
1	9.	The signature of the person completing the report form.
1	10.	The dates the laboratory report form was prepared, as well as the dates the sample were collected, submitted and analyzed.
31	11.	A list of all parameters (constituents and conditions) for which the analyses were performed.
3-21	12.	Sample results and corresponding units for each parameter.

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CHAIN OF CUSTODY

EMSL ANALYTICAL INC.
3 Cooper Street
Westmont, New Jersey 08108
609-858-9573
609-858-4571 (Fax)

Chain of Custody / Analysis Request Form

EMSL Project # 95118847
PO # IJO#95-0091/SAI

Custody and Sample Information - Print ALL information. Put N/A in blanks not applicable. Press firmly.

1. Report to:	2. Bill to:	Project:
US ARMY FT.MONMOUTH Charles Appleby SELFM-PW-EV Env.Lab.Cert#13461		Bldg 430 MW SAMPLING Tel #: 908-532-6224 FAX #:

3. Sampled by (Signature)	4. # of Samples in Shipment	5. Date of Sample Shipment	6. Date Results Needed
Baxter/Palilonis	ONE	11-27-95	

Indicate Analysis Requested: VOA524 + Library (Includ xylene, MTBE, TBA); BN625+15

Item No.	Sample Number	Station Location / Sample ID	COMP	GRAB	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: Date	Time	Number of Containers 7	VOA524 + Library	(Includ xylene, MTBE, TBA)	BN625+15								Laboratory Number
1	1983.1	MW1-2933756		X	X					X			X	X		11/27	1214	7	X		X								54558
2	1980.2	Trip Blank		X	X					X			X			11/27	0645	3	X										·1553
3	1980.3	Field Blank		X	X					X			X	X		11/27	1415	6	X		X								54554
4																													
5																													
6																													
7																													
8																													
9																													

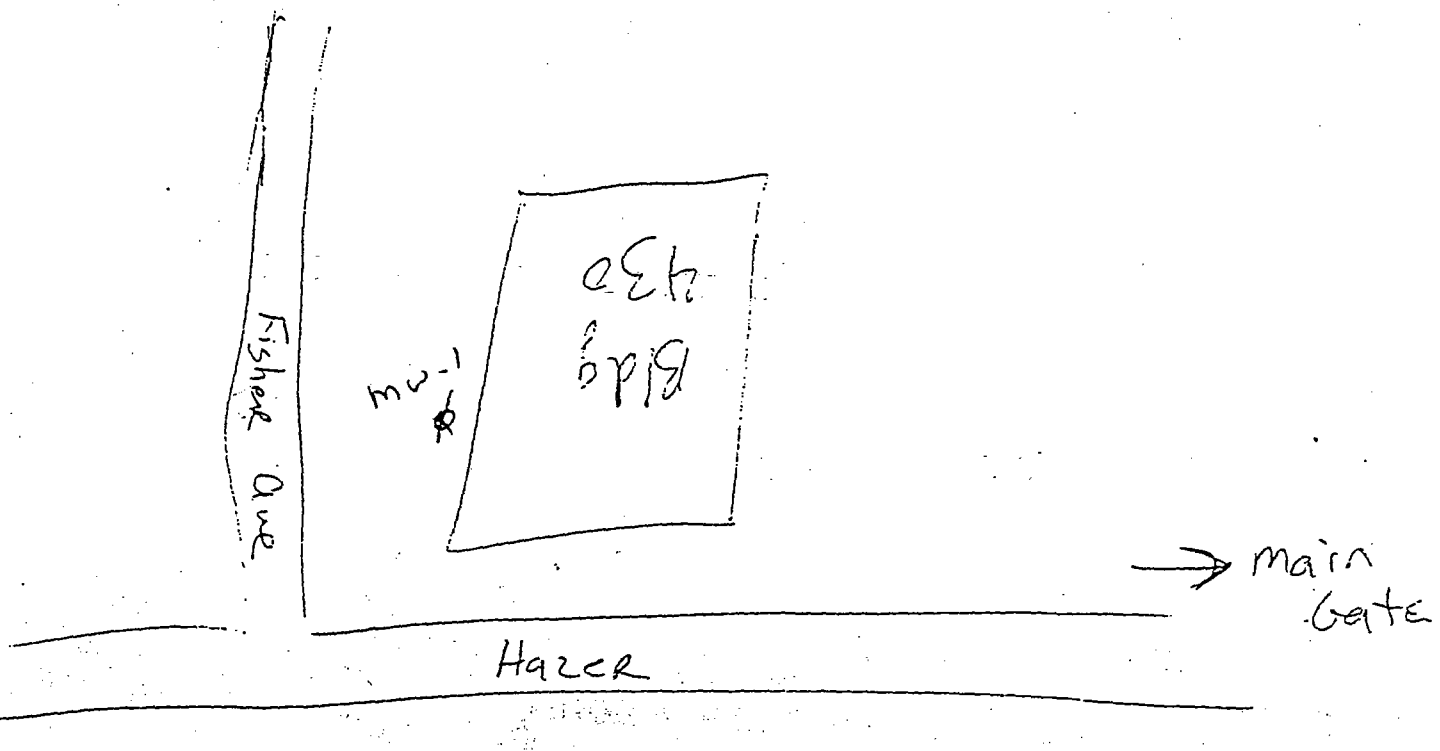
Released by (Signature)	Date/Time Released	Delivery Method	Received by (Signature)	Company/Agency Affiliation	Date/Time Received	Condition Noted
S. Hubbard	11/27/95 / 1515	Courier	D Palilonis	EMSL	11/27/95	1515
	/		[signature]	EMSL	11/27 / 17:30	
	/				/	

Please indicate turnaround time: standard 10D 5D 72HR 48HR 24HR (Must call for quick turn)

Comments: Page 1 of 1
* A drawing depicting sample location on reverse side.

Please indicate reporting requirements:
1) Results only 2) Results & QC 3) Reduced Deliverables (circled)

025


Fisher Ave
Bldg 432
main Gate
Hazer

INTERNAL CHAIN OF CUSTODY(ORGANICS)

SAMPLE No(S).	ANALYSIS	DATE ANALYZED	NAME (PRINT)	NAME (SIGNATURE)
55592	TCLP BNA	12/10/95	S. VanEtta	
9555533-5	BNA SOIL	12/8/95	S. VanEtta	
9554749	VOA TCL	12/04/95	M. CIAMPI	
95 54731	VOA + QC	12/01/95	M. CIAMPI	
95 54732	TCL VOA + LS + QC + SPECIAL	12/02/95	M. CIAMPI	
95 55592	GASOLINE	12/11/95	M. CIAMPI	
95 54733	BN +	12/1/95	S. VanEtta	
7451-8	BN +	12/8/95	S. VanEtta	
54779	BNA	12/8/95	S. VanEtta	
54985	BN +	12/8/95	S. VanEtta	
54781,245	TCL BNA +	12/11/95	S. VanEtta	
95549991,92	VOA + CS	12/05/95	M. CIAMPI	
95 56167	VOA	12/13/95	M. CIAMPI	
54992	BNT	12/12/95	S. VanEtta	
9556244	524.2	12/11/95	S. K	
9554974-79	624	12/7/95	S K	
9555614	624	12/7/95	S. Kessler	
9554985	624	12/7/95	S Kessler	
9554779	624	12/6/95	S. Kessler	
9555117-23	624	12/7/95	S. Kessler	
9554891-98	624	12/6-12/7/95	S Kessler	
9555085-90	GASOLINE	12/13/95	M. CIAMPI	

EMSL ANALYTICAL, INC.

INTERNAL CHAIN OF CUSTODY

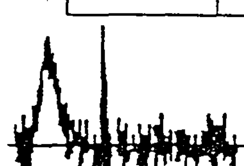
EMSL LAB ID NO. 54558

PROJECT NO. 95118847

SAMPLE/CONTAINERS

PARAMETERS VOA, B/N

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
12/4/95		B/N extraction	Charles Bartolone	Charles Bartolone



U.S. ARMY FORT MONMOUTH
MONITORING WELL SAMPLING DATASHEET

IJO#95-0091
BLDG.#: 430 MW#: 1 NJDEPE WELL ID # 2933756
LABORATORY: EMSL Analytical Services, NJDEP CERT # 04653
SAMPLING CONTRACTOR: EMSL Analytical Services Inc.
SAMPLERS NAMES: Tom Baxter, Susan Palilonis 1146

DATE: 11-27-95
WEATHER CONDITIONS: Cool, Sunny

ELEVATION OF CASING SURVEY MARK: ____.____FT
TOTAL DEPTH FROM TOP OF SURVEYORS MARK: 12.13 FT
DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____FT
LENGTH OF SCREENED SECTION: ____.____FT
DEPTH TO H2O PRIOR TO PURGING AND SAMPLING: 2.78 FT
ELEVATION OF GW PRIOR TO PURGING: ____.____FT
THICKNESS OF LNAPL PRIOR TO PURGING: 0.0 FT

PID/Hnu READING IMMEDIATELY AFTER CAP REMOVAL: 2.5 PPM
DEPTH OF WELL: ____.____FT HEIGHT OF WATER: ____.____FT
GAL OF H2O TO BE EVACUATED (EST) 18 GAL
(9.35 X 0.65 X 3 = 18.23)
PURGE METHOD: (FLOW OF <0.5 GPM TO >5.0 GPM) Pump
PURGE RATE (0.5 GPM) : 2 GPM

PURGE START TIME: 1155
pH: 5.13 s.u. TEMP: 14.3 Deg.C
Dissolved Oxygen: 2.0 PPM Specific Conductivity: 115 us/cm

PURGE END TIME: 1210
pH: 5.13 s.u. TEMP: 14.0 Deg.C
Dissolved Oxygen: 2.1 PPM Specific Conductivity: 120 us/cm

DEPTH TO H2O AFTER PURGING AND BEFORE SAMPLING: 3.71 FT 1214
SAMPLING METHOD: DEDICATED, DECONTAMINATED (IAW NJDEP FSPM 1992) TEFLON (R) BAILER
TOTAL VOLUME PURGED : 18 GAL.
pH: 5.10 s.u. TEMP: 13.9 Deg.C
Dissolved Oxygen: 2.2 PPM Specific Conductivity: 121 us/cm

COMMENTS: _____

EMSL

METHODOLOGY SUMMARY

METHODOLOGY SUMMARY

EPA Method 524.2 - Aqueous

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

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

Method detection limits are as stated.

Semivolatiles by GC/MS - Aqueous

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

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

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

Method detection limits are as stated.

EMSL

LABORATORY CHRONICLE

Lab ID: 95-54558, 95-54553, 95-54554 Client: E-Systems

	I DATE	II	Hold Time
Date Sampled	11/27/95		
Receipt/Refrigeration	11/27/95		
Extractions			
1. Semivolatile Organics	**12/4/95**		**7 days**
Analyses			
1. Volatile Organics	**12/5/95**		**14 days**
2. Semivolatile Organics	**12/8/95**		**40 days**

QC Supervisor
Review & Approval

(Signature) Peter B. Panton
(Printed Name) Peter B. Panton
(Date) 01/18/96

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 0.5 - 1.2 ppb.**		
	b. B/N Fraction **46360 MS/MSD: Di-n-butylphthalate 5 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		
	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:		
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 Farrar Date: 1-18-96

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

LABORATORY AUTHENTICATION STATEMENT

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

Paul Jones

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

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 430B
Main Post

NJDEP UST Registration No. 0090010-45
NJDEP Closure Approval No. C-93-3897
Spill Case No. 94-7-27-1344

Volume 2 of 2
Appendix G (Continued)

February 1997

SMITH
TECHNOLOGY CORPORATION

SMITH

APPENDIX G

GROUNDWATER ANALYTICAL DATA PACKAGE (CONTINUED)

Bldg. 430 MW Anal
12/18/95 001

ANALYTICAL, INC.

Asbestos - Lead - Enivronmental - Materials

New Jersey

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

3 Cooper Street
Westmont, NJ 08108
(609) 858-4800

1056 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 Stonehinge Lane
Carle Place, NY 11514
(516) 997-7251

California

1720 S. Amphlet Blvd.
Suite 130
San Mateo, Ca. 4402
(415) 570-5401

Georgia

1600 Rosewell Street, SE
Suite One
Smyrna, GA 30080
(770) 333-6066

Michigan

212 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

Washington

Harbor Marina Corp. Ctr.
1001 SW Klickitat Way
Suite 107
Seattle, WA 98134
(206) 233-9007

ANALYTICAL DATA REPORT
FOR .
E-SYSTEMS
P.O. Box 360
Fort Monmouth, NJ 07703

PROJECT : **MW Sampling, Bldg. 430**

EMSL Project: # 95129582

Field Sample No. & Location	Laboratory Sample ID	Matrix	Date & Time of Collection	Date Received
2004.1 MW1, 2933756	**95-58314**	**Aqueous**	**12/18/95 @ 1450**	**12/18/95**
2002.2, Trip Blank	**95-58312**	**Aqueous**	**12/18/95 @ 0700**	**12/18/95**
2002.3, Field Blank	**95-58313**	**Aqueous**	**12/18/95 @ 1450**	**12/18/95**

Laboratory Name — EMSL ANALYTICAL, INC.

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

Supervisor/Manager Signature

Printed Name — Paul V. Laraia

Date — 1-23-96

EMSL

TABLE OF CONTENTS

SAMPLE DATA SUMMARY PACKAGE

EMSL

Date of Report: 01/11/96
Project Number: 95129582
Lab ID: 95-0058314
Date Collected: 12/18/95 14:50
Collected By: Client
Date Received: 12/18/95 16:00

Attention: Barbara O'Toole
E-Systems
P.O. Box 360
Fort Monmouth NJ 07703

Client Project: MW Sampling Bldg.430

Client Designation: MW1-2933756

	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
Xylenes	see attached	ug/l

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 005

2004.1
9558314B
2933756

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: MW1 Group: Bldg 430

Matrix: (soil/water) WATER Lab Sample ID: 9558314B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9480.D

Level: (low/med) Date Received:

% Moisture: decanted: (Y/N): N Date Extracted: 12/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/26/95

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

SAMPLE NO. 006

2004.1
9558314B
2933756

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: _____ Location: MW 1 Group: Bldg 430

Matrix: (soil/water) WATER Lab Sample ID: 9558314B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9480.D

Level: (low/med) _____ Date Received: _____

% Moisture: _____ decanted: (Y/N): N Date Extracted: 12/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/26/95

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

1F

SAMPLE NO. 007

2004.1
9558314B
2933756

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: EMSL ANALYTICAL Contract: _____

Project No.: _____ Site: _____ Location: MW1 Group: Bldg 430

Matrix: (soil/water) WATER Lab Sample ID: 9558314B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B9480.D

Level: (low/med) _____ Date Received: _____

% Moisture: _____ decanted: (Y/N) N Date Extracted: 12/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/26/95

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. 582-16-1	Naphthalene, 2,7-dimethyl-	15.31	1	J
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# MW 1 2933756 008

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

Project No.: FT. MONMOUTH NJ Bldg#: 430 NJDEP MW#: 1 Bldg 430 2004.1

Matrix: (soil/water) WATER Lab Sample ID: 9558314V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0786.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/96

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	.50	U
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	.90	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 2084.1 29337560 005

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

Project No.: FT. MONMOUTH NJ Bldg#: 430 NJDEP MW#: 1 Bldg 430

Matrix: (soil/water) WATER Lab Sample ID: 9558314V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0786.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/96

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
1634-04-4	Methy-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FMETL# 2004.1 2933756 010

Bldg 430

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

Project No. FT. MONMOUTH NJ Bldg#: 430 NJDEP MW#: 1

Matrix: (soil/water) WATER Lab Sample ID: 9558314V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0786.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/95

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Column Bleed	19.61	2	J
2. 135-98-8	Benzene, (1-methylpropyl)-	21.09	1	J
3. 105-05-5	Benzene, 1,4-diethyl-	22.04	1	J
4. 141-93-5	Benzene, 1,3-diethyl-	22.04	1	J
5. 535-77-3	Benzene, 1-methyl-3-(1-methy	22.61	2	J
6.	Unknown	22.98	1	J
7.	Unknown	22.99	1	J
8.	Unknown	23.01	3	J
9. 527-53-7	Benzene, 1,2,3,5-tetramethyl	23.58	1	J
10.	Unknown Hydrocarbon	24.37	1	J
11.	Unknown	24.98	1	J
12.	Unknown	25.27	2	J
13.	Unknown	25.76	2	J
14.	Unknown	25.94	1	J
15.	Unknown	26.76	1	J
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011

EMSL

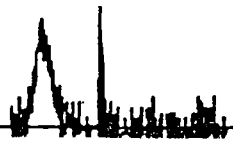
Date of Report: 01/17/96
Project Number: 95129581
Lab ID: 95-0058312
Date Collected: 12/18/95 07:00
Collected By: Client
Date Received: 12/18/95 16:00

Attention: Barbara O'Toole
E-Systems
P.O. Box 360
Fort Monmouth NJ 07703

Client Project: MW Sampling Bldg 290

Client Designation: Trip Blank

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



1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 012

Trip Blank

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

Project No.: FT. MONMOUTH NJ Bldg#: NJDEP MW#: TB

Matrix: (soil/water) WATER Lab Sample ID: 9558312V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0783.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/96

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	.50	U
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	1.4	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 013

Trip Blank

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

Project No.: FT. MONMOUTH NJ Bldg#: 290 NJDEP MW#: TB

Matrix: (soil/water) WATER Lab Sample ID: 9558312V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0783.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/96

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
1634-04-4	Methy-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

1E

FMETL# 014

Trip Blank

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Project No. FT. MONMOUTH NJ Bldg#: NJDEP MW#: TB

Matrix: (soil/water) WATER Lab Sample ID: 9558312V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0783.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/95

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 109-99-9	Furan, tetrahydro-	10.61	2	J
2.	Column Bleed	19.62	2	J
3.	Column Bleed	23.00	1	J
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EMSL

Date of Report: 01/17/96
Project Number: 95129581
Lab ID: 95-0058313
Date Collected: 12/18/95 14:50
Colledted By: Client
Date Received: 12/18/95 16:00

Attention: Barbara O'Toole
E-Systems
P.O. Box 360
Fort Monmouth NJ 07703

Client Project: MW Sampling Bldg. 290

Client Designation: Field Blank

	Conc.	Unit
ORGANIC		
Semi-Volatiles		
TCL BNA's with Library Search	see attached	ug/l
Volatiles		
Volatiles by 524.2 w/Library Search	see attached	ug/l
Xylenes	see attached	ug/l

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 016

9558313B
Field Blank

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9558313B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9479.D

Level: (low/med) _____ Date Received: _____

% Moisture: _____ decanted: (Y/N): N Date Extracted: 12/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/26/95

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
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

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO. 017

9558313B
Field Blank

Lab Name: EMSL ANALYTICAL Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: 9558313B

Sample wt/vol: 1000.0 (g/mL ML Lab File ID: B9479.D

Level: (low/med) _____ Date Received: _____

% Moisture: _____ decanted: (Y/N): N Date Extracted: 12/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/26/95

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
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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.
9558313B
Field Blank

Lab Name: EMSL ANALYTICAL Contract:

Project No.: Site: Location: Group:

Matrix: (soil/water) WATER Lab Sample ID: 9558313B

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: B9479.D

Level: (low/med) Date Received:

% Moisture: decanted: (Y/N) N Date Extracted: 12/23/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/26/95

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.	Unknown Hydrocarbon	27.84	6	J
2.				
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 019

Field Blank

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

Project No.: FT. MONMOUTH NJ Bldg#: NJDEP MW#: FB

Matrix: (soil/water) WATER Lab Sample ID: 9558313V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0784.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/96

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
75-71-8	Dichlorodifluoromethane	.50	U
74-87-3	Chloromethane	.50	U
75-01-4	Vinyl chloride	.50	U
74-83-9	Bromomethane	.50	U
75-00-3	Chloroethane	.50	U
75-69-4	Trichlorofluoromethane	.50	U
75-35-4	1,1-Dichloroethene	.50	U
75-09-2	Methylene chloride	1.4	B
156-60-65	trans-1,2-Dichloroethene	.50	U
75-34-3	1,1-Dichloroethane	.50	U
594-20-7	2,2-Dichloropropane	.50	U
156-59-2	cis-1,2-Dichloroethene	.50	U
74-97-1	Bromochloromethane	.50	U
67-66-3	Chloroform	.50	U
71-55-6	1,1,1-Trichloroethane	.50	U
56-23-1	Carbon tetrachloride	.50	U
563-58-6	1,1-Dichloropropene	.50	U
71-43-2	Benzene	.50	U
107-06-2	1,2-Dichloroethane	.50	U
79-01-6	Trichloroethene	.50	U
78-87-1	1,2-Dichloropropane	.50	U
74-95-3	Dibromomethane	.50	U
75-27-4	Bromodichloromethane	.50	U
10061-01-1	cis-1,3-Dichloropropene	.50	U
108-88-3	Toluene	.50	U
10061-02-6	trans-1,3-Dichloropropene	.50	U
79-00-1	1,1,2-Trichloroethane	.50	U
127-18-4	Tetrachloroethene	.50	U
142-28-9	1,3-Dichloropropane	.50	U
124-48-1	Dibromochloromethane	.50	U
106-93-4	1,2-Dibromomethane	.50	U
108-90-7	Chlorobenzene	.50	U
630-20-6	1,1,1,2-Tetrachloroethane	.50	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

FMETL# 020

Field Blank

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

Project No.: FT. MONMOUTH NJ Bldg#: 290 NJDEP MW#: FB

Matrix: (soil/water) WATER Lab Sample ID: 9558313V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0784.D

Level: (low/med) LOW Date Received:

% Moisture: not dec. NA Date Analyzed: 12/29/96

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
1634-04-4	Methy-tertiary butyl ether	.50	U
75-65-0	tertiary-Butyl alcohol	2.0	U

1E

FMETL# 021

Field Blank

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

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

Project No. FT. MONMOUTH NJ Bldg#: _____ NJDEP MW#: FB

Matrix: (soil/water) WATER Lab Sample ID: 9558313V

Sample wt/vol: 25.0 (g/mL) ML Lab File ID: C0784.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. NA Date Analyzed: 12/29/95

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

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 109-99-9	Furan, tetrahydro-	10.60	2	J
2.	Column Bleed	19.61	1	J
3.				
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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 USEPA CLP.	X
12	Non-Conformance Summary	X

Paul Farag

Laboratory Manager or Environmental Consultant's Signature

1-23-95

Date

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

A. Checklist which must be attached to the Summary

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

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

CHAIN OF CUSTODY

EMSL ANALYTICAL INC.

3 Cooper Street
Westmont, New Jersey 08108
609-858-9573
609-858-4571 (Fax)

Chain of Custody / Analysis Request Form

EMSL Project # 95129582
PO # IJO#95-0091/SAI

Custody and Sample Information - Print ALL information. Put N/A in blanks not applicable. Press firmly.

1. Report to:	2. Bill to:	Project:
US ARMY FT.MONMOUTH Charles Appleby SELFM-PW-EV Env.Lab.Cert#13461		Bldg 430 MW SAMPLING Tel #: 908-532-6224 FAX #:

3. Sampled by (Signature)	4. # of Samples in Shipment	5. Date of Sample Shipment	6. Date Results Needed
Baxter/Palilonis			

Item No.	Sample Number	Station Location / Sample ID	COMP	GRAB	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: Date	Time	Number of Containers	Indicate Analysis Requested: VOA 624.2 + Lib (Inc. xylenes)		BN 625 + 15	Laboratory Number
1	2004.1	MW1-2933756		X	X					X	X					12/18	1450		X		X	58314
2	2002.2	TB		X	X											↓	700		X			
3	2002.3	FB		X	X											↓	1450		X		X	
4																						
5																						
6																						
7																						
8																						
9																						

Released by (Signature)	Date/Time Released	Delivery Method	Received by (Signature)	Company/Agency Affiliation	Date/Time Received	Condition Noted
S. Hubbard	12/18/95 1600		[signature]	EMSL	12/18/95/1600	
	/				/	
	/				/	

Please indicate turnaround time: standard 10D 5D 72HR 48HR 24HR (Must call for quick turn)

Comments: Page ______ of ______
* A drawing depicting sample location on reverse side. N/A

Please indicate reporting requirements:
1) Results only 2) Results & QC 3) Reduced Deliverables

025

EMSL ANALYTICAL, INC.

INTERNAL CHAIN OF CUSTODY

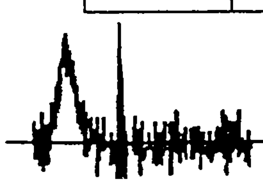
EMSL LAB ID NO. 58314

PROJECT NO. 95129582

SAMPLE/CONTAINERS

PARAMETERS B/N

DATE	TIME	ANALYSIS	NAME (PRINT)	SIGNATURE
12/23/95		B/N extraction	Charles Bortolone	Charles Bortolone



INTERNAL CHAIN OF CUSTODY(ORGANICS)

SAMPLE No(S).	ANALYSIS	DATE ANALYZED	NAME (PRINT)	NAME (SIGNATURE)
9556580	VOA 8240	12/20/95	M. CIAMPI	
56178	BNA625	12/21/95	S. VanBatten	
56570-85	8021/8240	12/18, 12/19, 12/20	S. Kossler	
95 56805-807	VOA + LS	12/15 - 12/26	M. CIAMPI	
95 56784	VOA + LS	12/14 - 12/26	M. CIAMPI	
95 56785-88	VOA + NAPH + LS	12/14 - 12/26	M. CIAMPI	
95 58182	TCLP	12/22 - 12/26	M. CIAMPI	
95 58375	TCLP	12/22 - 12/26	M. CIAMPI	
95 57201	TCLP	12/22 - 12/26	M. CIAMPI	
95 57087-99	TCLP	12/21 - 12/26	M. CIAMPI	
95558050-51	BTEX 8240	12/22 - 12/26	M. CIAMPI	
9.558378-83	BTEX	12/22 - 12/26	M. CIAMPI	
95558366	BENZENE + QC	12/22 - 12/26	M. CIAMPI	
95557838	BENZENE + QC	12/22 - 12/26	M. CIAMPI	
95 56789-96	VOA + LS	12/14 - ~~12/28~~ 12/27	M. CIAMPI	
95 57835	VOA + AC/BC + 2CLVE + DCBS	12/26/95	M. CIAMPI	
95 57836	VOA + AC/BC + 2CLVE + DCBS	12/26/95	M. CIAMPI	
95557564	VOA + AC/BC + 2CLVE + DCBS	12/20 - 12/26/95	M. CIAMPI	
9556188-91, 95-96	BNA625+	12/26/95	S. VanBatten	
58311+13	TCLBNA+	11	S. VanBatten	
58314-7	BN625+	11	S. VanBatten	
95 56808-812	VOA + MTBE + TBA + LS	12/14 - 12/28/95	M. CIAMPI	

120

INTERNAL CHAIN OF CUSTODY(ORGANICS)

MPLE No(S).	ANALYSIS	DATE ANALYZED	NAME (PRINT)	NAME (SIGNATURE)
59189-96	602 + MTBE	12/28/95	S. VanEtten	SV
[illegible]	TCLP HEAR	1-4-96	[illegible]	[illegible]
[illegible]	"	1-4-96	[illegible]	[illegible]
58920	"	1-4-96	S. VanEtten	SV
59346	BN625+	1-3-96	S. VanEtten	SV
9600201	GASOLINE	01/04/96	M. CIAMPI	[signature]
9558432	VOA + CS + TICLR	01/09/96	M. CIAMPI	[signature]
9558920	BTEX 8240	01/04/96	M. CIAMPI	[signature]
9558823	VOA + QC	~~12/04~~ 12/29/95 01/04/96	M. CIAMPI	[signature]
9558371-59346	5242	12/29/95 / 1/4/95	S. Kessle	[signature]
96-275	PAH	1-10-96	S. VanEtten	SV
59202/4	BNA625	1-10-96	S. VanEtta	SV
59223	BNA625	1-10-96	S. VanEtta	SV
96-271+4	TCLP BNA	1-11-96	S. VanEtten	SV
96-465	" "	1-11-96	S. VanEtten	SV
9558751, 52, 54	TCL VOA + AC/AC TLS + SCOTT	12/29/95 - 01/05/96	M. CIAMPI	[signature]
9559334-339	VOA + CS + TICLR	01/04/96	M. CIAMPI	[signature]
9558873-882	VOA + CS	12/26 - 12/28/95	M. CIAMPI	[signature]
9559168, 70	VOA	12/29/95 - 01/04/96	M. CIAMPI	[signature]
9559771-774	VOA + CS + TICLR	01/09/96	M. CIAMPI	[signature]
9600271, 274	TCLP	01/11/96	M. CIAMPI	[signature]
483-507	BTEX/MTBE	1/11-12/96	S. VanEtten	SV

020

U.S. ARMY FORT MONMOUTH
MONITORING WELL SAMPLING DATASHEET

1340

IJO#95-0091
BLDG.#: 430 MW#: 1 NJDEPE WELL ID # 2933756
LABORATORY: EMSL Analytical Services, NJDEP CERT # 04653
SAMPLING CONTRACTOR: EMSL Analytical Services Inc.
SAMPLERS NAMES: Tom Baxter, Susan Palilonis

DATE: 12-18-95
WEATHER CONDITIONS: Cold, overcast

ELEVATION OF CASING SURVEY MARK: ____.____FT
TOTAL DEPTH FROM TOP OF SURVEYORS MARK: 12.12 FT
DEPTH FROM SURVEYORS MARK TO SCREEN: ____.____FT
LENGTH OF SCREENED SECTION: ____.____FT
DEPTH TO H2O PRIOR TO PURGING AND SAMPLING: 2.49 FT
ELEVATION OF GW PRIOR TO PURGING: ____.____FT
THICKNESS OF LNAPL PRIOR TO PURGING: 0.0 FT

PID/Hnu READING IMMEDIATELY AFTER CAP REMOVAL: 1 PPM
DEPTH OF WELL: ____.____FT HEIGHT OF WATER: ____.____FT
GAL OF H2O TO BE EVACUATED (EST) 19 GAL
(9.63 X 0.65 X 3 = 18.77)
PURGE METHOD: (FLOW OF <0.5 GPM TO >5.0 GPM) Pump
PURGE RATE (0.5 GPM) : 2 GPM

PURGE START TIME: 1355
pH: 5.32 s.u. TEMP: 10.2 Deg.C
Dissolved Oxygen: 2.7 PPM Specific Conductivity: 134 us/cm

PURGE END TIME: 1410
pH: 5.34 s.u. TEMP: 10.4 Deg.C
Dissolved Oxygen: 2.7 PPM Specific Conductivity: 148 us/cm

DEPTH TO H2O AFTER PURGING AND BEFORE SAMPLING: 3.60 FT
SAMPLING METHOD: DEDICATED, DECONTAMINATED (IAW NJDEP FSPM 1992) TEFLON (R) BAILER
TOTAL VOLUME PURGED : 19 GAL.
1415
pH: 5.36 s.u. TEMP: 10.2 Deg.C
Dissolved Oxygen: 3.1 PPM Specific Conductivity: 147 us/cm

COMMENTS: Inside Casing filled w/ H2O
Frozen over well cap

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: **95-58314, 95-58312, 95-58313** Client: **ESystems**

	I DATE	II	Hold Time
Date Sampled	**12/18/95**		
Receipt/Refrigeration	**12/18/95**		
Extractions			
1. Semivolatile Organics	**12/23/95**		**7 days**
Analyses			
1. Volatile Organics	**12/29/95**		**14 days**
2. Semivolatile Organics	**12/26/95**		**40 days**

QC Supervisor
Review & Approval

(Signature) Peter B. Panton
(Printed Name) Peter B. Panton
(Date) 01/25/96

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 0.90 ppb.**		
	b. B/N Fraction **49360 MS/MSD: Di-n-butylphthalate 5 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		
	b. B/N Fraction		
	c. Acid Fraction		
9.	Internal Standard Area/Retention Time Shift Meet Criteria **58311-58317 IS #6 outside QC limits.**	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: 1-23-96

ATTACHMENT P

UST 435 Notes

PROJECT PARCEL 79 BLD. 435

project description UHOT Removal

date	task/action	follow-up	start date	completion date

PROJECT CONTACTS

name	phone/fax	e-mail
HOWARD SWARTH	29254	

documents enclosed

notes

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

FORMER BLDG. #: 435 REG. #: ____

DATE: 3-19-10 TOA: ____ TOD: ____

SSE: Frank Accorsi NJDEP CERT. #: 0010042

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: Frank Accorsi NJDEP CERT. #: 0010042

WEATHER: Sunny 50's

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	NA
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	NA
A DISCHARGE WAS REPORTED BY THE DPW TO THE NJDEP (609-292-7172), CASE# ____	NA
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT ____ FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	N
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	NA
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	N
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	NA
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	NA
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	NA
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR IS ATTACHED	NA
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	NA
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	Y
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS³), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): FRANK ACCORSI Date: 3-19-10

SIGNATURE: Frank Accorsi

800'

EXCAVATED TWO TEST PITS TO LOCATE POSSIBLE ABANDONED UNDERGROUND STORAGE TANKS. ONE TEST PIT WAS EXCAVATED WERE ON SITE MAPS SHOWED POSSIBLE TANK LOCATION - NOTHING FOUND. THE TEST PIT WAS LOCATED IN VICINITY WHERE A MAGNETIC ANOMALY OCCURED WITH METAL DETECTOR. NO TANK FOUND, ONLY ABANDONED TELEPHONE LINES (LEAD WRAPPED COPPER WIRES).

ATTACHMENT Q

UST 437 File Review and Analyses

PARSONS

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

Date: *March 2, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 437*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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): *10-02-16-1626-01*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 2/16/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

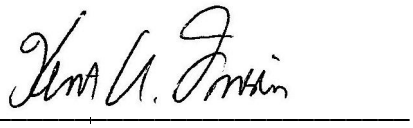
Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). An initial sample was collected from the bottom of the tank excavation on Feb. 16, 2010, which contained 31,000 mg/kg of TPH. Additional soil was excavated, and five samples from the excavation bottom and four side walls (plus one field duplicate) were collected on February 17, 2010. The final soil sample results from this excavation were all non-detected (ND) for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. The final soil sample from the excavation bottom was also analyzed for semivolatile organic compound (SVOCs); no SVOCs were detected. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 437 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 2/16/2010 ***REMOVAL CONTRACTOR:*** TVS Inc.

SRF SEND DATE: ***TMS:***

DICAR NO. 10-02-16-1626-01 ***LEAK DETECT:***

REMEDIATION COMMENTS: discharge observed in soils adjav=cent to and below UST. 900 gallons of oil removed, 75 gal. of water removed. GW not observed in excavation. Contaminated soil sample collected to confirm discharge (TPHC). Soil rememdiation completed.

REGISTRATION COMMENTS: UHOT as per BRAC Legal Office

SAS DONE: NO ***CONSULTANT:*** DPW

MWs NEEDED: ***MONITORING WELLS:***

SUB-SURFACE EVALUATOR: F. Accorsi TVS

CURRENT UST STATUS

UST STATUS: REMOVED RI ON-GOING ***CASE STATUS:*** Case Open

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 2-10/16-2010
LOCATION: Parcel 79-12 EXCAVATION ID: BLDG. 437

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 5.5 ft. below grade; Sheen was observed on groundwater

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10059) NO

NOTES: UST Found and removed on 2/16/2010. UST cleaned and no residual liquids were left in the tank. 900 Gallons of oil and 75 gallons of H2O were removed. UST was transported to 108 yard and then to Red Bank Recycling. 30 cubic yards of petrol. cont. soil were excavated and transported. C. Appleby of DPW was notified of any discharge to the environment.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 437 REG.#: NA - Parcel 79-12

DATE: 2-16-10 TOA: 1300 TOD: 1320

SSE: C. Appleby DPW / Frank Iacorsi TVS NJDEP CERT.#: Not on Record

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: Frank Iacorsi. TVS NJDEP CERT.#: "

WEATHER: Snow - N30 °F

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Yes
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Yes
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Yes
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	NA
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (877) 927-6337), CASE# 10-02-16-1606-01 0818.	Yes
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	NA
GROUNDWATER WAS ENCOUNTERED AT ____ FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	Not
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	NA
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	NA
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 2005 August	NA
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	NA
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Yes
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1'' ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	No
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	NA
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	Yes
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS) Updated UST Database	

CHECK ALL BOXES, LEAVE NO BLANK

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Subsurface Evaluator (print Name): Charles Appleby Date: 2-16-10,

SIGNATURE: _____

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

Contract Management Division

SUBJECT: PWS-007, UST Removal 2-23-09
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 437

TVS Inc.
Field Supervisor, PWS-007
ATTN: Harold Hornung
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Hornung:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits or that the site requires further investigation outside the scope of this contract. The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

CC: UST file copy

Chris Christie
Governor

Kim Guadango
Lt. Governor

State of New Jersey
Department of Environmental Protection
P.O. Box 434, Trenton, NJ 08625-0434

Bob Martin
Acting Commissioner

February 18, 2010

Attn: US ARMY
BLDG 173 RIVERSIDE AVE
OCEANPORT BORO, NJ 07703

Re : VACANT LOT BLDEG 437, SELF RIDGE AVE, OCEANPORT BORO-MONMOUTH CO
Incident #: 10-02-16-1626-01

Dear Sir or Madam:

A suspected release of hazardous substances at the above referenced property has been reported to the Department of Environmental Protection (Department). Since the discharge occurred as the result of a leaking underground or above ground heating oil tank at a residential property or an underground heating oil tank with a capacity of less than 2001 gallons at a non residential property, oversight will be provided by the Unregulated Heating Oil Tank Program (UHOT).

In addition to a Remedial Action Report, you or your contractor will need to submit a UHOT Questionnaire, UHOT Certification, and a certified check, attorney check, money order or by personal check made payable to "Treasurer, State of New Jersey" for $400.00. *Please be sure to write the incident number on the check.*

Please submit your documents and payment to:

NJDEP, Bureau of Case Assignment & Initial Notice
401 East State Street, PO Box 434
Trenton, NJ 08625-0434
Attention: Bureau Chief

Additional information about the UHOT program is available at www.state.nj.us/dep/srp/unregulatedtanks, or by contacting the Department's General Questions Line at (609) 984-3081.

Loans and grants to qualifying owners of non-regulated petroleum underground storage tanks are available from the Underground Storage Tank (UST) Fund. To find out if you are eligible, as well as to obtain an application package, please go to www.state.nj.us/dep/srp/finance/ustfund, or contact the Bureau of Contract and Fund Management, at (609) 777-0101.

If the source of the release is from something other than an underground storage tank, you are required to complete a Request for Department Oversight form, which must be submitted along with your cleanup report to the above address. This form is available at http://www.state.nj.us/dep/srp/forms/, or by contacting the Case Assignment Section at (609) 292-2943.

Once the required documents and payment are received, the case will be assigned to a case manager who will review the submittals to ensure that the cleanup has been completed.

Sincerely

Kirstin Hahn

Kirstin Hahn, Bureau Chief
Bureau of Case Assignment & Initial Notice

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: 10-72654

Parcel 79/Bldg. 437

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
437-1/Tank Bottom	1005901	Soil	16-Feb-10 13:45	02/16/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 3/3/10
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X 22692
( )DERA ( )OMA (X)Other: BRAC
Project No: 10-72654
Location: PARCEL 79 (79-12) BLDG. 437
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	T-PH	%& SOLIDS						DEPTH (FT)	Remarks / Preservation Method
10059 01	437-1, TANK BOTTOM	2-16-10	1345	SOIL	1	X	X						5.5-6	ICE

Analysis Parameters

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	2-16-10 1400				
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:

200000

print legibly

new coc._1.XLS8/18/2009

SAMPLE RECEIPT FORM

Date Received: 2-16-10 Work Order ID#: 10059

Site/Proj. Name: Parcel 79/ Bldg 434 Cooler Temp (°C): ICE

Received By: J. Vergum Sign: J. Vergum
(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: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 437 - (1,000 G. UST)

SOIL SAMPLING GPS POSITIONS & COORDINATES

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

(IN US SURVEY FEET)

SAMPLE POINT

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
437-1 TANK BOTTOM	541693.95	622214.106

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

10059 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	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	Yes
7.	Analysis holding time met (If not met, list number of days exceeded for each sample)	Yes

Additional comments: ______

Laboratory Manager: [signature] Date: 3/3/10

[signature] 2/22/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10059 **Site:** Parcel 79

	Date	Hold Time
Date Sampled	02/16/10	NA
Receipt/Refrigeration	02/16/10	NA
Analyses		
1. TPHC	02/18/10	14 Days

TPHC
(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	**Project #:** **Location:** **ECP:** **Work Order:**	10-72654 PARCEL 79
Analysis:	OQA-QAM-025	**Date Received:**	16-Feb-10
Matrix:	Soil	**Date Extracted:**	18-Feb-10
Inst. ID:	GC TPHC INST. #1	**Extraction Method:**	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	**Analysis Complete:**	18-Feb-10
Injection Volume:	1 uL	**Analyst:**	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data	Qualifiers
MB02181001	MB02181001	1.00	15.05	100.00	23	332	0.00		
LCS02181001	LCS02181001	1.00	15.06	100.00	23	332	1293.48		
1005901	437-1 TANK BOTTOM	1.00	15.08	80.0	29	414	29810.71	E	
1005901	437-1 TANK BOTTOM	10.00	15.08	80.0	290	4145	31107.88		D
1006106	437 DUPLICATE	1.00	15.13	82.2	28	402	0.00		

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

000043

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 Dean Tarabokija

Date: 3/3/12

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

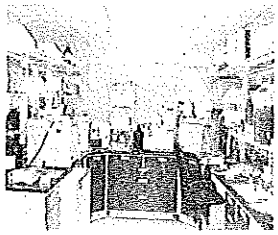
I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information 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 3/3/

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: 10-72654

Parcel 79/Bldg. 437

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
437-A/Bottom	1006101	Soil	17-Feb-10 09:35	02/17/10
437-B/South Wall	1006102	Soil	17-Feb-10 10:15	02/17/10
437-C/West Wall	1006103	Soil	17-Feb-10 10:40	02/17/10
437-D/East Wall	1006104	Soil	17-Feb-10 11:10	02/17/10
437-E/North Wall	1006105	Soil	17-Feb-10 11:50	02/17/10
437-Duplicate	1006106	Soil	17-Feb-10 11:50	02/17/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
BN+15, TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff 3/4/10
Dean Tardiff/Date:
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X26292
( )DERA ( )OMA (X)Other: BRAC

Project No: 10-72654
Location: PARCEL 79-12
BLDG. 437

Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	* TPH	% SOLIDS					FID (ppm)	DEPTH (ft)	Remarks / Preservation Method
10061 01	437-A, BOTTOM	2-17-10	0935	SOIL	1	X	X					0.9	~~5-6~~	6.5-7 1 CE
02	437-B, SOUTH WALL		1015			X	X					0.7	~~5-6~~	
03	437-C, WEST WALL		1040			X	X					0	~~5-6~~	
04	437-D, EAST WALL		1110			X	X					0.3	~~5-6~~	
05	437-E, NORTH WALL		1150			X	X					1.0	~~5-6~~	
06	437-DUPLICATE		1150			X	X					1.2	~~5-6~~	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	2-17-10 1330				
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 3 DAYS WK., ( )ASAP Verbal ____Hrs.

Comments: * CONTINGENT BN +15 IF TPH > 1,000 ppm
TPH

000002

print legibly

SAMPLE RECEIPT FORM

Date Received: 2-17-10 Work Order ID#: 10061

Site/Proj. Name: Parcel 19 / Bldg 437 Cooler Temp (°C): 2.0°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

Comments: _____

Change of Chain of Custody

Lab Project ID#: 100601
Date Received: 2-17-10
Requested by: *(print)* C. Hoelen
Turnaround Time: 3 Days

Site/Project Name: Parcel 79
Date of Change: 2-24-10
Sign: J. Clifford

1. Were the correct containers and/or preservatives used for the tests indicated? ~~Yes~~ No
2. Was sufficient amount of sample sent for the tests indicated? ~~Yes~~ No
3. Are samples within holding time for new analysis? ~~Yes~~ No
4. Was the change documented in the receipt logbook? Yes No

Received by: *(print)* _____ Sign: _____

Sample ID#	New Analysis	Sample ID#	New Analysis
100601-01	BX+15		

Comments: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 437 - (1,000 G. UST)

SOIL SAMPLING 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)
437A BOTTOM	541694.351	622214.55
437B SOUTH WALL	541688.8	622218.319
437C WEST WALL	541691.018	622207.132
437D EAST WALL	541700.979	622224.84
437E NORTH WALL	541699.418	622208.505

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10061

Site: Parcel 79/Bldg. 437

The Field Duplicate was performed on 437-E/North Wall (1006105).

METHOD SUMMARY

Method Summary

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.

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

1C061 BN

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)	No
a. VOA Fraction See MS/MSD recovery 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 — 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: Dean Tarantolis Date: 3/4/10

3/4/10

10061 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	Yes
5.	IR Spectra submitted for standards, blanks and samples	N/A
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: Dean Tarantolis Date: 3/4/10

2/22/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10061 **Site:** Parcel 79/Bldg. 437

	Date	Hold Time
Date Sampled	02/17/10	NA
Receipt/Refrigeration	02/17/10	NA
Analyses		
1. TPHC	02/18/10	14 Days
2. Semi-Volatiles	03/02/10	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 #: 10-72654
Location: PARCEL 79
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix: Soil
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Volume: 1 uL
Blank Conc.: 0.00

Date Received: 17-Feb-10
Date Extracted: 18-Feb-10
Extraction Method: Shake
Analysis Complete: 18-Feb-10
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB02181001	MB02181001	1.00	15.05	100.00	23	332	0.00		
LCS02181001	LCS02181001	1.00	15.06	100.00	23	332	1293.48		
1006101	437-A BOTTOM	1.00	15.16	79.2	29	416	0.00		
1006102	437-B SOUTH WALL	1.00	15.11	81.6	28	406	0.00		
1006103	437-C WEST WALL	1.00	15.20	81.9	28	402	0.00		
1006104	437-D EAST WALL	1.00	15.04	82.5	28	403	0.00		
1006105	437-E NORTH WALL	1.00	15.21	82.2	28	400	0.00		
1006106	437 DUPLICATE	1.00	15.13	82.2	28	402	0.00		

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

000018

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E090.D	Misc Info	METHOD 8270 3/2/10	Sample Weight	10.00 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	100.0 %
Date Acquired	2-Mar-10	Sample Multiplier	0.100		
Sample Name	MB03011001				

*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.099	0.50	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.168	0.50	mg/kg	
62-53-3	Aniline			not detected	NLE	0.267	0.50	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.193	0.50	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.167	0.50	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.174	0.50	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.258	0.50	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.194	0.50	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.224	0.50	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.253	0.50	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.189	0.50	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.226	0.50	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.240	0.50	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.198	0.50	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.219	0.50	mg/kg	
91-20-3	Naphthalene			not detected	6	0.242	0.50	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.370	0.50	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.216	0.50	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.260	0.50	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.146	0.50	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.251	0.50	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.307	0.50	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.264	0.50	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.272	0.50	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.261	0.50	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.221	0.50	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.271	0.50	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.319	0.50	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.261	0.50	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.250	0.50	mg/kg	
86-73-7	Fluorene			not detected	110	0.283	0.50	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.278	0.50	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.273	0.50	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.271	0.50	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.287	0.50	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.288	0.50	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.300	0.50	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.297	0.50	mg/kg	
120-12-7	Anthracene			not detected	1500	0.299	0.50	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.286	0.50	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.297	0.50	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E090.D**	Misc Info	**METHOD 8270 3/2/10**	Sample Weight	**10.00 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**100.0 %**
Date Acquired	**2-Mar-10**	Sample Multiplier	**0.100**		
Sample Name	**MB03011001**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.269	0.50	mg/kg	
129-00-0	Pyrene			not detected	550	0.317	0.50	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.263	0.50	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.298	0.50	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.272	0.50	mg/kg	
218-01-9	Chrysene			not detected	52	0.281	0.50	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.316	0.50	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.265	0.50	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.214	0.50	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.257	0.50	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.230	0.50	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.195	0.50	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.182	0.50	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.185	0.50	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB03011001**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10061 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: MB03011001

Sample wt/vol: 10 (g/ml) G Lab File ID: E090.D

Level: (low/med) LOW Date Received: 2/17/2010

% Moisture: 0 decanted: (Y/N) N Date Extracted: 3/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 3/2/2010

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/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		extraction by-product	6.83	1400	J
2.		extraction by-product	7.43	100000	J
3.		extraction by-product	8.65	580	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E092.D	Misc Info	437-A BOTTOM	Sample Weight	10.22 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	79.2 %
Date Acquired	2-Mar-10	Sample Multiplier	0.124		
Sample Name	1006101	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.122	0.62	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.208	0.62	mg/kg	
62-53-3	Aniline			not detected	NLE	0.330	0.62	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.238	0.62	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.206	0.62	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.215	0.62	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.319	0.62	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.240	0.62	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.277	0.62	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.313	0.62	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.233	0.62	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.279	0.62	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.297	0.62	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.245	0.62	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.271	0.62	mg/kg	
91-20-3	Naphthalene			not detected	6	0.299	0.62	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.457	0.62	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.267	0.62	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.321	0.62	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.180	0.62	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.310	0.62	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.379	0.62	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.326	0.62	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.336	0.62	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.322	0.62	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.273	0.62	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.335	0.62	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.394	0.62	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.322	0.62	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.309	0.62	mg/kg	
86-73-7	Fluorene			not detected	110	0.350	0.62	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.343	0.62	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.337	0.62	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.335	0.62	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.355	0.62	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.356	0.62	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.371	0.62	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.367	0.62	mg/kg	
120-12-7	Anthracene			not detected	1500	0.369	0.62	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.353	0.62	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.367	0.62	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E092.D**	Misc Info	**437-A BOTTOM**	Sample Weight	**10.22 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**79.2 %**
Date Acquired	**2-Mar-10**	Sample Multiplier	**0.124**		
Sample Name	**1006101**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.332	0.62	mg/kg	
129-00-0	Pyrene			not detected	550	0.392	0.62	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.325	0.62	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.368	0.62	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.336	0.62	mg/kg	
218-01-9	Chrysene			not detected	52	0.347	0.62	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.390	0.62	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.327	0.62	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.264	0.62	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.318	0.62	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.284	0.62	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.241	0.62	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.225	0.62	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.229	0.62	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **437-A BOTTOM**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10061 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1006101

Sample wt/vol: 10.22 (g/ml) G Lab File ID: E092.D

Level: (low/med) LOW Date Received: 2/17/2010

% Moisture: 20.8 decanted: (Y/N) N Date Extracted: 3/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 3/2/2010

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	6.84	1100	J
2.	extraction by-product	7.43	97000	J
3.	extraction by-product	8.65	520	J
4.	unknown hydrocarbon	24.66	620	J
5.	unknown hydrocarbon	26.69	710	J

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 Dean Tarantile

Date: 3/4/10

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 3/14/10

Dean Tardiff
Laboratory Manager

ATTACHMENT R

UST 440 File Review and Analyses

PARSONS

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

Date: *March 2, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 440*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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): *10-01-29-1721-30*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 1/29/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

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

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). There were visual indications of a fuel oil release at the ground surface, and contaminated soils were removed during the tank removal. Five samples from the excavation bottom and four side walls (plus one field duplicate) were collected on February 1, 2010. The final soil sample results from this excavation ranged from non-detected (ND) to 139 mg/kg for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: _____

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 440 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 1/29/2010 ***REMOVAL CONTRACTOR:*** TVS Inc

SRF SEND DATE: ***TMS:***

DICAR NO. 10-01-29-1721-30 ***LEAK DETECT:***

REMEDIATION COMMENTS: Visual observation of discharge to the ground. Surface soils excavated and removed as petroleum contaminated as UST was excavated. Soil remediation completed

REGISTRATION COMMENTS: UHOT as per BRAC Legal Office not reg. with NJDEP

SAS DONE: NO ***CONSULTANT:*** DPW

MWs NEEDED: yes ***MONITORING WELLS:*** 0

SUB-SURFACE EVALUATOR: Frank Accorsi

CURRENT UST STATUS

UST STATUS: REMOVED RI ON-GOING ***CASE STATUS:*** Case Open

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG.#: 440 REG.#: _____ - _____

DATE: 1-29-10 TOA: _____ TOD: _____

CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: 0010042

PERSONNEL: ANTHONY FORGIONE, MARC TAYLOR

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Y
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. (YES) NO)	Y
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	NA
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	NA
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	NA
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS ~~CLEANED~~ PUMPED OUT AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	N
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP,CW,EV) HWSA	N
1000 (900/100) GALLONS OF OIL/H2O ~~WASTE~~ WERE REMOVED (MANIFEST#: EQ Rec _____)	Y
NW 30 CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	Y
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) C. APPLEBY	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: _____	Y
THE UST WAS TRANSPORTED TO 108 → RED BANK REC. FOR DISPOSAL (ATTACH SCRAP TICKET)	Y
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	N

CHECK ALL BOXES, LEAVE NO BLANKS

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.

CLOSURE TECH (PRINT NAME): FRANK ACCORSI

SIGNATURE: F. Accorsi DATE: 2-1-10

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 440 REG.#: _____ - _____

DATE: 1-29-10 TOA: _____ TOD: _____

SSE: FRANK ACCORSI NJDEP CERT.#: 0010042

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 0010042

WEATHER: SUNNY, 20's

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED BY THE DPW TO THE NJDEP (609-292-7172), CASE# _____	Y
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 5 FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	Y
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	Y
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	Y
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	Y
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	Y

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): FRANK ACCORSI Date: 1-29-10

SIGNATURE: Frank Accorsi

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 1-29-2010
LOCATION: Parcel 79 (400Area) EXCAVATION ID: BLDG. 440

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 5 ft. below grade; Sheen was observed on groundwater

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10041) NO

NOTES: UST Found. UST pumped out and no residual liquids were left in the tank. 900 Gallons of oil and 100 gallons of H2O were removed. UST was transported to 108 yard and then to Red Bank Recycling. 30 cubic yards of petrol. cont. soil were excavated and transported. C. Appleby of DPW was notified of any discharge to the environment.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

Contract Management Division

2-4-10

SUBJECT: PWS-007, UST Removal
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 440

TVS Inc.
Field Supervisor, PWS-007
ATTN: Harold Hornung
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Hornung:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits or that the site requires further investigation outside the scope of this contract. The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

CC: UST file copy

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: 10-72654

Parcel 79/Bldg. 440

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
440-A/Bottom	1004101	Soil	01-Feb-10 11:10	02/01/10
440-B/South Wall	1004102	Soil	01-Feb-10 13:10	02/01/10
440-C/West Wall	1004103	Soil	01-Feb-10 13:40	02/01/10
440-D/North Wall	1004104	Soil	01-Feb-10 14:20	02/01/10
440-E/East Wall	1004105	Soil	01-Feb-10 15:00	02/01/10
440-Duplicate	1004106	Soil	01-Feb-10 15:00	02/01/10

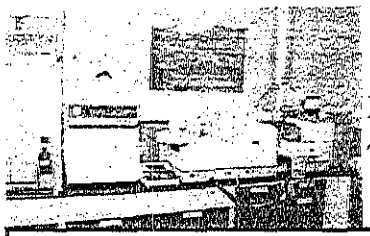
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff 2/4/10
Dean Tardiff/Date:
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X26292
( )DERA ( )OMA (X)Other: BRAC

Project No: 10-72654
Location: PARCEL 79, BLDG. 440

Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	%% SOLIDS					PID (ppm)	DEPTH (FT)	Comments: Remarks / Preservation Method
10041 01	440-A, BOTTOM	2-1-10	1110	SOIL	1	X	X					0	6.5-7	ICE
02	440-B, SOUTH WALL		1310			X	X					0	5-5.5	
03	440-C, WEST WALL		1340			X	X					0	5-5.5	
04	440-D, NORTH WALL		1420			X	X					0	5-5.5	
05	440-E, EAST WALL		1500			X	X					5	5-5.5	
06	440-DUPLICATE		1500			X	X					7	5-5.5	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	2-1-10 1530				
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 ~~3 Wk.~~ 7 DAYS, ( )ASAP Verbal ____ Hrs.

Comments:

200002

print legibly

new coc._1.XLS10/9/2009

SAMPLE RECEIPT FORM

Date Received: 2-1-10 Work Order ID#: 10041

Site/Proj. Name: Panel 79 Cooler Temp (°C): _____

Received By: WALTER FUNK Sign: Walter Funk
(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: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 440 - (1,000 G. UST)

SOIL SAMPLING 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)
440A -BOTTOM	541306.656	622097.274
440B -SOUTH WALL	541301.605	622100.277
440C -WEST WALL	541301.831	622089.313
440D -NORTH WALL	541311.289	622094.591
440E -EAST WALL	541311.487	622105.456

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10041

Site: Bldg. 440

The Field Duplicate was performed on 440-E/East Wall (1004105)

METHOD SUMMARY

Method Summary

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

Surrogate standard spiking solution is added to a measured volume of sample, usually 1 liter. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract is concentrated and then injected directly into a GC-FID for analysis. The sample is analyzed for Total Petroleum Hydrocarbons covering a range of C8-C42, including Pristane and Phytane. Integrating between peak C8 and peak C42 determines the Total Petroleum Hydrocarbon concentration. The final concentration of Total Petroleum Hydrocarbons is calculated by using the initial and final volume values.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

TPHC 10041

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	N/A
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: Dean Tarantino Date: 2/4/10

2/3/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10041 **Site:** Bldg. 440

	Date	Hold Time
Date Sampled	02/01/10	NA
Receipt/Refrigeration	02/01/10	NA
Analyses		
1. TPHC	02/02/09	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:**	10-72654 PARCEL 79
Analysis:	OQA-QAM-025	**Date Received:**	1-Feb-10
Matrix:	Soil	**Date Extracted:**	2-Feb-10
Inst. ID:	GC TPHC INST. #1	**Extraction Method:**	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	**Analysis Complete:**	2-Feb-10
Injection Volume:	1 uL	**Analyst:**	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data	Qualifiers
MB02021001	MB02021001	1.00	15.05	100.00	23	332	0.00		
LCS02021001	LCS02021001	1.00	15.06	100.00	23	332	1129.63		
1004101	440-A BOTTOM	1.00	15.01	84.5	28	394	0.00		
1004102	440-B SOUTH WALL	1.00	15.16	77.9	30	423	0.00		
1004103	440-C WEST WALL	1.00	15.15	81.0	29	407	0.00		
1004104	440-D NORTH WALL	1.00	15.11	82.9	28	399	0.00		
1004105	440-E EAST WALL	1.00	15.12	81.2	29	407	138.97		J
1004106	440 DUPLICATE	1.00	15.07	82.1	28	404	105.91		J

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

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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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 Dean Tardiff

Date: 2/4/10

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 2/4/1

Dean Tardiff
Laboratory Manager

ATTACHMENT S

UST 441 File Review and Analyses

PARSONS

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

Date: *March 2, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 441*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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): *10-02-22-1636-01*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 2/22/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

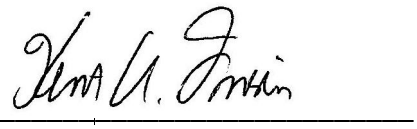
Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). An oily sheen was observed on the groundwater surface in the excavation during the tank removal, which was observed at 5.5 feet below ground surface. Five soil samples from the excavation bottom and four side walls (plus one field duplicate) were collected on March 8 and 10, 2010. The soil sample results from this excavation were all non-detected (ND) for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 441 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 2/22/2010 ***REMOVAL CONTRACTOR:*** TVS Inc.

SRF SEND DATE: ***TMS:***

DICAR NO. 10-02-22-1636-01 ***LEAK DETECT:***

REMEDIATION COMMENTS: Oil observed on groundwater approx DTW 5.5 ft. Soil remediation completed.

REGISTRATION COMMENTS: Unregulated heating oil tank UHOT as per BRAC Legal Office

SAS DONE: NO ***CONSULTANT:*** DPW

MWs NEEDED: ***MONITORING WELLS:***

SUB-SURFACE EVALUATOR: Frank Accorsi

CURRENT UST STATUS

UST STATUS: REMOVED RI ON-GOING ***CASE STATUS:*** Case Open

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

PARCEL 79-18

BLDG.#: 141 REG.#: _____ - _____

DATE: 2-18-10 TOA: _____ TOD: _____

SSE: FRANK ACCORSI NJDEP CERT.#: 0010042

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 0010042

WEATHER: CLDY, RAIN, 40's

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172), CASE# _____	N
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 5.5 FEET BG, A SHEEN (WAS / WAS NOT) OBSERVED ON GW	Y
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	N
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA / FID RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	Y
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	Y
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	Y

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): FRANK ACCORSI Date: 2-19-10

SIGNATURE: Frank Accorsi

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

PARCEL 79-18

BLDG.#: 471 REG.#: _____

DATE: 2-18-10 TOA: _____ TOD: _____

CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: 00100492

PERSONNEL: ANTHONY FORLONE, MARC TAYLOR

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Y
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. (YES)/NO)	Y
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	NA
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	NA
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	NA
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS CLEANED AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	NA
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP, CW, EV) HWSA	NA
945 GALLONS OF H_2O WASTE WERE REMOVED (MANIFEST#: _____)	Y
X10CY IIII 40 CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	Y
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) C. APPLEBY	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: _____	Y
THE UST WAS TRANSPORTED TO RED BANK RECYCLING FOR DISPOSAL (ATTACH SCRAP TICKET)	Y
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	Y

CHECK ALL BOXES, LEAVE NO BLANKS

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.

CLOSURE TECH (PRINT NAME): FRANK ACCORSI

SIGNATURE: Frank Accorsi DATE: 2-18-10

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 2-18-2010
LOCATION: Parcel 79-18 EXCAVATION ID: BLDG. 441

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 5.5 ft. below grade; Sheen was observed on groundwater

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10076) NO

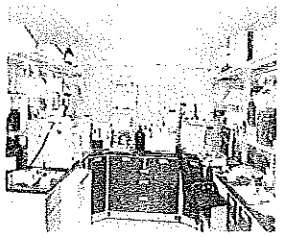
NOTES: UST Found and removed on 2/18/2010. UST cleaned and no residual liquids were left in the tank. 995 gallons of H2O were removed. UST was transported to Red Bank Recycling. 40 cubic yards of petrol. cont. soil were excavated and transported. C. Appleby of DPW was notified of any discharge to the environment.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

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: 10-72654

Parcel 79-18/Bldg. 441

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
441-A/Bottom	1007601	Soil	08-Mar-10 10:30	03/08/10
441-B/North Wall	1007602	Soil	08-Mar-10 10:50	03/08/10
441-C/West Wall	1007603	Soil	08-Mar-10 11:10	03/08/10
441-/Duplicate	1007604	Soil	08-Mar-10 10:50	03/08/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff 3/26/10
Dean Tardiff/Date
Laboratory Manager

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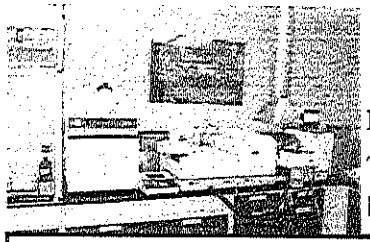
CHAIN OF CUSTODY



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: CHUCK APPLEBY
Phone #:
( )DERA ( )OMA (X)Other: BRAC

Project No: 10-72654
Location: PARCEL 79-18 (FORMER) BLDG. 441

Samplers Name / Company:

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: * TPH	EPA 8015					F10 (ppm)	DEPTH (ft)	Comments: Remarks / Preservation Method
10076.01	441-A, BOTTOM	3-8-10	1030	SOIL	1	X	X					1.5	6.5-7	ICE
10076.02	441-B, NORTH WALL		1050			X	X					5.5	5-5.5	
10076.03	441-C, WEST WALL		1110			X	X					3.0	5-5.5	
10076.04	441-DUPLICATE		1050			X	X					3.2	5-5.5	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Alegre	3-8-10 1600	George Boyce			
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, (7)Rush ~~Wk.~~ DAYS, ( )ASAP Verbal ____Hrs.

Comments: * CONTINGENT BN415 IF TPH > 1,000 ppm, ON HIGHEST, MIN. ONE.

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Page 1 of 1

new coc._1.XLS8/18/2009

SAMPLE RECEIPT FORM

Date Received: 3/8/10 Work Order ID#: 10076

Site/Proj. Name: PARCEL 79 Cooler Temp (°C): 5°

Received By: George Boyce Sign: George Boyce
(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: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 441- (1,000 G. UST)

SOIL SAMPLING 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)
441A BOTTOM	541645.76	622293.887
441B NORTH WALL	541651.576	622284.889
441C WEST WALL	541635.215	622284.254
441D EAST WALL	541655.982	622299.893
441E SOUTH WALL	541637.683	622299.197

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10076

Site: Parcel 79-18/Bldg. 441

The Field Duplicate was performed on 441-B/North Wall (1007602).

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

10076 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	Yes
5.	IR Spectra submitted for standards, blanks and samples	N/A
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: Dawn Tarby/L Date: 3/26/10

3/23/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10076 **Site:** Parcel 79-18/Bldg. 441

	Date	Hold Time
Date Sampled	03/08/10	NA
Receipt/Refrigeration	03/08/10	NA
Analyses		
1. TPHC	03/10/10	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:**	10-72654 PARCEL 79
Analysis:	OQA-QAM-025	**Date Received:**	8-Mar-10
Matrix:	Soil	**Date Extracted:**	9-Mar-10
Inst. ID:	GC TPHC INST. #1	**Extraction Method:**	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	**Analysis Complete:**	10-Mar-10
Injection Volume:	1 uL	**Analyst:**	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data	Qualifiers
MB03091001	MB03091001	1.00	15.22	100.00	23	329	0.00		
LCS03091001	LCS03091001	1.00	15.03	100.00	23	333	1144.08		
1007601	441-A BOTTOM	1.00	15.09	84.8	27	391	0.00		
1007602	441-B NORTH WALL	1.00	15.26	81.8	28	401	0.00		
1007603	441-C WEST WALL	1.00	15.16	82.7	28	399	0.00		
1007604	441 DUPLICATE	1.00	15.22	82.1	28	400	0.00		

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

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 Dean Tarazi

Date: 3/26/10

Laboratory Certification # 13461

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

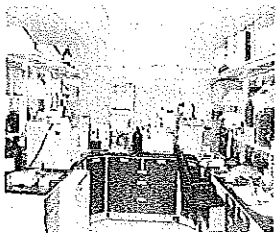
Laboratory Authentication Statement

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 3/26/10
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: 10-72654

Parcel 79-18/Bldg. 441

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
441-D/East Wall	1008001	Soil	10-Mar-10 14:00	03/10/10
441-E/South Wall	1008002	Soil	10-Mar-10 14:20	03/10/10
441-Duplicate	1008003	Soil	10-Mar-10 14:00	03/10/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 3/26/10
Laboratory Manager

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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: CHUCK APPLEBY
Phone #: X26292
( )DERA ( )OMA (X)Other: BRAC

Project No: 10-72654
Location: PARCEL 79-18
(FORMER) BLDG 441

Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: * TPH	% SOLIDS					FID (ppm)	DEPTH (FT)	Comments: Remarks / Preservation Method
10080-01	441-D EAST WALL	3-10-10	1400	SOIL	1	X	X					1.0	5-5.5	ICE
1 -02	441-E, SOUTH WALL	↓	1420	↓	↓	X	X					2.5	5-5.5	↓
↓ -03	441- DUPLICATE	↓	1400	↓	↓	X	X					1.5	5-5.5	↓

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	3-10-10 1515				
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, (X)Rush 3 ~~wk.~~ DAYS, ( )ASAP Verbal ____Hrs.

Comments: * CONTINGENT ON TIS IF TPH > 1000 PPM, ON HIGHEST.

000002

print legibly

new coc._1.XLS8/18/2009

SAMPLE RECEIPT FORM

Date Received: 3/10/10 Work Order ID#: 10080

Site/Proj. Name: Bldg 941 Cooler Temp (°C): 3.4

Received By: Dean Tarditt Sign: Dean Tarditt
(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
10080-01	✓	✓			
-02	✓	✓			
-03	✓	✓			

Comments: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 441- (1,000 G. UST)

SOIL SAMPLING 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)
441A BOTTOM	541645.76	622293.887
441B NORTH WALL	541651.576	622284.889
441C WEST WALL	541635.215	622284.254
441D EAST WALL	541655.982	622299.893
441E SOUTH WALL	541637.683	622299.197

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10080

Site: Parcel 79-18/Bldg. 441

The Field Duplicate was performed on 441-D/East Wall (1008001).

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

10080 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	Yes
5.	IR Spectra submitted for standards, blanks and samples	N/A
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: Dean Tandy Date: 3/26/10

3/23/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10080

Site: Parcel 79-18/Bldg. 441

	Date	Hold Time
Date Sampled	03/10/10	NA
Receipt/Refrigeration	03/10/10	NA
Analyses		
1. TPHC	03/11/10	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:**	10-72654 PARCEL 79
Analysis:	OQA-QAM-025	**Date Received:**	10-Mar-10
Matrix:	.	**Date Extracted:**	11-Mar-10
Inst. ID:	GC TPHC INST. #1	**Extraction Method:**	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	**Analysis Complete:**	11-Mar-10
Injection Volume:	1 uL	**Analyst:**	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB03111001	MB03111001	1.00	15.00	100.00	23	333	0.00		
LCS03111001	LCS03111001	1.00	15.01	100.00	23	333	1132.35		
1008001	441-E SOUTH WALL	1.00	15.09	84.8	27	391	0.00		
1008002	441-F EAST WALL	1.00	15.14	81.8	28	404	0.00		
1008003	441 DUPLICATE	1.00	15.14	82.7	28	399	0.00		

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

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 Tardy

Date: 3/26/10

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

3/26/10

ATTACHMENT T

UST 443 Report

United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 443
Main Post Area

NJDEP UST Registration No. 090010-49
NJDEP Closure Approval No. C-93-3913

February 1996

SMITH
ENVIRONMENTAL TECHNOLOGIES CORPORATION

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 443

MAIN POST AREA
NJDEP UST REGISTRATION NO. 090010-49
NJDEP CLOSURE APPROVAL NO. C-93-3913

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

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ENVIRONMENTAL TECHNOLOGIES CORPORATION

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TABLE OF CONTENTS (CONTINUED)

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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-93-3913 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 090010-49, was located immediately adjacent to Building 443 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 090010-49 was a 1,080-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 holes. No holes were noted in the UST and 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, H, and I were collected from nine (9) locations along the base and sidewalls of the excavation. 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 443 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, D, E, F, G, H, and I, contained levels of TPHC ranging in concentration from 7.85 mg/kg to 19.2 mg/kg. Sample A contained a non-detectable concentration 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.

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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. 090010-49 at Building 443.

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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. 090010-49, was closed at Building 443 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 August 2, 1993. The plan was approved on September 7, 1993 and assigned TMS No. C-93-3913. The UST was a steel, 1,080-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 090010-49 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. 090010-49 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. 090010-49 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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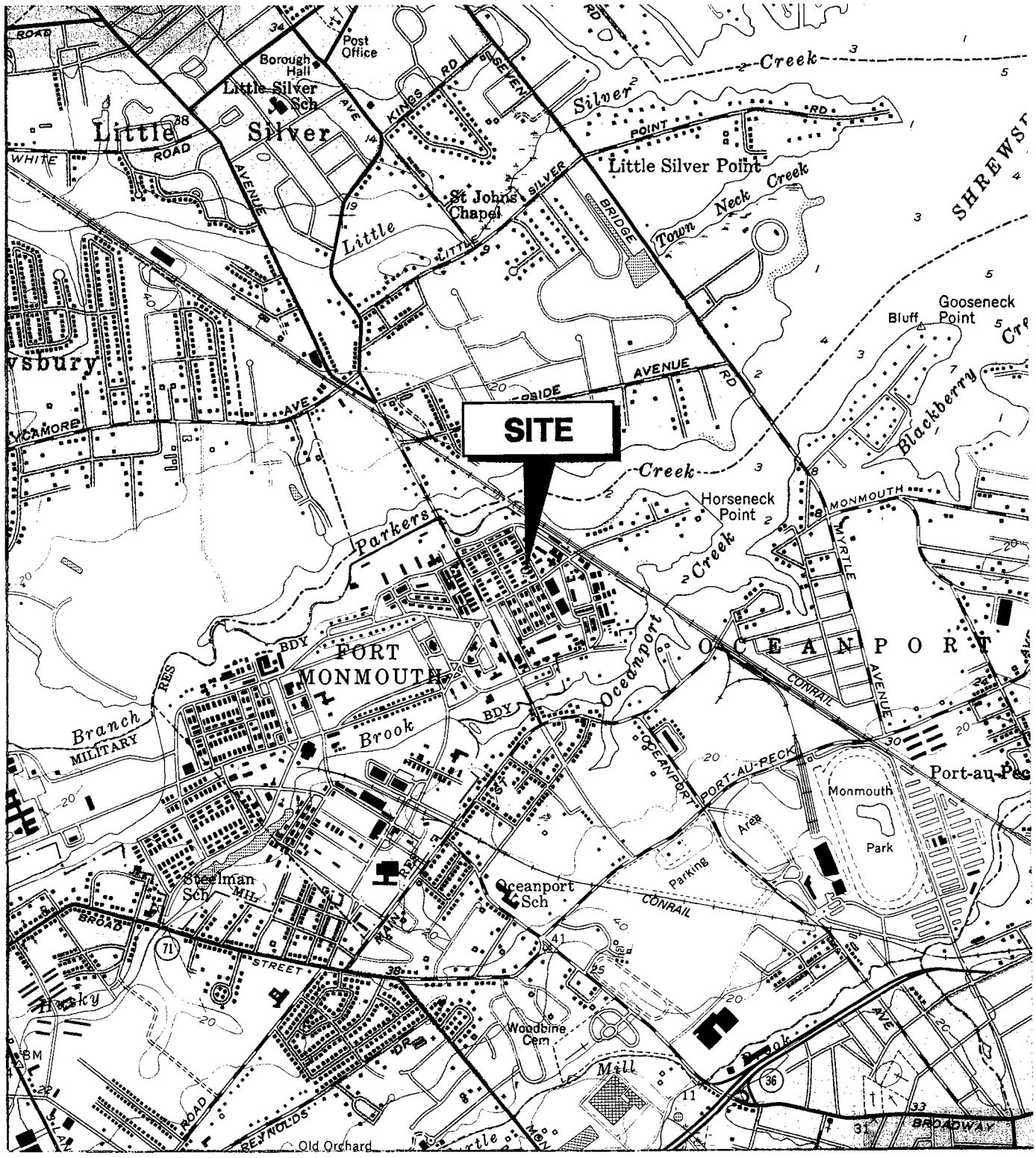
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: BCM/Smith Environmental Technologies Corporation (028)

Project No. 09-5004-07

Figure 1
Site Location Map

1.2 SITE DESCRIPTION

Building 443 is located in the northeastern portion of the Main Post area of Fort Monmouth as shown on Figure 1. UST No. 090010-49 was located north of Building 443 and appurtenant piping ran less than 15 feet north from Building 443 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 443. 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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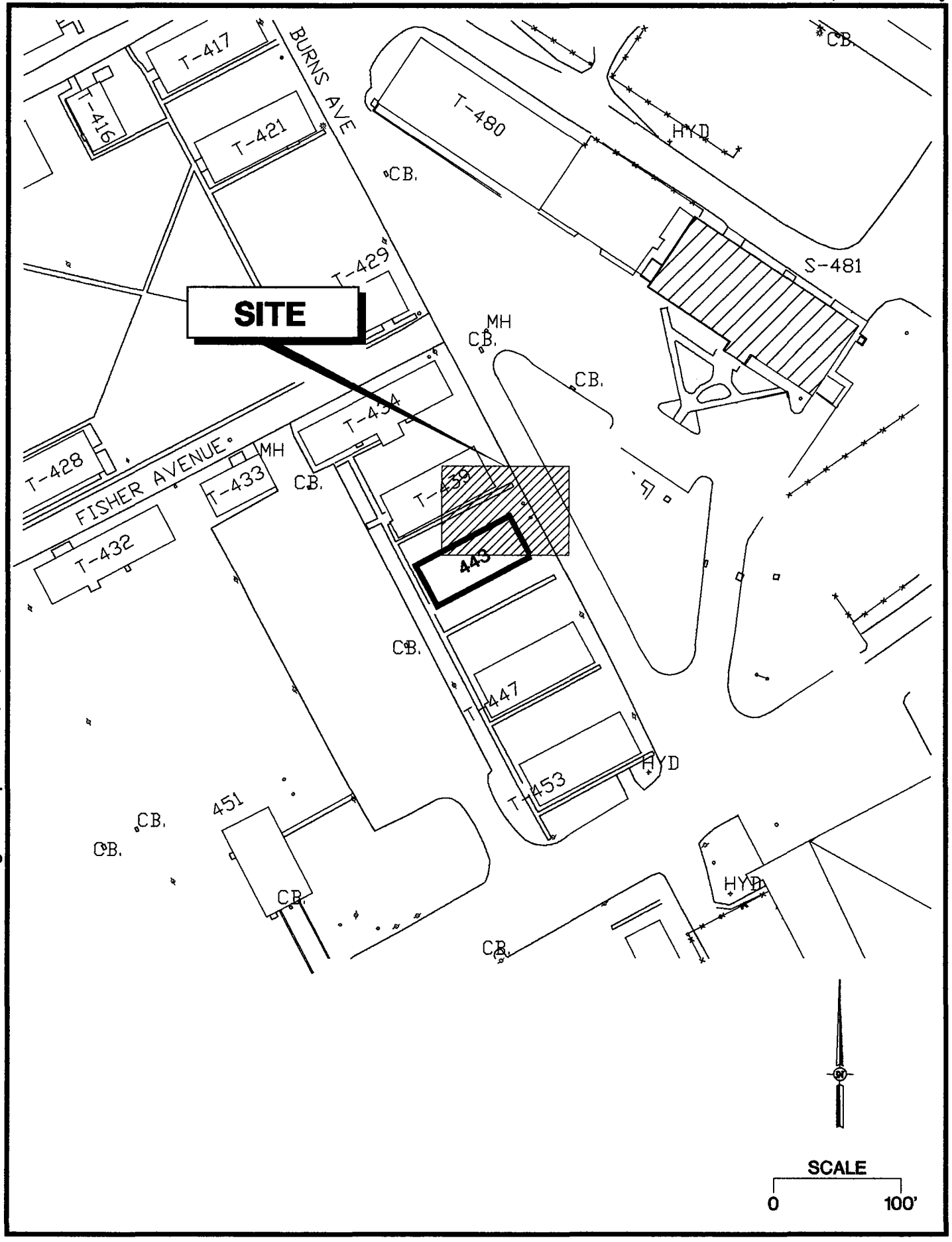

Source: BCM/Smith Environmental Technologies Corporation (054)

Project No. 09-5004-07

Figure 2
Building 443
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 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 844 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-1603192).

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 cracks 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.

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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) 532-6223
  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, H, and I, were collected from nine (9) locations along the base and sidewalls of the UST excavation. 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 38.4 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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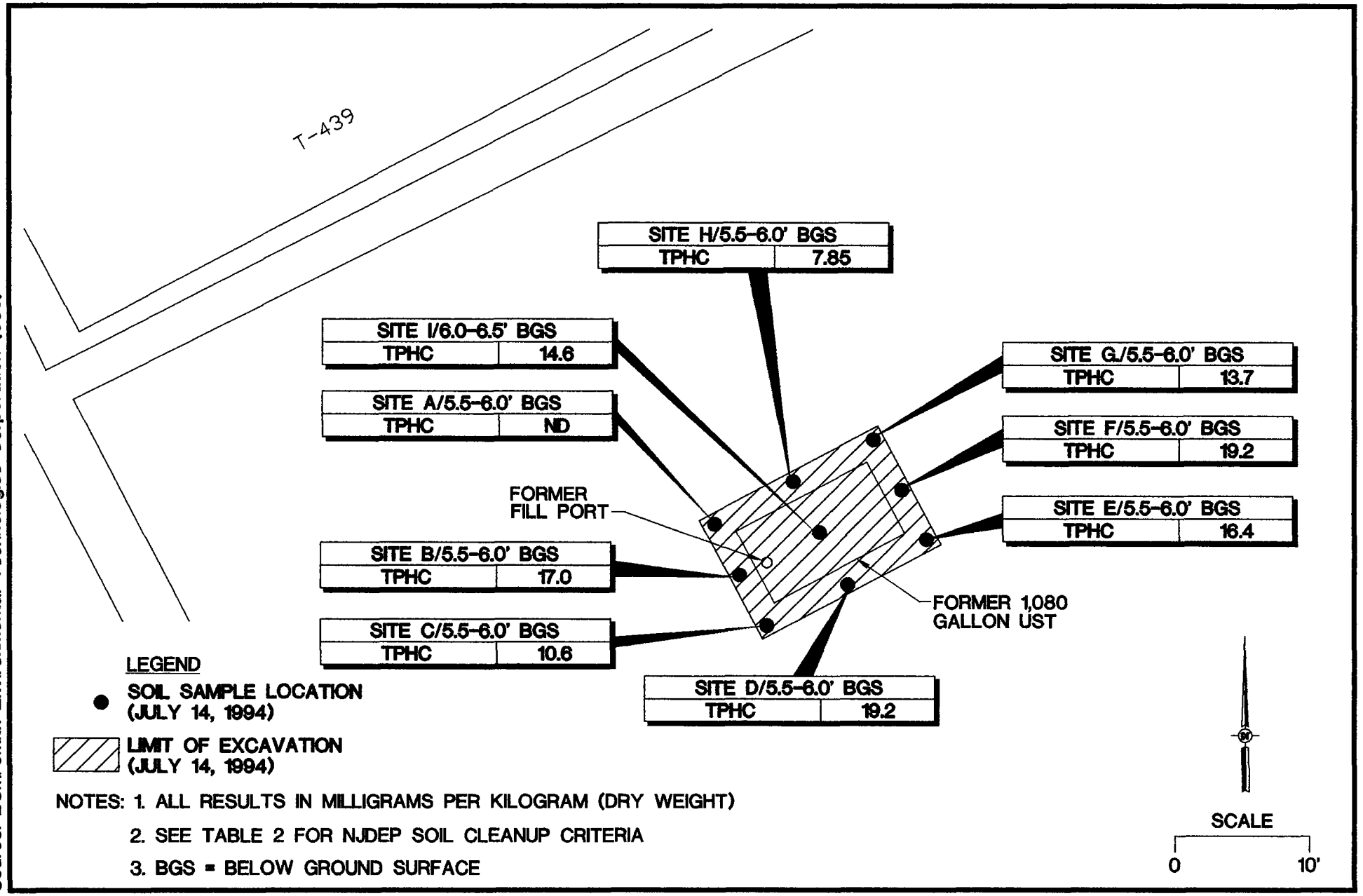
U.S. Army
Department of Public Works
Fort Monmouth, New Jersey



Source: BCM/Smith Environmental Technologies Corporation (055)

Project No. 09-5004-07

Figure 3

Building 443
Soil Sampling Results

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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 nine (9) 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. B, C, D, E, F, G, H, and I, contained levels of TPHC ranging in concentration from 7.85 mg/kg to 19.2 mg/kg. Sample A 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 443 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. 090010-49 at Building 443.

TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 443, 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
I	07-14-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop

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

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 443
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/5.5-6.0'	1566.1	07-14-94	07-15-94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	ND	10,000	--
B/5.5-6.0'	1566.2	07-14-94	07-15-94	Total Solid	--	--	85 %	--	--
				TPHC	6.6	yes	17.0	10,000	--
C/5.5-6.0'	1566.3	07-14-94	07-15-94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	10.6	10,000	--
D/5.5-6.0'	1566.4	07-14-94	07-15-94	Total Solid	--	--	89 %	--	--
				TPHC	6.6	yes	19.2	10,000	--
E/5.5-6.0'	1566.5	07-14-94	07-15-94	Total Solid	--	--	88 %	--	--
				TPHC	6.6	yes	16.4	10,000	--
F/5.5-6.0'	1566.6	07-14-94	07-15-94	Total Solid	--	--	89 %	--	--
				TPHC	6.6	yes	19.2	10,000	--
G/5.5-6.0'	1566.7	07-14-94	07-15-94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	13.7	10,000	--
H/5.5-6.0'	1566.8	07-14-94	07-15-94	Total Solid	--	--	83 %	--	--
				TPHC	6.6	yes	7.85	10,000	--
I/6.0-6.5'	1566.9	07-14-94	07-15-94	Total Solid	--	--	81 %	--	--
				TPHC	6.6	yes	14.6	10,000	--

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

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 #	UST #
C-93-3913	0081533

US Army
BLDG. 443
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 1080 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 [illegible] 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

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. 443

090010-49
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-93-3913

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. 19.2 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 Fallon SIGNATURE Joseph 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)1i].

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

NAME (Print or Type) James Ott SIGNATURE James Ott

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

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

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

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

NAME (Print or Type) _____ SIGNATURE _____

COMPANY NAME _____ DATE _____

SMITH

APPENDIX C

WASTE MANIFEST

State of New Jersey
Dep_ ..nent of Environmental Protection and En.. ..y
Hazardous Waste Regulation Program
Manifest Section
CN 023, Trenton, NJ 08625-0028

Bldg. 443

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. N J 3 2 1 0 0 2 0 5 9 7 — Manifest Document No. 03197 — 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 Electonics Command
Main Post, c/o James Shirghio, Bldg 2504
ATTN: SELFM-DL-EM-MS, Fort Monmouth, NJ 07703
4. Generator's Phone (908) 532-6223

A. State Manifest Document Number NJA 1603192
B. State Generator's ID

5. Transporter 1 Company Name: Freehold Cartage, Inc.
6. US EPA ID Number: N J D 0 5 4 1 2 6 1 6 4
C. State Trans. ID NJDEPS 2265
D. Transporter's Phone (908) 462-1001

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID

9. Designated Facility Name and Site Address
Lionetti Oil Recovery Co., Inc.
Runyon & Cheesequake Rds.
Old Bridge, NJ 08857
10. US EPA ID Number: N J D 0 8 4 0 4 4 0 6 4
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (908) 721-0900

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X Petroleum Oil, N.O.S. Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III	001	TT	00052	G	X 7 2 2
b.	X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	00844	G	X 7 2 2
c.	X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid UN1270 PG III	001	TT	00124	G	X 7 2 2
d.	X Petroleum oil, NOS class 3 (Petroleum oil) combustible liquid, UN1270 PG III	001	TT	00326	G	X 7 2 2

J. Additional Descriptions for Materials Listed Above
a. Petroleum Oil 60 % Water 40 % X % L,T
c. oil 60% water 40%
b. Pet oil 60% water 40% L,T
d. oil 60% water 40%

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. REGULATED AS HAZARDOUS WASTE BY NJ. 11a. ERG #27
24 HOUR EMERGENCY PHONE: 201-427-2881 a) NJDEPE 009010-28 c) NJDEPE 009010-37
NJ DECAL# 55404 b) NJDEPE 009010-49 d) NJDEPE 009010-37

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. 3/89) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

LDG 108 - 009001D-7
LDG 443 - 009001D-49
LDG 364 - 008533-74

MAZZA & SONS, INC.

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

NO. _____

DATE 15 July 94

Customer's Name Cute inc

Address _____

Make of Autos

Tires
Tank
Price:

43560 LB G
38740 LB G
4820

	Weight	Price
Cast Iron		
Steel		.40
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum.Clean		
Lead		
Stainless		
Radiators		
Battery		
TOTAL AMOUNT		

JUL 15 1994

Weigher (N) 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 #: 1566.1-.9
Sample Rec'd: 07/14/94
Analysis Start: 07/15/94
Analysis Comp: 07/15/94

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

NJDEPE UST Reg.#: 0090010-49
Closure #:
DICAR #:
Location #: Bldg. 443

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1566.1	Site A OVA= ND	86	ND	6.6
1566.2	Site B OVA= ND	85	17.0	6.6
1566.3	Site C OVA= ND	86	10.6	6.6
1566.4	Site D OVA= ND	89	19.2	6.6
1566.5	Site E OVA= ND	88	16.4	6.6
1566.6	Site F OVA= ND	89	19.2	6.6
1566.7	Site G OVA= ND	86	13.7	6.6
1566.8	Site H OVA= ND	83	7.85	6.6
1566.9	Site I OVA= ND	81	14.6	6.6
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1566.8 dup= 100% 1566.8 s= 100% 1566.8 sd= 94% RPD= 6.2%

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 #: 1566.1-.9
Sample Rec'd: 07/14/94
Analysis Start: 07/15/94
Analysis Comp: 07/15/94

Analysis: Munsel

Lab ID#	Soil Color
1566.1	5Y 3/2 Dark Olive Gray
1566.2	5Y 2.5/2 Black
1566.3	5Y 3/2 Dark Olive Gray
1566.4	5Y 3/2 Dark Olive Gray
1566.5	5Y 3/2 Dark Olive Gray
1566.6	5Y 3/2 Dark Olive Gray
1566.7	5Y 3/2 Dark Olive Gray
1566.8	5Y 3/2 Dark Olive Gray
1566.9	5Y 5/4 Olive

Brian K. McKee
Laboratory Director

U.S. ARMY FORT MONMOUTH

P.O. #:

Chain of Custody

Project #:	Sampler: Joe Fallon	Date / Time 7/14/[illegible] 5:00PM	Analysis Parameters	Start:
Customer: DPW	Site Name: Bldg 443 UST Registration 0090010 ID#49		TPH; VOS & Munsel	Finish:
Phone:				Preservation Method

Lab Sample ID Number	Date	Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPH	VOS & Munsel						Remarks	
1566.1	7/14	345	A	Soil	1	X							OVA Reading	ND
.2	7/14	348	B	↓	↓	X							↓	↓
.3	7/14	350	C	↓	↓	X							↓	↓
.4	7/14	352	D	↓	↓	X							↓	↓
.5	7/14	355	E	↓	↓	X							↓	↓
.6	7/14	357	F	↓	↓	X							↓	↓
.7	7/14	359	G	↓	↓	X							↓	↓
.8	7/14	401	H	↓	↓	X							↓	↓
.9	7/14	404	I	↓	↓	X							↓	↓

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
Joe Fallon	7/14/[illegible] 500PM	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.

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

Enviornmental Laboratory

Certification Number 13461

July 20, 1994 0935 D.J. Hubbard

Blank) 0 MV

40.75 107 MV

81.5 208 MV

163 411 MV

1566.1 4 MV

1566.2 8 MV

1566.3 6 MV

1566.4 9 MV

1566.5 8 MV

1566.6 9 MV

1566.7 7 MV

1566.8 5 MV

1566.8 5 MV Dup.

1566.8 34 MV (Spk)

1566.8 32 MV Dup. Spk

1566.9 7 MV

1567.1 32 MV

1567.2 18 MV

1568.1 20 MV

1570.1 24 MV

PHC Conformance/Non-conformance Summary Report

	No	Yes
1. Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank	✓	
2. Matrix Spike/Matrix Sp Dup. Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)		✓
3. IR Spectra submitted for standards, blanks, & samples		✓
4. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.		NA
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 #1566

B. McK

Brian K. McKee
Laboratory Manager

ATTACHMENT U

UST 444 File Review and Analyses

PARSONS

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

Date: *March 2, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 444*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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): *10-01-27-1916-11*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 1/19/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

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

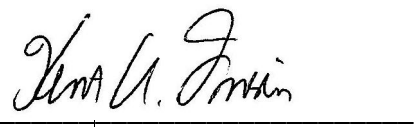
Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). Visual indications of petroleum contamination were observed in overburden soils, and holes were noted in the tank upon removal and inspection. Five soil samples from the excavation bottom and four side walls (plus one field duplicate) were collected on January 27, 2010. The soil sample results from this excavation ranged from non-detected (ND) to 3100 mg/kg for TPH, with elevated TPH measured in the east sidewall of the tank excavation. The east sidewall soil sample was also analyzed for semi-volatile organic compounds (SVOCs), and 2-methylnaphthalene, fluorene, and phenanthrene were detected at concentrations less than the current Residential Direct Contact Soil Remediation Standard (RDCSRS), while naphthalene (6.98 mg/kg) slightly exceeded the RDCSRS of 6 mg/kg in one sample. 2-Methylnaphthalene (28.17 mg/kg) exceeded the impact-to-groundwater screening level of 5 mg/kg in this soil sample. Fingerprint analysis of an oily sheen collected from the groundwater in the tank excavation was consistent with "diesel fuel No. 2," which is similar to No. 2 fuel oil.

Additional soil was removed from the east sidewall of the excavation, and final soil samples were collected on February 4, 2010; these results were ND for TPH. The final results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Therefore, soil remediation was completed, and no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 444 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 1/19/2010 ***REMOVAL CONTRACTOR:*** TVS Inc

SRF SEND DATE: ***TMS:***

DICAR NO. 10-01-27-1916-11 ***LEAK DETECT:***

REMEDIATION COMMENTS: UST had observed oil contaminated soils in overburden material and holes in UST once removed and inspected. Soil remediation completed.

REGISTRATION COMMENTS: unregulated heating oil UST as per BRAC Legal Office determination

SAS DONE: NO ***CONSULTANT:*** DPW

MWs NEEDED: no ***MONITORING WELLS:*** 0

SUB-SURFACE EVALUATOR: CharlesAppleby

CURRENT UST STATUS

UST STATUS: REMOVED RI ON-GOING ***CASE STATUS:*** Case Open

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

79-6

BLDG.#: 444 REG.#: _____

DATE: 1-19-10 TOA: _____ TOD: _____

CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: 00100 42

PERSONNEL: ANTHONY FORGIONE, MARC TAYLOR

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Y
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. (YES) NO)	Y
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	NA
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	NA
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	NA
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS CLEANED AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	NA
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP, CW, EV) HWSA	NA
900 GALLONS OF H_2O WASTE WERE REMOVED (MANIFEST#: _____)	Y
TNT 40 CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO ~~(T-80, 2624)~~ 8,490	Y
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) C. APPLEBY	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: _____	
THE UST WAS TRANSPORTED TO 103 YARD FOR DISPOSAL (ATTACH SCRAP TICKET)	
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	

CHECK ALL BOXES, LEAVE NO BLANKS

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.

CLOSURE TECH (PRINT NAME): _____

SIGNATURE: _____ DATE: _____

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

79-6

BLDG.#: 444 REG.#: _____ - _____

DATE: 1-19-10 TOA: _____ TOD: _____

SSE: FRANK ACCORSI NJDEP CERT.#: 00100 42

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 00100 42

WEATHER: PT. CLDY, 40's

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172), CASE# _____	Y
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 6.5 FEET BG, A SHEEN (WAS) WAS NOT) OBSERVED ON GW	Y
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	Y
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/(FID) RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): FRANK ACCORSI Date: 1-19-10

SIGNATURE: Frank Accorsi

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 1-19-2010
LOCATION: Parcel 79-6 EXCAVATION ID: BLDG. 444

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 6.5 ft. below grade; Sheen was observed on groundwater

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10025,10037) NO

NOTES: UST Found. 800 Gallons of oil/H2O were removed. UST was transported to 108 yard. 40 cubic yards of petrol. cont. soil were excavated and transported to B. 490. C. Appleby of DPW was notified of any discharge to the environment.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

Contract Management Division

SUBJECT: PWS-007, UST Removal
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 414

TVS Inc.
Field Supervisor, PWS-007
ATTN: Harold Hornung
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Hornung:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits or that the site requires further investigation outside the scope of this contract. The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

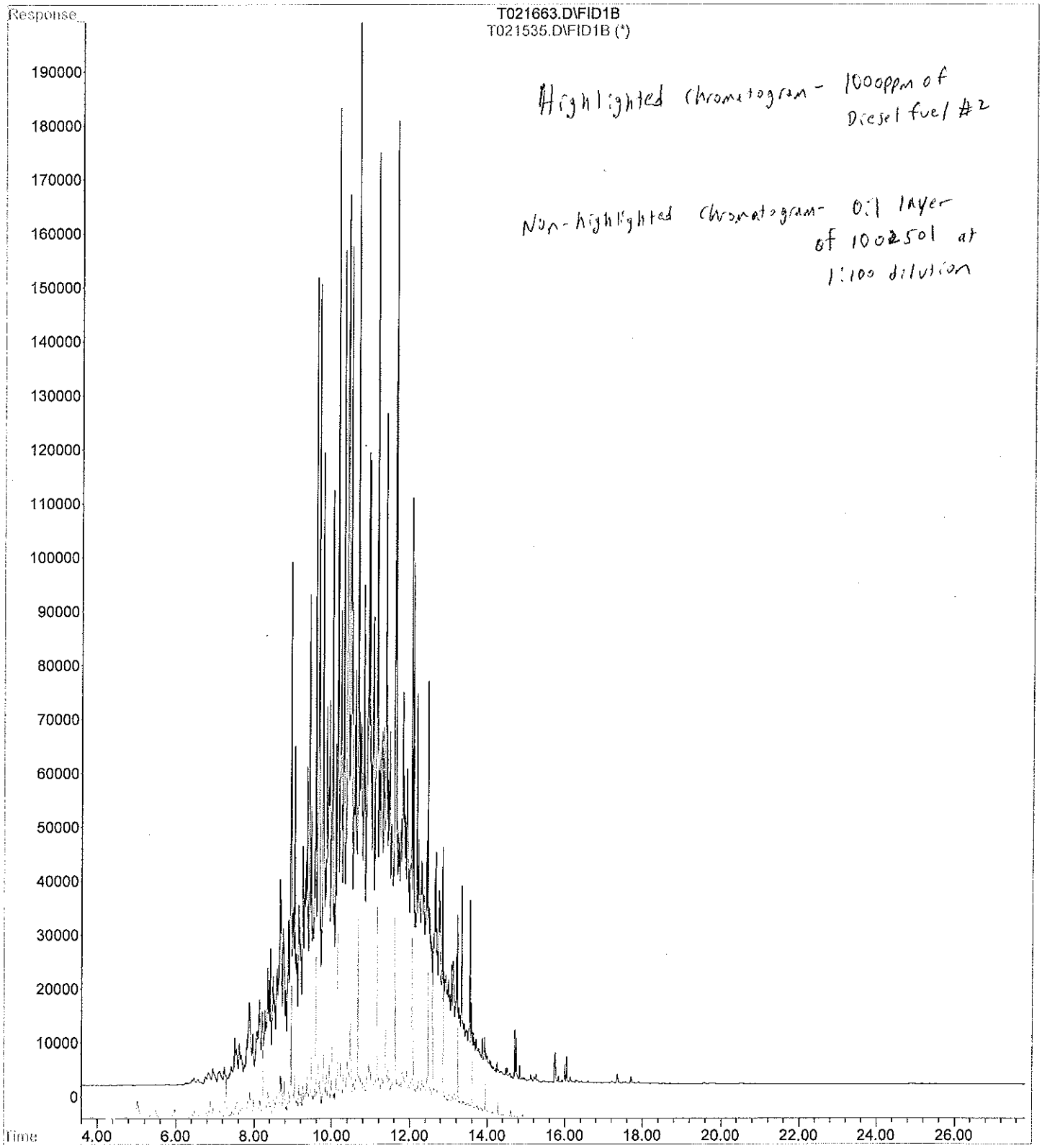
Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

CC: UST file copy

1/27/10

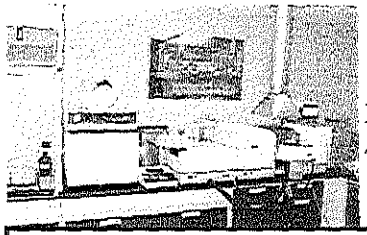
Sample 1002501 was analyzed by GC on 1/21/10 for diesel range organics. The oil layer of the sample was diluted by a factor of 100 then analyzed. The attached overlaid chromatograms are of the diluted sample and of 1000 parts per million of diesel fuel #2. The highlighted chromatogram is 1000 ppm of diesel fuel #2 and the non-highlighted is of sample 1002501. It is evident from this comparison that sample 1002501 is likely diesel fuel #2 or some other fuel in the diesel range of hydrocarbons.

File : C:\HPCHEM\1\DATA\100121\T021663.D
Operator : ROBERTS
Acquired : 21 Jan 2010 5:04 pm using AcqMethod TPHC029.M
Instrument : TPHC
Sample Name: 1002501
Misc Info : TPHC 1/21/10
Vial Number: 9



Highlighted chromatogram - 1000ppm of Diesel fuel #2

Non-highlighted chromatogram - Oil layer of 1002501 at 1:100 dilution



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
Phone #: X26292
( )DERA ( )OMA (X)Other: BRAC
Project No: 10 -
Location: PARCEL 79 BLDG. 444
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: Fingerprint Analysis	Comments: Remarks / Preservation Method
10025 01	BLDG. 444 - GW@ UST EXCAVATION	1-20-10	1450	AQ.	1	X	ICE

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	1-20-10 1500				
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.XLS11/18/2009

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: 10-72654

Parcel 79-6/Bldg. 444

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
444-A/Bottom	1003701	Soil	27-Jan-10 08:00	01/27/10
444-B/North Wall	1003702	Soil	27-Jan-10 08:25	01/27/10
444-C/West Wall	1003703	Soil	27-Jan-10 09:00	01/27/10
444-D/East Wall	1003704	Soil	27-Jan-10 09:30	01/27/10
444-E/South Wall	1003705	Soil	27-Jan-10 09:50	01/27/10
444-Duplicate	1003706	Soil	27-Jan-10 09:30	01/27/10

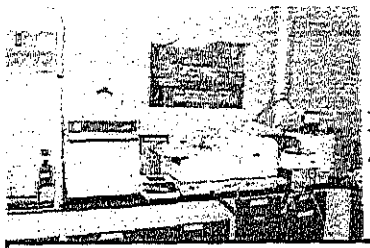
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
BN+15, TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff 2/17/10
Dean Tardiff/Date:
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY | Project No: 10-72654
Phone #: X26292 | Location: PARCEL 79-6 BLDG. 444
( )DERA ( )OMA (X)Other: BRAC
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	TCL VOLS					PID (ppm)	DEPTH (FT)	Remarks / Preservation Method
10037 01	444-A, BOTTOM	1-27-10	0800	SOIL	1	X	X					0	6.5-7	ICE
02	444-B, NORTH WALL		0825			X	X					1	3.5-4	
03	444-C, WEST WALL		0900			X	X					1	4-4.5	
04	444-D, EAST WALL		0930			X	X					52	5-5.5	
05	444-E, SOUTH WALL		0950			X	X					3	5-5.5	
06	444 - DUPLICATE		0930			X	X					14	5-5.5	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	1-27-10 1025				
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 3 DAYS wk., ( )ASAP Verbal ___ Hrs.

Comments:

200000

print legibly

new coc 1 XLS10/9/2009

SAMPLE RECEIPT FORM

Date Received: 1-27-10 Work Order ID#: 10031

Site/Proj. Name: Price/196/Bldg 444 Cooler Temp (°C): 2.0°C

Received By: J. Verduzco Sign: J. Verduzco
(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: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 444 - (1,000 G. UST)

SOIL SAMPLING 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)
444A BOTTOM	541375.778	622062.824
444B NORTH WALL	541386.214	622057.571
444C WEST WALL	541372.266	622048.044
444D EAST WALL	541383.191	622077.067
444E SOUTH WALL	541368.204	622071.669

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10037

Site: Parcel 79-6/Bldg. 444

The Field Duplicate was performed on 444-C/East Wall (1003704)

METHOD SUMMARY

Method Summary

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.

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

10037 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 Sample 1003704 results are higher than its duplicate due to Sample inhomogeneity.	No
5.	IR Spectra submitted for standards, blanks and samples	N/A
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: Dean Tarolli Date: 2/17/10

2/2/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10039 **Site:** Bldg. 448

	Date	Hold Time
Date Sampled	01/28/10	NA
Receipt/Refrigeration	01/28/10	NA

Analyses

1. Semi Volatiles	02/02/10	14 Days
2. TPHC	01/29/10	14 Days

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E030.D	Misc Info	METHOD 8270 2/2/10	Sample Weight	10.02 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	100.0 %
Date Acquired	2-Feb-10	Sample Multiplier	0.100		
Sample Name	MB02011001	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.099	0.50	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.168	0.50	mg/kg	
62-53-3	Aniline			not detected	NLE	0.266	0.50	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.193	0.50	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.167	0.50	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.174	0.50	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.257	0.50	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.194	0.50	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.224	0.50	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.252	0.50	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.189	0.50	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.226	0.50	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.240	0.50	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.198	0.50	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.219	0.50	mg/kg	
91-20-3	Naphthalene			not detected	6	0.242	0.50	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.369	0.50	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.216	0.50	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.259	0.50	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.146	0.50	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.250	0.50	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.306	0.50	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.263	0.50	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.271	0.50	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.260	0.50	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.221	0.50	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.270	0.50	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.318	0.50	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.260	0.50	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.250	0.50	mg/kg	
86-73-7	Fluorene			not detected	110	0.282	0.50	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.277	0.50	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.272	0.50	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.270	0.50	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.286	0.50	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.287	0.50	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.299	0.50	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.296	0.50	mg/kg	
120-12-7	Anthracene			not detected	1500	0.298	0.50	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.285	0.50	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.296	0.50	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	E030.D	Misc Info	METHOD 8270 2/2/10	Sample Weight	10.02 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	100.0 %
Date Acquired	2-Feb-10	Sample Multiplier	0.100		
Sample Name	MB02011001	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.268	0.50	mg/kg	
129-00-0	Pyrene			not detected	550	0.316	0.50	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.262	0.50	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.297	0.50	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.271	0.50	mg/kg	
218-01-9	Chrysene			not detected	52	0.280	0.50	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.315	0.50	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.264	0.50	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.214	0.50	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.256	0.50	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.230	0.50	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.195	0.50	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.182	0.50	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.185	0.50	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB02011001**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10037 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: MB02011001

Sample wt/vol: 10.02 (g/ml) G Lab File ID: E030.D

Level: (low/med) LOW Date Received: 1/27/2010

% Moisture: 0 decanted: (Y/N) N Date Extracted: 2/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/2/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 2 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	7.38	45000	J
2.	extraction by-product	19.91	430	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E038.D	Misc Info	444-D EAST WALL	Sample Weight	10.11 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	78.3 %
Date Acquired	2-Feb-10	Sample Multiplier	0.126		
Sample Name	1003704	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			0.00 mg/kg	NLE	0.125	0.63	mg/kg	
62-75-9	N-nitroso-dimethylamine			0.00 mg/kg	0.2	0.212	0.63	mg/kg	
62-53-3	Aniline			0.00 mg/kg	NLE	0.337	0.63	mg/kg	
111-44-4	bis-2-chloroethyl ether			0.00 mg/kg	0.2	0.244	0.63	mg/kg	
541-73-1	1,3-dichlorobenzene			0.00 mg/kg	12	0.211	0.63	mg/kg	
106-46-7	1,4-dichlorobenzene			0.00 mg/kg	1	0.220	0.63	mg/kg	
100-51-6	Benzyl alcohol			0.00 mg/kg	NLE	0.326	0.63	mg/kg	
95-50-1	1,2-dichlorobenzene			0.00 mg/kg	11	0.245	0.63	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			0.00 mg/kg	3	0.283	0.63	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			0.00 mg/kg	0.2	0.320	0.63	mg/kg	
67-72-1	Hexachloroethane			0.00 mg/kg	0.2	0.239	0.63	mg/kg	
98-95-3	Nitrobenzene			0.00 mg/kg	0.2	0.285	0.63	mg/kg	
78-59-1	Isophorone			0.00 mg/kg	0.2	0.303	0.63	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			0.00 mg/kg	NLE	0.250	0.63	mg/kg	
120-82-1	1,2,4-trichlorobenzene			0.00 mg/kg	0.4	0.277	0.63	mg/kg	
91-20-3	Naphthalene	12.99	9512903	6.98 mg/kg	6	0.306	0.63	mg/kg	
106-47-8	4-chloroaniline			0.00 mg/kg	9	0.467	0.63	mg/kg	
87-68-3	Hexachlorobutadiene			0.00 mg/kg	0.6	0.273	0.63	mg/kg	
91-57-6	2-methylnaphthalene	14.44	22659462	27.34 mg/kg	5	0.328	0.63	mg/kg	E
77-47-4	Hexachlorocyclopentadiene			0.00 mg/kg	45	0.184	0.63	mg/kg	
91-58-7	2-chloronaphthalene			0.00 mg/kg	NLE	0.317	0.63	mg/kg	
88-74-4	2-nitroaniline			0.00 mg/kg	39	0.388	0.63	mg/kg	
131-11-3	Dimethylphthalate			0.00 mg/kg	NLE	0.333	0.63	mg/kg	
208-96-8	Acenaphthylene			0.00 mg/kg	300000	0.344	0.63	mg/kg	
606-20-2	2,6-dinitrotoluene			0.00 mg/kg	0.7	0.330	0.63	mg/kg	
99-09-2	3-nitroaniline			0.00 mg/kg	NLE	0.279	0.63	mg/kg	
83-32-9	Acenaphthene			0.00 mg/kg	74	0.342	0.63	mg/kg	
132-64-9	Dibenzofuran			0.00 mg/kg	NLE	0.403	0.63	mg/kg	
121-14-2	2,4-dinitrotoluene			0.00 mg/kg	0.7	0.330	0.63	mg/kg	
84-66-2	Diethylphthalate			0.00 mg/kg	57	0.316	0.63	mg/kg	
86-73-7	Fluorene	17.70	1790007	2.67 mg/kg	110	0.357	0.63	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			0.00 mg/kg	NLE	0.351	0.63	mg/kg	
100-01-6	4-nitroaniline			0.00 mg/kg	NLE	0.345	0.63	mg/kg	
86-30-6	N-nitrosodiphenylamine			0.00 mg/kg	0.2	0.342	0.63	mg/kg	
103-33-3	Azobenzene			0.00 mg/kg	NLE	0.363	0.63	mg/kg	
101-55-3	4-bromophenyl-phenylether			0.00 mg/kg	NLE	0.364	0.63	mg/kg	
118-74-1	Hexachlorobenzene			0.00 mg/kg	0.2	0.379	0.63	mg/kg	
85-01-8	Phenanthrene	19.67	3934385	3.66 mg/kg	300000	0.375	0.63	mg/kg	
120-12-7	Anthracene			0.00 mg/kg	1500	0.378	0.63	mg/kg	
84-74-2	Di-n-butylphthalate			0.00 mg/kg	620	0.361	0.63	mg/kg	
206-44-0	Fluoranthene			0.00 mg/kg	840	0.375	0.63	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E038.D**	Misc Info	**444-D EAST WALL**	Sample Weight	**10.11 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**78.3 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.126**		
Sample Name	**1003704**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			0.00 mg/kg	0.7	0.340	0.63	mg/kg	
129-00-0	Pyrene			0.00 mg/kg	550	0.400	0.63	mg/kg	
85-68-7	Butylbenzylphthalate			0.00 mg/kg	50	0.332	0.63	mg/kg	
56-55-3	Benzo[a]anthracene			0.00 mg/kg	0.5	0.376	0.63	mg/kg	
91-94-1	3,3'-dichlorobenzidine			0.00 mg/kg	0.2	0.344	0.63	mg/kg	
218-01-9	Chrysene			0.00 mg/kg	52	0.355	0.63	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			0.00 mg/kg	35	0.399	0.63	mg/kg	
117-84-0	Di-n-octylphthalate			0.00 mg/kg	2400	0.335	0.63	mg/kg	
205-99-2	Benzo[b]fluoranthene			0.00 mg/kg	0.6	0.270	0.63	mg/kg	
207-08-9	Benzo[k]fluoranthene			0.00 mg/kg	6	0.325	0.63	mg/kg	
50-32-8	Benzo[a]pyrene			0.00 mg/kg	0.2	0.291	0.63	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			0.00 mg/kg	0.6	0.246	0.63	mg/kg	
53-70-3	Dibenz[a,h]anthracene			0.00 mg/kg	0.2	0.230	0.63	mg/kg	
191-24-2	Benzo[g,h,i]perylene			0.00 mg/kg	30000	0.234	0.63	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E049.D	Misc Info	444-D EAST WALL	Sample Weight	10.11 g
Operator	ROBERTS	Dilution factor	5	Percent Solids	78.3 %
Date Acquired	4-Feb-10	Sample Multiplier	0.632		
Sample Name	1003704 5x	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.625	3.16	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	1.061	3.16	mg/kg	
62-53-3	Aniline			not detected	NLE	1.686	3.16	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	1.219	3.16	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	1.055	3.16	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	1.099	3.16	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	1.630	3.16	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	1.225	3.16	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	1.415	3.16	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	1.598	3.16	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	1.194	3.16	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	1.427	3.16	mg/kg	
78-59-1	Isophorone			not detected	0.2	1.516	3.16	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	1.251	3.16	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	1.383	3.16	mg/kg	
91-20-3	Naphthalene	12.97	2123366	5.96 mg/kg	6	1.529	3.16	mg/kg	D
106-47-8	4-chloroaniline			not detected	9	2.337	3.16	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	1.364	3.16	mg/kg	
91-57-6	2-methylnaphthalene	14.39	6103973	28.17 mg/kg	5	1.642	3.16	mg/kg	D
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.922	3.16	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	1.585	3.16	mg/kg	
88-74-4	2-nitroaniline			not detected	39	1.939	3.16	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	1.667	3.16	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	1.718	3.16	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	1.649	3.16	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	1.396	3.16	mg/kg	
83-32-9	Acenaphthene			not detected	74	1.712	3.16	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	2.015	3.16	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	1.649	3.16	mg/kg	
84-66-2	Diethylphthalate			not detected	57	1.579	3.16	mg/kg	
86-73-7	Fluorene	17.65	457134	2.46 mg/kg	110	1.787	3.16	mg/kg	D J
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	1.756	3.16	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	1.724	3.16	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	1.712	3.16	mg/kg	
103-33-3	Azobenzene			not detected	NLE	1.813	3.16	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	1.819	3.16	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	1.895	3.16	mg/kg	
85-01-8	Phenanthrene	19.62	980666	3.70 mg/kg	300000	1.876	3.16	mg/kg	D
120-12-7	Anthracene			not detected	1500	1.889	3.16	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	1.806	3.16	mg/kg	
206-44-0	Fluoranthene			not detected	840	1.876	3.16	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E049.D**	Misc Info	**444-D EAST WALL**	Sample Weight	**10.11 g**
Operator	**ROBERTS**	Dilution factor	**5**	Percent Solids	**78.3 %**
Date Acquired	**4-Feb-10**	Sample Multiplier	**0.632**		
Sample Name	**1003704 5x**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	1.699	3.16	mg/kg	
129-00-0	Pyrene			not detected	550	2.002	3.16	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	1.661	3.16	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	1.882	3.16	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	1.718	3.16	mg/kg	
218-01-9	Chrysene			not detected	52	1.775	3.16	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	1.996	3.16	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	1.674	3.16	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	1.352	3.16	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	1.623	3.16	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	1.453	3.16	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	1.232	3.16	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	1.150	3.16	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	1.169	3.16	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: 144-D EAST WALL

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10039 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1003704

Sample wt/vol: 10.11 (g/ml) G Lab File ID: E038.D

Level: (low/med) LOW Date Received: 1/28/2010

% Moisture: 21.7 decanted: (Y/N) N Date Extracted: 2/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/2/2010

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/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	7.37	28000	J
2.	Alkane: Cyclic	14.84	7700	J
3.	Alkane: Branched	15.10	10000	J
4.	Alkane: Straight-Chain	15.41	12000	J
5.	Naphthalene, ethyl-	15.57	8100	J
6.	Naphthalene, dimethyl-	15.73	9700	J
7.	Naphthalene, dimethyl-	15.90	9700	J
8.	Alkane: Branched	16.05	10000	J
9.	Naphthalene, dimethyl-	16.13	6600	J
10.	Alkane: Straight-Chain	16.50	13000	J
11.	Naphthalene, trimethyl-	16.81	7300	J
12.	Naphthalene, trimethyl-	17.01	9200	J
13.	Alkane: Straight-Chain	17.53	17000	J
14.	Alkane: Branched	17.96	11000	J
15.	Alkane: Straight-Chain	18.50	14000	J
16.	Alkane: Branched	18.53	8900	J
17.	Alkane: Branched	18.85	7200	J
18.	Alkane: Straight-Chain	19.40	11000	J
19.	Alkane: Branched	19.46	8500	J
20.	Alkane: Branched	19.73	6500	J
21.	Alkane: Branched	20.15	7100	J
22.	Alkane: Straight-Chain	20.27	12000	J
23.	Alkane: Straight-Chain	21.08	7200	J
24.	Alkane: Straight-Chain	22.61	10000	J
25.	Alkane: Branched	23.33	7700	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E039.D	Misc Info	444 DUPLICATE	Sample Weight	10.00 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	77.7 %
Date Acquired	2-Feb-10	Sample Multiplier	0.129		
Sample Name	1003706	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			0.00 mg/kg	NLE	0.127	0.64	mg/kg	
62-75-9	N-nitroso-dimethylamine			0.00 mg/kg	0.2	0.216	0.64	mg/kg	
62-53-3	Aniline			0.00 mg/kg	NLE	0.344	0.64	mg/kg	
111-44-4	bis-2-chloroethyl ether			0.00 mg/kg	0.2	0.248	0.64	mg/kg	
541-73-1	1,3-dichlorobenzene			0.00 mg/kg	12	0.215	0.64	mg/kg	
106-46-7	1,4-dichlorobenzene			0.00 mg/kg	1	0.224	0.64	mg/kg	
100-51-6	Benzyl alcohol			0.00 mg/kg	NLE	0.332	0.64	mg/kg	
95-50-1	1,2-dichlorobenzene			0.00 mg/kg	11	0.250	0.64	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			0.00 mg/kg	3	0.288	0.64	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			0.00 mg/kg	0.2	0.326	0.64	mg/kg	
67-72-1	Hexachloroethane			0.00 mg/kg	0.2	0.243	0.64	mg/kg	
98-95-3	Nitrobenzene			0.00 mg/kg	0.2	0.291	0.64	mg/kg	
78-59-1	Isophorone			0.00 mg/kg	0.2	0.309	0.64	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			0.00 mg/kg	NLE	0.255	0.64	mg/kg	
120-82-1	1,2,4-trichlorobenzene			0.00 mg/kg	0.4	0.282	0.64	mg/kg	
91-20-3	Naphthalene	12.99	6203271	4.50 mg/kg	6	0.311	0.64	mg/kg	
106-47-8	4-chloroaniline			0.00 mg/kg	9	0.476	0.64	mg/kg	
87-68-3	Hexachlorobutadiene			0.00 mg/kg	0.6	0.278	0.64	mg/kg	
91-57-6	2-methylnaphthalene	14.42	16132271	19.26 mg/kg	5	0.335	0.64	mg/kg	E
77-47-4	Hexachlorocyclopentadiene			0.00 mg/kg	45	0.188	0.64	mg/kg	
91-58-7	2-chloronaphthalene			0.00 mg/kg	NLE	0.323	0.64	mg/kg	
88-74-4	2-nitroaniline			0.00 mg/kg	39	0.395	0.64	mg/kg	
131-11-3	Dimethylphthalate			0.00 mg/kg	NLE	0.340	0.64	mg/kg	
208-96-8	Acenaphthylene			0.00 mg/kg	300000	0.350	0.64	mg/kg	
606-20-2	2,6-dinitrotoluene			0.00 mg/kg	0.7	0.336	0.64	mg/kg	
99-09-2	3-nitroaniline			0.00 mg/kg	NLE	0.284	0.64	mg/kg	
83-32-9	Acenaphthene			0.00 mg/kg	74	0.349	0.64	mg/kg	
132-64-9	Dibenzofuran			0.00 mg/kg	NLE	0.411	0.64	mg/kg	
121-14-2	2,4-dinitrotoluene			0.00 mg/kg	0.7	0.336	0.64	mg/kg	
84-66-2	Diethylphthalate			0.00 mg/kg	57	0.322	0.64	mg/kg	
86-73-7	Fluorene	17.68	1286648	1.77 mg/kg	110	0.364	0.64	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			0.00 mg/kg	NLE	0.358	0.64	mg/kg	
100-01-6	4-nitroaniline			0.00 mg/kg	NLE	0.351	0.64	mg/kg	
86-30-6	N-nitrosodiphenylamine			0.00 mg/kg	0.2	0.349	0.64	mg/kg	
103-33-3	Azobenzene			0.00 mg/kg	NLE	0.369	0.64	mg/kg	
101-55-3	4-bromophenyl-phenylether			0.00 mg/kg	NLE	0.371	0.64	mg/kg	
118-74-1	Hexachlorobenzene			0.00 mg/kg	0.2	0.386	0.64	mg/kg	
85-01-8	Phenanthrene	19.65	2927896	2.57 mg/kg	300000	0.382	0.64	mg/kg	
120-12-7	Anthracene			0.00 mg/kg	1500	0.385	0.64	mg/kg	
84-74-2	Di-n-butylphthalate			0.00 mg/kg	620	0.368	0.64	mg/kg	
206-44-0	Fluoranthene			0.00 mg/kg	840	0.382	0.64	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E039.D**	Misc Info	**444 DUPLICATE**	Sample Weight	**10.00 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**77.7 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.129**		
Sample Name	**1003706**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			0.00 mg/kg	0.7	0.346	0.64	mg/kg	
129-00-0	Pyrene			0.00 mg/kg	550	0.408	0.64	mg/kg	
85-68-7	Butylbenzylphthalate			0.00 mg/kg	50	0.338	0.64	mg/kg	
56-55-3	Benzo[a]anthracene			0.00 mg/kg	0.5	0.384	0.64	mg/kg	
91-94-1	3,3'-dichlorobenzidine			0.00 mg/kg	0.2	0.350	0.64	mg/kg	
218-01-9	Chrysene			0.00 mg/kg	52	0.362	0.64	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			0.00 mg/kg	35	0.407	0.64	mg/kg	
117-84-0	Di-n-octylphthalate			0.00 mg/kg	2400	0.341	0.64	mg/kg	
205-99-2	Benzo[b]fluoranthene			0.00 mg/kg	0.6	0.275	0.64	mg/kg	
207-08-9	Benzo[k]fluoranthene			0.00 mg/kg	6	0.331	0.64	mg/kg	
50-32-8	Benzo[a]pyrene			0.00 mg/kg	0.2	0.296	0.64	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			0.00 mg/kg	0.6	0.251	0.64	mg/kg	
53-70-3	Dibenz[a,h]anthracene			0.00 mg/kg	0.2	0.234	0.64	mg/kg	
191-24-2	Benzo[g,h,i]perylene			0.00 mg/kg	30000	0.238	0.64	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E050.D	Misc Info	444 DUPLICATE	Sample Weight	10.00 g
Operator	ROBERTS	Dilution factor	2.5	Percent Solids	77.7 %
Date Acquired	4-Feb-10	Sample Multiplier	0.322		
Sample Name	1003706 2.5x	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.319	1.61	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.541	1.61	mg/kg	
62-53-3	Aniline			not detected	NLE	0.859	1.61	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.621	1.61	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.537	1.61	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.560	1.61	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.830	1.61	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.624	1.61	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.721	1.61	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.814	1.61	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.608	1.61	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.727	1.61	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.772	1.61	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.637	1.61	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.705	1.61	mg/kg	
91-20-3	Naphthalene	12.98	2635639	4.33 mg/kg	6	0.779	1.61	mg/kg	D
106-47-8	4-chloroaniline			not detected	9	1.190	1.61	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.695	1.61	mg/kg	
91-57-6	2-methylnaphthalene	14.40	7805100	21.10 mg/kg	5	0.837	1.61	mg/kg	D
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.470	1.61	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.808	1.61	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.988	1.61	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.849	1.61	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.875	1.61	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.840	1.61	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.711	1.61	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.872	1.61	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	1.026	1.61	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.840	1.61	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.804	1.61	mg/kg	
86-73-7	Fluorene	17.65	601365	1.89 mg/kg	110	0.911	1.61	mg/kg	D
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.894	1.61	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.878	1.61	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.872	1.61	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.923	1.61	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.927	1.61	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.965	1.61	mg/kg	
85-01-8	Phenanthrene	19.63	1282039	2.81 mg/kg	300000	0.956	1.61	mg/kg	D
120-12-7	Anthracene			not detected	1500	0.962	1.61	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.920	1.61	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.956	1.61	mg/kg	

Semi-Volatile Analysis Report
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Data File Name	**E050.D**	Misc Info	**444 DUPLICATE**	Sample Weight	**10.00 g**
Operator	**ROBERTS**	Dilution factor	**2.5**	Percent Solids	**77.7 %**
Date Acquired	**4-Feb-10**	Sample Multiplier	**0.322**		
Sample Name	**1003706 2.5x**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.866	1.61	mg/kg	
129-00-0	Pyrene			not detected	550	1.020	1.61	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.846	1.61	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.959	1.61	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.875	1.61	mg/kg	
218-01-9	Chrysene			not detected	52	0.904	1.61	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	1.017	1.61	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.853	1.61	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.689	1.61	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.827	1.61	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.740	1.61	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.627	1.61	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.586	1.61	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.595	1.61	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **444 DUPLICATE**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10039 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1003706

Sample wt/vol: 10 (g/ml) G Lab File ID: E039.D

Level: (low/med) LOW Date Received: 1/28/2010

% Moisture: 22.3 decanted: (Y/N) N Date Extracted: 2/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/2/2010

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/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkane: Straight-Chain	15.39	11000	J
2.	Naphthalene, ethyl-	15.56	7100	J
3.	Naphthalene, dimethyl-	15.72	8500	J
4.	Naphthalene, dimethyl-	15.88	8400	J
5.	Alkane: Branched	16.03	9600	J
6.	Alkane: Straight-Chain	16.48	8400	J
7.	Naphthalene, trimethyl-	16.78	5900	J
8.	Alkane: Straight-Chain	17.51	11000	J
9.	unknown hydrocarbon	17.59	5400	J
10.	Alkane: Branched	17.94	8400	J
11.	Alkane: Branched	18.10	5200	J
12.	Alkane: Straight-Chain	18.47	13000	J
13.	Alkane: Branched	18.51	9600	J
14.	Alkane: Straight-Chain	18.84	6800	J
15.	Alkane: Straight-Chain	19.38	11000	J
16.	Alkane: Straight-Chain	19.44	8300	J
17.	Alkane: Branched	19.71	6200	J
18.	Alkane: Straight-Chain	19.91	5500	J
19.	Alkane: Straight-Chain	20.25	12000	J
20.	Alkane: Straight-Chain	21.07	6800	J
21.	Alkane: Branched	21.85	5700	J
22.	Alkane: Straight-Chain	22.60	8200	J
23.	extraction by-product	7.37	31000	J
24.	Alkane: Straight-Chain	14.22	8700	J
25. 000090-12-0	Naphthalene, 1-methyl-	14.62	7000	JN

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E035.D	Misc Info	C-03 (18-24")	Sample Weight	10.05 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	90.5 %
Date Acquired	2-Feb-10	Sample Multiplier	0.110		
Sample Name	1004012	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.109	0.55	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.185	0.55	mg/kg	
62-53-3	Aniline			not detected	NLE	0.294	0.55	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.212	0.55	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.184	0.55	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.191	0.55	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.284	0.55	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.213	0.55	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.246	0.55	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.278	0.55	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.208	0.55	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.248	0.55	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.264	0.55	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.218	0.55	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.241	0.55	mg/kg	
91-20-3	Naphthalene			not detected	6	0.266	0.55	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.407	0.55	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.237	0.55	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.286	0.55	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.161	0.55	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.276	0.55	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.338	0.55	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.290	0.55	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.299	0.55	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.287	0.55	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.243	0.55	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.298	0.55	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.351	0.55	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.287	0.55	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.275	0.55	mg/kg	
86-73-7	Fluorene			not detected	110	0.311	0.55	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.306	0.55	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.300	0.55	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.298	0.55	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.316	0.55	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.317	0.55	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.330	0.55	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.327	0.55	mg/kg	
120-12-7	Anthracene			not detected	1500	0.329	0.55	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.314	0.55	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.327	0.55	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E035.D**	Misc Info	**C-03 (18-24")**	Sample Weight	**10.05 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**90.5 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.110**		
Sample Name	**1004012**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.296	0.55	mg/kg	
129-00-0	Pyrene			not detected	550	0.349	0.55	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.289	0.55	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.328	0.55	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.299	0.55	mg/kg	
218-01-9	Chrysene			not detected	52	0.309	0.55	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.347	0.55	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.291	0.55	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.235	0.55	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.283	0.55	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.253	0.55	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.214	0.55	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.200	0.55	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.203	0.55	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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:**	10-72654 PARCEL 79
Analysis:	OQA-QAM-025	**Date Received:**	27-Jan-10
Matrix:	Soil	**Date Extracted:**	28-Jan-10
Inst. ID:	GC TPHC INST. #1	**Extraction Method:**	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	**Analysis Complete:**	28-Jan-10
Injection Volume:	1 uL	**Analyst:**	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB01281001	MB01281001	1.00	15.14	100.00	23	330	0.00		
LCS01281001	LCS01281001	1.00	15.09	100.00	23	331	1085.98		
1003701	444-A BOTTOM	1.00	15.08	85.5	27	388	0.00		
1003702	444-B NORTH WALL	1.00	15.04	77.9	30	427	0.00		
1003703	444-C WEST WALL	1.00	15.20	82.3	28	400	0.00		
1003704	444-D EAST WALL	1.00	15.37	78.3	29	415	3100.47		
1003705	444-E SOUTH WALL	1.00	15.08	79.2	29	419	0.00		
1003706	444 DUPLCATE	1.00	15.33	77.7	29	420	963.89		

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

000063

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 Dean Tardiff

Date: 2/12/10

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

2/17/10

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: 10-72654

Parcel 79/Bldg. 444

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
444-F/East Wall	1004801	Soil	04-Feb-10 10:10	02/04/10
444-Duplicate	1004802	Soil	04-Feb-10 10:10	02/04/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
BN+15, TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff 3/2/10
Dean Tardiff/Date:
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY | Project No: 10-72654
Phone #: X26292 | Location: PARCEL 79
( )DERA ( )OMA (X)Other: BRAC | BLDG. 444

Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: TPH	% SOLIDS					FID (PPM)	DEPTH (FT)	Comments: Remarks / Preservation Method
10048 01	444-F, ~~NORTH~~ WALL 5.5'	2-4-10	1010	SOIL	1	X	X					0.5	5-5.5	ICE
" 02	444-DUPLICATE	"	1010	"	1	X	X					1.5	5-5.5	"

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	2-4-10 1215				
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 3 ~~wk~~ DAYS., ( )ASAP Verbal ____Hrs.

Comments:

print legibly

new coc._1.XLS8/18/2009

000002

SAMPLE RECEIPT FORM

Date Received: 2-4-10 Work Order ID#: 10048

Site/Proj. Name: [illegible] Cooler Temp (°C): 20°C

Received By: (Print name) J. Vergara Sign: [signature]

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:

Change of Chain of Custody

Lab Project ID#: PACE/ 19
Date Received: 2-4 / 2-4
Requested by: *(print)* F. Anderson
Turnaround Time: 3 DAYS

Site/Project Name: 10048 / 10051
Date of Change: 2-9-10
Sign: J. Wittig

1. Were the correct containers and/or preservatives used for the tests indicated? (Yes) No
2. Was sufficient amount of sample sent for the tests indicated? (Yes) No
3. Are samples within holding time for new analysis? (Yes) No
4. Was the change documented in the receipt logbook? (Yes) No

Received by: *(print)* _____ Sign: _____

Sample ID#	New Analysis	Sample ID#	New Analysis
10048 01	BNAs		
02	"		
10051 01	BNAs		
02	"		

Comments: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 444 - (1,000 G. UST)

SOIL SAMPLING 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)
444F EAST WALL	541379.988	622080.793

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10048

Site: Parcel 79/Bldg. 444

The Field Duplicate was performed on 444-F/East Wall (1004801)

METHOD SUMMARY

Method Summary

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.

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

12018
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: Dean Tomajko Date: 3/2/10

2/25/10

TPHC 10018

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	N/A
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: Dean Tudrej Date: 3/2/10

2/9/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10048 **Site:** Parcel 79/Bldg. 444

	Date	Hold Time
Date Sampled	02/04/10	NA
Receipt/Refrigeration	02/04/10	NA
Analyses		
1. TPHC	02/05/10	14 Days
2. Semi-Volatiles	02/17/10	14 Days

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E054.D	Misc Info	METHOD 8270 2/17/10	Sample Weight	10.19 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	85.2 %
Date Acquired	17-Feb-10	Sample Multiplier	0.115		
Sample Name	MB02121001	*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		Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	NLE	0.114	0.58	mg/kg	
62-75-9	N-nitroso-dimethylamine			not	detected	0.2	0.194	0.58	mg/kg	
62-53-3	Aniline			not	detected	NLE	0.308	0.58	mg/kg	
108-95-2	Phenol			not	detected	18000	0.286	0.58	mg/kg	
111-44-4	bis-2-chloroethyl ether			not	detected	0.2	0.222	0.58	mg/kg	
95-57-8	2-chlorophenol			not	detected	310	0.268	0.58	mg/kg	
541-73-1	1,3-dichlorobenzene			not	detected	12	0.192	0.58	mg/kg	
106-46-7	1,4-dichlorobenzene			not	detected	1	0.200	0.58	mg/kg	
100-51-6	Benzyl alcohol			not	detected	NLE	0.297	0.58	mg/kg	
95-50-1	1,2-dichlorobenzene			not	detected	11	0.223	0.58	mg/kg	
95-48-7	2-methylphenol			not	detected	310	0.317	0.58	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	3	0.258	0.58	mg/kg	
106-44-5	4-methylphenol			not	detected	31	0.355	0.58	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not	detected	0.2	0.291	0.58	mg/kg	
67-72-1	Hexachloroethane			not	detected	0.2	0.218	0.58	mg/kg	
98-95-3	Nitrobenzene			not	detected	0.2	0.260	0.58	mg/kg	
78-59-1	Isophorone			not	detected	0.2	0.276	0.58	mg/kg	
88-75-5	2-nitrophenol			not	detected	NLE	0.258	0.58	mg/kg	
105-67-9	2,4-dimethylphenol			not	detected	1200	0.294	0.58	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not	detected	NLE	0.228	0.58	mg/kg	
120-83-2	2,4-dichlorophenol			not	detected	0.4	0.290	0.58	mg/kg	
65-85-0	Benzoic acid			not	detected	NLE	0.238	0.58	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not	detected	0.4	0.252	0.58	mg/kg	
91-20-3	Naphthalene			not	detected	6	0.279	0.58	mg/kg	
106-47-8	4-chloroaniline			not	detected	9	0.426	0.58	mg/kg	
87-68-3	Hexachlorobutadiene			not	detected	0.6	0.249	0.58	mg/kg	
59-50-7	4-chloro-3-methylphenol			not	detected	NLE	0.313	0.58	mg/kg	
91-57-6	2-methylnaphthalene			not	detected	5	0.299	0.58	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not	detected	45	0.168	0.58	mg/kg	
88-06-2	2,4,6-trichlorophenol			not	detected	19	0.320	0.58	mg/kg	
95-95-4	2,4,5-trichlorophenol			not	detected	6100	0.333	0.58	mg/kg	
91-58-7	2-chloronaphthalene			not	detected	NLE	0.289	0.58	mg/kg	
88-74-4	2-nitroaniline			not	detected	39	0.354	0.58	mg/kg	
131-11-3	Dimethylphthalate			not	detected	NLE	0.304	0.58	mg/kg	
208-96-8	Acenaphthylene			not	detected	300000	0.313	0.58	mg/kg	
606-20-2	2,6-dinitrotoluene			not	detected	0.7	0.301	0.58	mg/kg	
99-09-2	3-nitroaniline			not	detected	NLE	0.255	0.58	mg/kg	
83-32-9	Acenaphthene			not	detected	74	0.312	0.58	mg/kg	
51-28-5	2,4-dinitrophenol			not	detected	120	0.200	0.58	mg/kg	
132-64-9	Dibenzofuran			not	detected	NLE	0.367	0.58	mg/kg	
100-02-07	4-nitrophenol			not	detected	NLE	0.283	0.58	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E054.D**	Misc Info	**METHOD 8270 2/17/10**	Sample Weight	**10.19 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**85.2 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.115**		
Sample Name	**MB02121001**	*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		Regulatory Level (mg/kg)*		RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	0.7	0.301	0.58	mg/kg	
84-66-2	Diethylphthalate			not	detected	57	0.288	0.58	mg/kg	
86-73-7	Fluorene			not	detected	110	0.326	0.58	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not	detected	NLE	0.320	0.58	mg/kg	
100-01-6	4-nitroaniline			not	detected	NLE	0.314	0.58	mg/kg	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	6	0.278	1.15	mg/kg	
86-30-6	N-nitrosodiphenylamine			not	detected	0.2	0.312	0.58	mg/kg	
103-33-3	Azobenzene			not	detected	NLE	0.331	0.58	mg/kg	
101-55-3	4-bromophenyl-phenylether			not	detected	NLE	0.332	0.58	mg/kg	
118-74-1	Hexachlorobenzene			not	detected	0.2	0.346	0.58	mg/kg	
87-86-5	Pentachlorophenol			not	detected	3	0.332	0.58	mg/kg	
85-01-8	Phenanthrene			not	detected	300000	0.342	0.58	mg/kg	
120-12-7	Anthracene			not	detected	1500	0.344	0.58	mg/kg	
84-74-2	Di-n-butylphthalate			not	detected	620	0.329	0.58	mg/kg	
206-44-0	Fluoranthene			not	detected	840	0.342	0.58	mg/kg	
92-87-5	Benzidine			not	detected	0.7	0.310	0.58	mg/kg	
129-00-0	Pyrene			not	detected	550	0.365	0.58	mg/kg	
85-68-7	Butylbenzylphthalate			not	detected	50	0.303	0.58	mg/kg	
56-55-3	Benzo[a]anthracene			not	detected	0.5	0.343	0.58	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not	detected	0.2	0.313	0.58	mg/kg	
218-01-9	Chrysene			not	detected	52	0.324	0.58	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	35	0.364	0.58	mg/kg	
117-84-0	Di-n-octylphthalate			not	detected	2400	0.305	0.58	mg/kg	
205-99-2	Benzo[b]fluoranthene			not	detected	0.6	0.246	0.58	mg/kg	
207-08-9	Benzo[k]fluoranthene			not	detected	6	0.296	0.58	mg/kg	
50-32-8	Benzo[a]pyrene			not	detected	0.2	0.265	0.58	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.6	0.225	0.58	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.2	0.210	0.58	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not	detected	30000	0.213	0.58	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
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: **MB02121001**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10048 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: MB02121001

Sample wt/vol: 10 (g/ml) G Lab File ID: E054.D

Level: (low/med) LOW Date Received: 2/4/2010

% Moisture: 0 decanted: (Y/N) N Date Extracted: 2/12/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/17/2010

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/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.82	1000	J
2.	extraction by-product	7.41	74000	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**E055.D**	Misc Info	**444-F EAST WALL**	Sample Weight	**10.36 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**80.4 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.120**		
Sample Name	**1004801**				

*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		Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	NLE	0.119	0.60	mg/kg	
62-75-9	N-nitroso-dimethylamine			not	detected	0.2	0.202	0.60	mg/kg	
62-53-3	Aniline			not	detected	NLE	0.321	0.60	mg/kg	
108-95-2	Phenol			not	detected	18000	0.298	0.60	mg/kg	
111-44-4	bis-2-chloroethyl ether			not	detected	0.2	0.232	0.60	mg/kg	
95-57-8	2-chlorophenol			not	detected	310	0.280	0.60	mg/kg	
541-73-1	1,3-dichlorobenzene			not	detected	12	0.200	0.60	mg/kg	
106-46-7	1,4-dichlorobenzene			not	detected	1	0.209	0.60	mg/kg	
100-51-6	Benzyl alcohol			not	detected	NLE	0.310	0.60	mg/kg	
95-50-1	1,2-dichlorobenzene			not	detected	11	0.233	0.60	mg/kg	
95-48-7	2-methylphenol			not	detected	310	0.330	0.60	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	3	0.269	0.60	mg/kg	
106-44-5	4-methylphenol			not	detected	31	0.370	0.60	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not	detected	0.2	0.304	0.60	mg/kg	
67-72-1	Hexachloroethane			not	detected	0.2	0.227	0.60	mg/kg	
98-95-3	Nitrobenzene			not	detected	0.2	0.271	0.60	mg/kg	
78-59-1	Isophorone			not	detected	0.2	0.288	0.60	mg/kg	
88-75-5	2-nitrophenol			not	detected	NLE	0.269	0.60	mg/kg	
105-67-9	2,4-dimethylphenol			not	detected	1200	0.306	0.60	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not	detected	NLE	0.238	0.60	mg/kg	
120-83-2	2,4-dichlorophenol			not	detected	0.4	0.303	0.60	mg/kg	
65-85-0	Benzoic acid			not	detected	NLE	0.249	0.60	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not	detected	0.4	0.263	0.60	mg/kg	
91-20-3	Naphthalene			not	detected	6	0.291	0.60	mg/kg	
106-47-8	4-chloroaniline			not	detected	9	0.444	0.60	mg/kg	
87-68-3	Hexachlorobutadiene			not	detected	0.6	0.259	0.60	mg/kg	
59-50-7	4-chloro-3-methylphenol			not	detected	NLE	0.327	0.60	mg/kg	
91-57-6	2-methylnaphthalene			not	detected	5	0.312	0.60	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not	detected	45	0.175	0.60	mg/kg	
88-06-2	2,4,6-trichlorophenol			not	detected	19	0.334	0.60	mg/kg	
95-95-4	2,4,5-trichlorophenol			not	detected	6100	0.347	0.60	mg/kg	
91-58-7	2-chloronaphthalene			not	detected	NLE	0.301	0.60	mg/kg	
88-74-4	2-nitroaniline			not	detected	39	0.369	0.60	mg/kg	
131-11-3	Dimethylphthalate			not	detected	NLE	0.317	0.60	mg/kg	
208-96-8	Acenaphthylene			not	detected	300000	0.327	0.60	mg/kg	
606-20-2	2,6-dinitrotoluene			not	detected	0.7	0.313	0.60	mg/kg	
99-09-2	3-nitroaniline			not	detected	NLE	0.265	0.60	mg/kg	
83-32-9	Acenaphthene			not	detected	74	0.325	0.60	mg/kg	
51-28-5	2,4-dinitrophenol			not	detected	120	0.209	0.60	mg/kg	
132-64-9	Dibenzofuran			not	detected	NLE	0.383	0.60	mg/kg	
100-02-07	4-nitrophenol			not	detected	NLE	0.295	0.60	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	E055.D	Misc Info	444-F EAST WALL	Sample Weight	10.36 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	80.4 %
Date Acquired	17-Feb-10	Sample Multiplier	0.120		
Sample Name	1004801	*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		Regulatory Level (mg/kg)*		RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	0.7	0.313	0.60	mg/kg	
84-66-2	Diethylphthalate			not	detected	57	0.300	0.60	mg/kg	
86-73-7	Fluorene			not	detected	110	0.340	0.60	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not	detected	NLE	0.334	0.60	mg/kg	
100-01-6	4-nitroaniline			not	detected	NLE	0.328	0.60	mg/kg	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	6	0.289	1.20	mg/kg	
86-30-6	N-nitrosodiphenylamine			not	detected	0.2	0.325	0.60	mg/kg	
103-33-3	Azobenzene			not	detected	NLE	0.345	0.60	mg/kg	
101-55-3	4-bromophenyl-phenylether			not	detected	NLE	0.346	0.60	mg/kg	
118-74-1	Hexachlorobenzene			not	detected	0.2	0.360	0.60	mg/kg	
87-86-5	Pentachlorophenol			not	detected	3	0.346	0.60	mg/kg	
85-01-8	Phenanthrene			not	detected	300000	0.357	0.60	mg/kg	
120-12-7	Anthracene			not	detected	1500	0.359	0.60	mg/kg	
84-74-2	Di-n-butylphthalate			not	detected	620	0.343	0.60	mg/kg	
206-44-0	Fluoranthene			not	detected	840	0.357	0.60	mg/kg	
92-87-5	Benzidine			not	detected	0.7	0.323	0.60	mg/kg	
129-00-0	Pyrene			not	detected	550	0.381	0.60	mg/kg	
85-68-7	Butylbenzylphthalate			not	detected	50	0.316	0.60	mg/kg	
56-55-3	Benzo[a]anthracene			not	detected	0.5	0.358	0.60	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not	detected	0.2	0.327	0.60	mg/kg	
218-01-9	Chrysene			not	detected	52	0.337	0.60	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	35	0.379	0.60	mg/kg	
117-84-0	Di-n-octylphthalate			not	detected	2400	0.318	0.60	mg/kg	
205-99-2	Benzo[b]fluoranthene			not	detected	0.6	0.257	0.60	mg/kg	
207-08-9	Benzo[k]fluoranthene			not	detected	6	0.309	0.60	mg/kg	
50-32-8	Benzo[a]pyrene			not	detected	0.2	0.276	0.60	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.6	0.234	0.60	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.2	0.219	0.60	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not	detected	30000	0.222	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
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: **444-F EAST WALL**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10048 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1004801

Sample wt/vol: 10.36 (g/ml) G Lab File ID: E055.D

Level: (low/med) LOW Date Received: 2/4/2010

% Moisture: 19.6 decanted: (Y/N) N Date Extracted: 2/12/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/17/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 8 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.01	510	J
2.	extraction by-product	6.83	1300	J
3.	extraction by-product	7.42	94000	J
4.	extraction by-product	8.65	570	J
5.	Alkane: Straight-Chain	18.40	550	J
6.	Alkane: Branched	18.44	620	J
7.	extraction by-product	19.91	550	J
8.	unknown hydrocarbon	24.67	870	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E056.D	Misc Info	444 DUPLICATE	Sample Weight	10.21 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	81.5 %
Date Acquired	17-Feb-10	Sample Multiplier	0.120		
Sample Name	1004802	*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		Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	NLE	0.119	0.60	mg/kg	
62-75-9	N-nitroso-dimethylamine			not	detected	0.2	0.202	0.60	mg/kg	
62-53-3	Aniline			not	detected	NLE	0.321	0.60	mg/kg	
108-95-2	Phenol			not	detected	18000	0.298	0.60	mg/kg	
111-44-4	bis-2-chloroethyl ether			not	detected	0.2	0.232	0.60	mg/kg	
95-57-8	2-chlorophenol			not	detected	310	0.280	0.60	mg/kg	
541-73-1	1,3-dichlorobenzene			not	detected	12	0.201	0.60	mg/kg	
106-46-7	1,4-dichlorobenzene			not	detected	1	0.209	0.60	mg/kg	
100-51-6	Benzyl alcohol			not	detected	NLE	0.310	0.60	mg/kg	
95-50-1	1,2-dichlorobenzene			not	detected	11	0.233	0.60	mg/kg	
95-48-7	2-methylphenol			not	detected	310	0.330	0.60	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	3	0.269	0.60	mg/kg	
106-44-5	4-methylphenol			not	detected	31	0.370	0.60	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not	detected	0.2	0.304	0.60	mg/kg	
67-72-1	Hexachloroethane			not	detected	0.2	0.227	0.60	mg/kg	
98-95-3	Nitrobenzene			not	detected	0.2	0.272	0.60	mg/kg	
78-59-1	Isophorone			not	detected	0.2	0.288	0.60	mg/kg	
88-75-5	2-nitrophenol			not	detected	NLE	0.269	0.60	mg/kg	
105-67-9	2,4-dimethylphenol			not	detected	1200	0.306	0.60	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not	detected	NLE	0.238	0.60	mg/kg	
120-83-2	2,4-dichlorophenol			not	detected	0.4	0.303	0.60	mg/kg	
65-85-0	Benzoic acid			not	detected	NLE	0.249	0.60	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not	detected	0.4	0.263	0.60	mg/kg	
91-20-3	Naphthalene			not	detected	6	0.291	0.60	mg/kg	
106-47-8	4-chloroaniline			not	detected	9	0.445	0.60	mg/kg	
87-68-3	Hexachlorobutadiene			not	detected	0.6	0.260	0.60	mg/kg	
59-50-7	4-chloro-3-methylphenol			not	detected	NLE	0.327	0.60	mg/kg	
91-57-6	2-methylnaphthalene			not	detected	5	0.312	0.60	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not	detected	45	0.175	0.60	mg/kg	
88-06-2	2,4,6-trichlorophenol			not	detected	19	0.334	0.60	mg/kg	
95-95-4	2,4,5-trichlorophenol			not	detected	6100	0.347	0.60	mg/kg	
91-58-7	2-chloronaphthalene			not	detected	NLE	0.302	0.60	mg/kg	
88-74-4	2-nitroaniline			not	detected	39	0.369	0.60	mg/kg	
131-11-3	Dimethylphthalate			not	detected	NLE	0.317	0.60	mg/kg	
208-96-8	Acenaphthylene			not	detected	300000	0.327	0.60	mg/kg	
606-20-2	2,6-dinitrotoluene			-0.22	detected	0.7	0.314	0.60	mg/kg	
99-09-2	3-nitroaniline			not	detected	NLE	0.266	0.60	mg/kg	
83-32-9	Acenaphthene			not	detected	74	0.326	0.60	mg/kg	
51-28-5	2,4-dinitrophenol			not	detected	120	0.209	0.60	mg/kg	
132-64-9	Dibenzofuran			not	detected	NLE	0.383	0.60	mg/kg	
100-02-07	4-nitrophenol			not	detected	NLE	0.296	0.60	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E056.D**	Misc Info	**444 DUPLICATE**	Sample Weight	**10.21 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**81.5 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.120**		
Sample Name	**1004802**	*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		Regulatory Level (mg/kg)*		RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	0.7	0.314	0.60	mg/kg	
84-66-2	Diethylphthalate			not	detected	57	0.300	0.60	mg/kg	
86-73-7	Fluorene			not	detected	110	0.340	0.60	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not	detected	NLE	0.334	0.60	mg/kg	
100-01-6	4-nitroaniline			not	detected	NLE	0.328	0.60	mg/kg	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	6	0.290	1.20	mg/kg	
86-30-6	N-nitrosodiphenylamine			not	detected	0.2	0.326	0.60	mg/kg	
103-33-3	Azobenzene			not	detected	NLE	0.345	0.60	mg/kg	
101-55-3	4-bromophenyl-phenylether			not	detected	NLE	0.346	0.60	mg/kg	
118-74-1	Hexachlorobenzene			not	detected	0.2	0.361	0.60	mg/kg	
87-86-5	Pentachlorophenol			not	detected	3	0.346	0.60	mg/kg	
85-01-8	Phenanthrene			not	detected	300000	0.357	0.60	mg/kg	
120-12-7	Anthracene			not	detected	1500	0.359	0.60	mg/kg	
84-74-2	Di-n-butylphthalate			not	detected	620	0.344	0.60	mg/kg	
206-44-0	Fluoranthene			not	detected	840	0.357	0.60	mg/kg	
92-87-5	Benzidine			not	detected	0.7	0.323	0.60	mg/kg	
129-00-0	Pyrene			not	detected	550	0.381	0.60	mg/kg	
85-68-7	Butylbenzylphthalate			not	detected	50	0.316	0.60	mg/kg	
56-55-3	Benzo[a]anthracene			not	detected	0.5	0.358	0.60	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not	detected	0.2	0.327	0.60	mg/kg	
218-01-9	Chrysene			not	detected	52	0.338	0.60	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	35	0.380	0.60	mg/kg	
117-84-0	Di-n-octylphthalate			not	detected	2400	0.318	0.60	mg/kg	
205-99-2	Benzo[b]fluoranthene			not	detected	0.6	0.257	0.60	mg/kg	
207-08-9	Benzo[k]fluoranthene			not	detected	6	0.309	0.60	mg/kg	
50-32-8	Benzo[a]pyrene			not	detected	0.2	0.276	0.60	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.6	0.234	0.60	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.2	0.219	0.60	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not	detected	30000	0.222	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
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: **444 DUPLICATE**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10048 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1004802

Sample wt/vol: 10.21 (g/ml) G Lab File ID: E056.D

Level: (low/med) LOW Date Received: 2/4/2010

% Moisture: 18.5 decanted: (Y/N) N Date Extracted: 2/12/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/17/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 6 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.01	510	J
2.	extraction by-product	6.84	1500	J
3.	extraction by-product	7.43	100000	J
4.	extraction by-product	8.65	590	J
5.	extraction by-product	19.91	540	J
6.	unknown hydrocarbon	24.67	720	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E081.D	Misc Info	C-05 (0-6")	Sample Weight	10.05 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	83.8 %
Date Acquired	23-Feb-10	Sample Multiplier	0.119		
Sample Name	1005008	*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		Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	NLE	0.118	0.59	mg/kg	
62-75-9	N-nitroso-dimethylamine			not	detected	0.2	0.199	0.59	mg/kg	
62-53-3	Aniline			not	detected	NLE	0.317	0.59	mg/kg	
108-95-2	Phenol			not	detected	18000	0.294	0.59	mg/kg	
111-44-4	bis-2-chloroethyl ether			not	detected	0.2	0.229	0.59	mg/kg	
95-57-8	2-chlorophenol			not	detected	310	0.277	0.59	mg/kg	
541-73-1	1,3-dichlorobenzene			not	detected	12	0.198	0.59	mg/kg	
106-46-7	1,4-dichlorobenzene			not	detected	1	0.207	0.59	mg/kg	
100-51-6	Benzyl alcohol			not	detected	NLE	0.306	0.59	mg/kg	
95-50-1	1,2-dichlorobenzene			not	detected	11	0.230	0.59	mg/kg	
95-48-7	2-methylphenol			not	detected	310	0.327	0.59	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	3	0.266	0.59	mg/kg	
106-44-5	4-methylphenol			not	detected	31	0.366	0.59	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not	detected	0.2	0.300	0.59	mg/kg	
67-72-1	Hexachloroethane			not	detected	0.2	0.224	0.59	mg/kg	
98-95-3	Nitrobenzene			not	detected	0.2	0.268	0.59	mg/kg	
78-59-1	Isophorone			not	detected	0.2	0.285	0.59	mg/kg	
88-75-5	2-nitrophenol			not	detected	NLE	0.266	0.59	mg/kg	
105-67-9	2,4-dimethylphenol			not	detected	1200	0.303	0.59	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not	detected	NLE	0.235	0.59	mg/kg	
120-83-2	2,4-dichlorophenol			not	detected	0.4	0.299	0.59	mg/kg	
65-85-0	Benzoic acid			not	detected	NLE	0.246	0.59	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not	detected	0.4	0.260	0.59	mg/kg	
91-20-3	Naphthalene			not	detected	6	0.287	0.59	mg/kg	
106-47-8	4-chloroaniline			not	detected	9	0.439	0.59	mg/kg	
87-68-3	Hexachlorobutadiene			not	detected	0.6	0.256	0.59	mg/kg	
59-50-7	4-chloro-3-methylphenol			not	detected	NLE	0.323	0.59	mg/kg	
91-57-6	2-methylnaphthalene	14.37	9506	not	detected	5	0.309	0.59	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not	detected	45	0.173	0.59	mg/kg	
88-06-2	2,4,6-trichlorophenol			not	detected	19	0.330	0.59	mg/kg	
95-95-4	2,4,5-trichlorophenol			not	detected	6100	0.343	0.59	mg/kg	
91-58-7	2-chloronaphthalene			not	detected	NLE	0.298	0.59	mg/kg	
88-74-4	2-nitroaniline			not	detected	39	0.365	0.59	mg/kg	
131-11-3	Dimethylphthalate			not	detected	NLE	0.313	0.59	mg/kg	
208-96-8	Acenaphthylene			not	detected	300000	0.323	0.59	mg/kg	
606-20-2	2,6-dinitrotoluene			not	detected	0.7	0.310	0.59	mg/kg	
99-09-2	3-nitroaniline			not	detected	NLE	0.262	0.59	mg/kg	
83-32-9	Acenaphthene			not	detected	74	0.322	0.59	mg/kg	
51-28-5	2,4-dinitrophenol			not	detected	120	0.207	0.59	mg/kg	
132-64-9	Dibenzofuran			not	detected	NLE	0.379	0.59	mg/kg	
100-02-07	4-nitrophenol			not	detected	NLE	0.292	0.59	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	E081.D	Misc Info	C-05 (0-6")	Sample Weight	10.05 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	83.8 %
Date Acquired	23-Feb-10	Sample Multiplier	0.119		
Sample Name	1005008	*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		Regulatory Level (mg/kg)*	RL			Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	0.7	0.310	0.59	mg/kg	
84-66-2	Diethylphthalate			not	detected	57	0.297	0.59	mg/kg	
86-73-7	Fluorene			not	detected	110	0.336	0.59	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not	detected	NLE	0.330	0.59	mg/kg	
100-01-6	4-nitroaniline			not	detected	NLE	0.324	0.59	mg/kg	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	6	0.286	1.19	mg/kg	
86-30-6	N-nitrosodiphenylamine			not	detected	0.2	0.322	0.59	mg/kg	
103-33-3	Azobenzene			not	detected	NLE	0.341	0.59	mg/kg	
101-55-3	4-bromophenyl-phenylether			not	detected	NLE	0.342	0.59	mg/kg	
118-74-1	Hexachlorobenzene			not	detected	0.2	0.356	0.59	mg/kg	
87-86-5	Pentachlorophenol			not	detected	3	0.342	0.59	mg/kg	
85-01-8	Phenanthrene			not	detected	300000	0.353	0.59	mg/kg	
120-12-7	Anthracene			not	detected	1500	0.355	0.59	mg/kg	
84-74-2	Di-n-butylphthalate			not	detected	620	0.340	0.59	mg/kg	
206-44-0	Fluoranthene			not	detected	840	0.353	0.59	mg/kg	
92-87-5	Benzidine			not	detected	0.7	0.319	0.59	mg/kg	
129-00-0	Pyrene			not	detected	550	0.376	0.59	mg/kg	
85-68-7	Butylbenzylphthalate			not	detected	50	0.312	0.59	mg/kg	
56-55-3	Benzo[a]anthracene			not	detected	0.5	0.354	0.59	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not	detected	0.2	0.323	0.59	mg/kg	
218-01-9	Chrysene			not	detected	52	0.334	0.59	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	35	0.375	0.59	mg/kg	
117-84-0	Di-n-octylphthalate			not	detected	2400	0.315	0.59	mg/kg	
205-99-2	Benzo[b]fluoranthene			not	detected	0.6	0.254	0.59	mg/kg	
207-08-9	Benzo[k]fluoranthene			not	detected	6	0.305	0.59	mg/kg	
50-32-8	Benzo[a]pyrene			not	detected	0.2	0.273	0.59	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.6	0.232	0.59	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.2	0.216	0.59	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not	detected	30000	0.220	0.59	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
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

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:**	10-72654 PARCEL 79
Analysis:	OQA-QAM-025	**Date Received:**	4-Feb-10
Matrix:	Soil	**Date Extracted:**	5-Feb-10
Inst. ID:	GC TPHC INST. #1	**Extraction Method:**	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	**Analysis Complete:**	5-Feb-10
Injection Volume:	1 uL	**Analyst:**	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB02051001	MB02051001	1.00	15.05	100.00	23	332	0.00		
LCS02051001	LCS02051001	1.00	15.06	100.00	23	332	1203.82		
1004801	444-F EAST WALL	1.00	15.02	80.4	29	414	0.00		
1004802	444 DUPLICATE	1.00	15.24	81.5	28	403	0.00		

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

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: 3/2/16

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 3/21

Dean Tardiff
Laboratory Manager

ATTACHMENT V

UST 445 File Review and Analyses

PARSONS

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

Date: *March 2, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 445*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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

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

NJDEP Release No. or DICAR (If applicable): *None*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 3/11/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

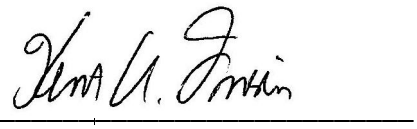
Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). Five samples from the excavation bottom and four side walls (plus one field duplicate) were collected on May 7, 2010. The final soil sample results from this excavation were all non-detected (ND) for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 445 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 3/11/2010 ***REMOVAL CONTRACTOR:*** TVS Inc.

SRF SEND DATE: ***TMS:***

DICAR NO. ***LEAK DETECT:***

REMEDIATION COMMENTS: Site AKA ECP Parcel 79-16. 75 gal of water removed from UST. Demoed building site. No discharge observed.

REGISTRATION COMMENTS: UHOT as per BRAC Legal Office. Not reg w/NJDEP no fees paid.

SAS DONE: ***CONSULTANT:*** DPW

MWs NEEDED: ***MONITORING WELLS:***

SUB-SURFACE EVALUATOR: Accorsi Frank

CURRENT UST STATUS

UST STATUS: REMOVED CLEAN SITE SAS REQ ***CASE STATUS:*** Case Closed

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

PARCEL 79-16

BLDG.#: 495 REG.#: _____ - _____

DATE: 3-10-10 TOA: _____ TOD: _____

SSE: FRANK ACCORSI NJDEP CERT.#: 0010042

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 0010042

WEATHER: CLOUDY, WINDY, 40'S

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172), CASE# _____	,
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 5 FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	Y
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	N
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/(PID) RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	Y
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	Y
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	Y

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): FRANK ACCORSI Date: 3-10-10

SIGNATURE: Frank Accorsi

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

PARCEL 79-16

BLDG.#: 495 REG.#: _____ - _____

DATE: 3-10-10 TOA: _____ TOD: _____

CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: 0010092

PERSONNEL: FRANK ACCORSI, ANTHONY FORGIONE, MARK TAYLOR

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Y
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. (YES) NO)	Y
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	NA
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	NA
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	NA
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS CLEANED AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	NA
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP, CW, EV) HWSA	NA
72 GALLONS OF WATER WASTE WERE REMOVED (MANIFEST#: _____)	Y
_____ CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) C. APPLEBY	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: _____	Y
THE UST WAS TRANSPORTED TO 108 YARD → R.B. RECYCLING FOR DISPOSAL (ATTACH SCRAP TICKET)	Y
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	Y

CHECK ALL BOXES, LEAVE NO BLANKS

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.

CLOSURE TECH (PRINT NAME): FRANK ACCORSI

SIGNATURE: Frank Accorsi DATE: 3-10-10

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 3-10-2010
LOCATION: Parcel 79-16 EXCAVATION ID: BLDG. 445

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 5 ft. below grade

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10177) NO

NOTES: UST Found and removed on 3/10/2010. UST cleaned and no residual liquids were left in the tank. 72 gallons of water were removed. UST was transported to 108 yard and then to Red Bank Recycling. C. Appleby of DPW was notified of any discharge to the environment. _____

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

13 May 2010

Contract Management Division

SUBJECT: PWS-007, UST Removal
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 445

TVS Inc.
Field Supervisor, PWS-007
ATTN: Harold Hornung
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Hornung:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits or that the site requires further investigation outside the scope of this contract. The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

CC: UST file copy

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: 10-127102

PARCEL/79-16 Bldg. 445

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
445-A, North Wall	1017701	Soil	07-May-10 14:00	05/07/10
445-B, South Wall	1017702	Soil	07-May-10 15:00	05/07/10
445-C, East Wall	1017703	Soil	07-May-10 14:22	05/07/10
445-D, West Wall	1017704	Soil	07-May-10 14:50	05/07/10
445-E, Bottom	1017705	Soil	07-May-10 14:35	05/07/10
445-Duplicate	1017706	Soil	07-May-10 15:00	05/07/10

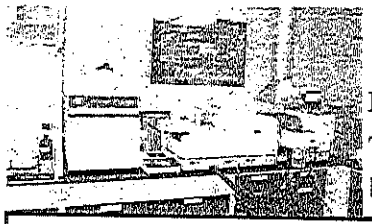
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 6/2/10
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X26292
( )DERA ( )OMA (X)Other: BRAC

Project No: 10-127102
Location: PARCEL 79-16
(FORMER) BUILDING 445

Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: * TPH	% SOLIDS					FID (ppm)	DEPTH (FT)	Comments: Remarks / Preservation Method
10177.01	445-A, NORTH WALL	5-7-10	1400	SOIL	1	X	X					0	5-5.5	ICE
.02	445-B, SOUTH WALL		1500			X	X					0	5-5.5	
.03	445-C, EAST WALL		1422			X	X					0	5-5.5	
.04	445-D, WEST WALL		1450			X	X					0	5-5.5	
.05	445-E, BOTTOM		1435			X	X					0	6-6.5	
.06	445- DUPLICATE		1500			X	X					0	5-5.5	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	5-7-10 1530	[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 3 wks, (X)Rush 3 Wk., ( )ASAP Verbal ___ Hrs.
3 DAYS

Comments: * CONTIGENT BN#15 ON 25% OF SAMPLES > 1,000 PPM TPH

print legibly

new coc._1.XLS11/18/2009

210012

SAMPLE RECEIPT FORM

Date Received: 5/7/10 Work Order ID#: 10177

Site/Proj. Name: Parcel 79-1 Cooler Temp (°C): 4°C

Received By: Dean Tarditi Sign: Dean Tarditi
(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
			10177-01		N/A
			02		N/A
			03		N/A
			04		N/A
			05		N/A
			06		N/A

Comments: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 445- (1,000 G. UST)

SOIL SAMPLING 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)
445A NORTH WALL	541562.695	622285.059
445B SOUTH WALL	541556.843	622295.902
445C EAST WALL	541565.739	622295.914
445D WEST WALL	541552.539	622281.05
445E BOTTOM	541557.757	622288.906

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10177

Site: Parcel 79-16/Bldg. 445

The Field Duplicate was performed on 445-B/South Wall (1017702)

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

10/77 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).	Yes
5.	IR Spectra submitted for standards, blanks and samples.	N/A
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: 6/2/10

5/24/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10177 **Site:** Parcel 79-16/Bldg. 445

	Date	Hold Time
Date Sampled	05/07/10	NA
Receipt/Refrigeration	05/07/10	NA
Analyses		
1. TPHC	05/10/10	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 #: 10-127102
Location: PARCEL 79
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix:
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Volume: 1 uL

Date Received: 7-May-10
Date Extracted: 10-May-10
Extraction Method: Shake
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB05101001	MB05101001	1.00	15.05	100.00	23	332	not detected		
LCS05101001	LCS05101001	1.00	15.05	100.00	23	332	1019.89		
1017701	445-A NORTH WALL	1.00	15.10	82.0	28	404	not detected		
1017702	445-B SOUTH WALL	1.00	15.08	83.0	28	399	not detected		
1017703	445-C EAST WALL	1.00	15.35	84.8	27	384	not detected		
1017704	445-D WEST WALL	1.00	15.12	84.4	27	392	not detected		
1017705	445-E BOTTOM	1.00	15.17	79.1	29	417	not detected		
1017706	445 DUPLICATE	1.00	15.20	83.3	28	395	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

000015

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: 6/2/10

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 6/2/10
Dean Tardiff
Laboratory Manager

ATTACHMENT W

UST 448 File Review and Analyses

PARSONS

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

Date: *March 2, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 448*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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): *10-01-28-1005-30*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 1/27/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

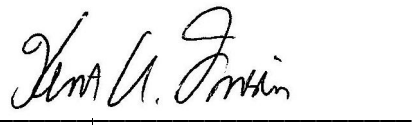
Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). An oily sheen was observed on the groundwater in the tank excavation; groundwater was observed at 6 feet below ground surface. Five soil samples from the excavation bottom and four side walls (plus one field duplicate) were collected on January 28, 2010. The soil sample results from this excavation ranged from non-detected (ND) to 1447 mg/kg (2840 mg/kg in the field duplicate) for TPH, with elevated TPH measured in the north sidewall of the tank excavation. The north sidewall sample was also analyzed for semi-volatile organic compounds (SVOCs), and naphthalene, 2-methylnaphthalene, acenaphthene, fluorene, phenanthrene, fluoranthene, pyrene, chrysene, and benzo(b)fluoranthene were detected at concentrations less than the current Residential Direct Contact Soil Remediation Standard (RDCSRS). Additional soil was removed from the north sidewall of the excavation, and final soil samples were collected on February 4, 2010; these results were ND for TPH. The final results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Therefore, soil remediation was completed, and no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 448 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 1/27/2010 ***REMOVAL CONTRACTOR:*** TVS Inc

SRF SEND DATE: ***TMS:***

DICAR NO. 10-01-28-1005-30 ***LEAK DETECT:***

REMEDIATION COMMENTS: Sheen on GW at approx 6 Ft BGS. Will need GW assessment.

REGISTRATION COMMENTS: UNHOT as per BRAC Legal Office. No reg. done/

SAS DONE: NO ***CONSULTANT:*** DPW

MWs NEEDED: yes ***MONITORING WELLS:*** 0

SUB-SURFACE EVALUATOR: Frank Accorsi

CURRENT UST STATUS

UST STATUS: REMOVED RI ON-GOING ***CASE STATUS:*** Case Open

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG.#: 448 REG.#: _____ - _____

DATE: 1-27-10 TOA: _____ TOD: _____

CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: 00100042

PERSONNEL: ANTHONY FORGIONE, MIKE TAYLOR

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Y
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. (YES) NO)	Y
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	NA
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	NA
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	NA
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS ~~CLEANED~~ PUMPED OUT AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	N
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP, CW, EV) HWSA	N
1,000 GALLONS OF OIL ~~WASTE~~ WERE REMOVED (MANIFEST#: LOR00)	Y
1/4 36 CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	Y
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) C. APPLEBY	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: _____	Y
THE UST WAS TRANSPORTED TO 108/IRM FOR DISPOSAL (ATTACH SCRAP TICKET)	Y
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	N

CHECK ALL BOXES, LEAVE NO BLANKS

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.

CLOSURE TECH (PRINT NAME): FRANK ACCORSI

SIGNATURE: Frank Accorsi DATE: 1-28-10

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 448 REG.#: _____ - _____

DATE: 1-27-10 TOA: _____ TOD: _____

SSE: FRANK ACCORSI NJDEP CERT.#: 0010042

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 0010042

WEATHER: Pt. cldy, 30's

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172), CASE# _____	Y
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 5.5 FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	Y
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	Y
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST (OVA)/FID RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	Y
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	Y
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	Y

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): FRANK ACCORSI Date: 1-28-10

SIGNATURE: Frank Accorsi

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 1-27-2010
LOCATION: Parcel 79 (400Area) EXCAVATION ID: BLDG. 448

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 5.5 ft. below grade; Sheen was observed on groundwater

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10039) NO

NOTES: UST Found. UST pumped out and no residual liquids were left in the tank. 1000 Gallons of oil were removed. UST was transported to 108 yard. 36 cubic yards of petrol. cont. soil were excavated and transported. C. Appleby of DPW was notified of any discharge to the environment.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

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: 10-72654

Parcel 79-6/Bldg. 448

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
448-A/Bottom	1003901	Soil	28-Jan-10 11:30	01/28/10
448-B/North Wall	1003902	Soil	28-Jan-10 15:00	01/28/10
448-C/South Wall	1003903	Soil	28-Jan-10 13:15	01/28/10
448-D/East Wall	1003904	Soil	28-Jan-10 13:50	01/28/10
448-E/West Wall	1003905	Soil	28-Jan-10 14:15	01/28/10
448-Duplicate	1003906	Soil	28-Jan-10 15:00	01/28/10

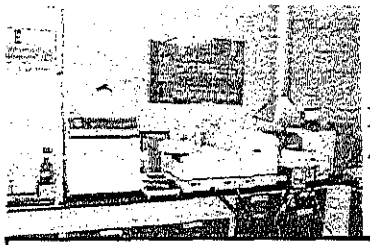
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
BN+15, TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 2/17/10
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X26292
( )DERA ( )OMA (X)Other: BRAC
Project No: 10-T2654
Location: PARCEL 79 BLDG. 448
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	% SOLIDS					PID (ppm)	DEPTH (FT)	Remarks / Preservation Method
10034 01	448-A, BOTTOM	1-28-10	1130	SOIL	1	X	X					0	~~5-5.5~~	7-7.5 ICE
02	448-B, NORTH WALL		1500			X	X					14	5-5.5	
03	448-C, SOUTH WALL		1315			X	X					0	5-5.5	
04	448-D, EAST WALL		1350			X	X					0	5-5.5	
05	448-E, WEST WALL		1415			X	X					0	5-5.5	
10	448-DUPLICATE		1500			X	X					26	5-5.5	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	1-28-10 1540				
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 2 WKS, ( )ASAP Verbal ____Hrs.

Comments:

print legibly

SAMPLE RECEIPT FORM

Date Received: 1-28-10 Work Order ID#: 10039

Site/Proj. Name: Parcel 79 Cooler Temp (°C): 4.0°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: _____

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 448 - (1,000 G. UST)

SOIL SAMPLING 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)
448A BOTTOM	541448.263	622024.846
448B NORTH WALL	541453.571	622022.972
448C SOUTH WALL	541439.701	622026.879
448D EAST WALL	541454.467	622034.61
448E WEST WALL	541441.626	622014.926

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10039

Site: Parcel 79/Bldg. 448

The Field Duplicate was performed on 448-B/North Wall (1003902).

METHOD SUMMARY

Method Summary

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.

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

10039 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 Sample 1003902 FB duplicate do not match due to sample inhomogenity	No
5.	IR Spectra submitted for standards, blanks and samples	N/A
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: Dennis Tuinman Date: 2/17/10

2/12/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10039 **Site:** Bldg. 448

	Date	Hold Time
Date Sampled	01/28/10	NA
Receipt/Refrigeration	01/28/10	NA

Analyses

1. Semi Volatiles	02/02/10	14 Days
2. TPHC	01/29/10	14 Days

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**E030.D**	Misc Info	**METHOD 8270 2/2/10**	Sample Weight	**10.02 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**100.0 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.100**		
Sample Name	**MB02011001**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.099	0.50	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.168	0.50	mg/kg	
62-53-3	Aniline			not detected	NLE	0.266	0.50	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.193	0.50	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.167	0.50	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.174	0.50	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.257	0.50	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.194	0.50	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.224	0.50	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.252	0.50	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.189	0.50	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.226	0.50	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.240	0.50	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.198	0.50	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.219	0.50	mg/kg	
91-20-3	Naphthalene			not detected	6	0.242	0.50	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.369	0.50	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.216	0.50	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.259	0.50	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.146	0.50	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.250	0.50	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.306	0.50	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.263	0.50	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.271	0.50	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.260	0.50	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.221	0.50	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.270	0.50	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.318	0.50	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.260	0.50	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.250	0.50	mg/kg	
86-73-7	Fluorene			not detected	110	0.282	0.50	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.277	0.50	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.272	0.50	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.270	0.50	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.286	0.50	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.287	0.50	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.299	0.50	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.296	0.50	mg/kg	
120-12-7	Anthracene			not detected	1500	0.298	0.50	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.285	0.50	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.296	0.50	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E030.D**	Misc Info	**METHOD 8270 2/2/10**	Sample Weight	**10.02 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**100.0 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.100**		
Sample Name	**MB02011001**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.268	0.50	mg/kg	
129-00-0	Pyrene			not detected	550	0.316	0.50	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.262	0.50	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.297	0.50	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.271	0.50	mg/kg	
218-01-9	Chrysene			not detected	52	0.280	0.50	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.315	0.50	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.264	0.50	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.214	0.50	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.256	0.50	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.230	0.50	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.195	0.50	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.182	0.50	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.185	0.50	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **MB02011001**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10039 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: MB02011001

Sample wt/vol: 10.02 (g/ml) G Lab File ID: E030.D

Level: (low/med) LOW Date Received: 1/28/2010

% Moisture: 0 decanted: (Y/N) N Date Extracted: 2/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/2/2010

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/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	7.38	45000	J
2.	extraction by-product	19.91	430	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E040.D	Misc Info	448-B NORTH WALL	Sample Weight	10.06 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	89.5 %
Date Acquired	2-Feb-10	Sample Multiplier	0.111		
Sample Name	1003902	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.110	0.56	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.187	0.56	mg/kg	
62-53-3	Aniline			not detected	NLE	0.297	0.56	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.214	0.56	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.185	0.56	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.193	0.56	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.287	0.56	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.215	0.56	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.249	0.56	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.281	0.56	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.210	0.56	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.251	0.56	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.267	0.56	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.220	0.56	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.243	0.56	mg/kg	
91-20-3	Naphthalene	12.99	5269442	2.90 mg/kg	6	0.269	0.56	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.411	0.56	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.240	0.56	mg/kg	
91-57-6	2-methylnaphthalene	14.41	10861467	9.83 mg/kg	5	0.289	0.56	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.162	0.56	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.279	0.56	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.341	0.56	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.293	0.56	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.302	0.56	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.290	0.56	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.245	0.56	mg/kg	
83-32-9	Acenaphthene	16.61	606295	0.67 mg/kg	74	0.301	0.56	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.354	0.56	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.290	0.56	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.278	0.56	mg/kg	
86-73-7	Fluorene	17.66	1084612	1.16 mg/kg	110	0.314	0.56	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.309	0.56	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.303	0.56	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.301	0.56	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.319	0.56	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.320	0.56	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.333	0.56	mg/kg	
85-01-8	Phenanthrene	19.64	3297955	2.34 mg/kg	300000	0.330	0.56	mg/kg	
120-12-7	Anthracene			not detected	1500	0.332	0.56	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.318	0.56	mg/kg	
206-44-0	Fluoranthene	22.07	1212357	0.83 mg/kg	840	0.330	0.56	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	E040.D	Misc Info	448-B NORTH WALL	Sample Weight	10.06 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	89.5 %
Date Acquired	2-Feb-10	Sample Multiplier	0.111		
Sample Name	1003902	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.299	0.56	mg/kg	
129-00-0	Pyrene	22.53	1133633	0.74 mg/kg	550	0.352	0.56	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.292	0.56	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.331	0.56	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.302	0.56	mg/kg	
218-01-9	Chrysene	25.04	353209	0.32 mg/kg	52	0.312	0.56	mg/kg	J
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.351	0.56	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.294	0.56	mg/kg	
205-99-2	Benzo[b]fluoranthene	27.04	227935	0.30 mg/kg	0.6	0.238	0.56	mg/kg	J
207-08-9	Benzo[k]fluoranthene			not detected	6	0.285	0.56	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.255	0.56	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.217	0.56	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.202	0.56	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.205	0.56	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **48-B NORTH WAL**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10039 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1003902

Sample wt/vol: 10.06 (g/ml) G Lab File ID: E040.D

Level: (low/med) LOW Date Received: 1/28/2010

% Moisture: 9.5 decanted: (Y/N) N Date Extracted: 2/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/2/2010

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/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	7.37	30000	J
2.	Alkane: Cyclic	13.56	4000	J
3.	Alkane: Branched	13.85	4300	J
4.	Alkane: Straight-Chain	14.19	5900	J
5.	Naphthalene, tetrahydro-methyl-	14.30	4100	J
6. 000090-12-0	Naphthalene, 1-methyl-	14.61	5700	JN
7.	Alkane: Straight-Chain	15.36	5200	J
8.	Naphthalene, ethyl-	15.55	4500	J
9.	Naphthalene, dimethyl-	15.70	5400	J
10.	Naphthalene, dimethyl-	15.86	5200	J
11.	Alkane: Branched	16.02	4100	J
12.	Alkane: Straight-Chain	16.45	3800	J
13.	Naphthalene, trimethyl-	16.77	4000	J
14.	Alkane: Branched	17.93	4300	J
15.	Naphthalene, tetramethyl-	18.24	3800	J
16.	Alkane: Branched	18.37	3800	J
17.	Alkane: Straight-Chain	18.44	6000	J
18.	Alkane: Branched	18.49	8700	J
19.	9H-Fluorene, methyl-	18.86	5600	J
20.	unknown PAH	19.30	4100	J
21.	Alkane: Straight-Chain	19.36	5700	J
22.	Alkane: Branched	19.43	6900	J
23.	Alkane: Branched	19.71	4800	J
24.	Alkane: Straight-Chain	20.22	5300	J
25.	Alkane: Straight-Chain	21.62	3700	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**E041.D**	Misc Info	**448 DUPLICATE**	Sample Weight	**10.11 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**85.0 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.116**		
Sample Name	**1003906**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.115	0.58	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.195	0.58	mg/kg	
62-53-3	Aniline			not detected	NLE	0.311	0.58	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.225	0.58	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.194	0.58	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.202	0.58	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.300	0.58	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.226	0.58	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.261	0.58	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.294	0.58	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.220	0.58	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.263	0.58	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.279	0.58	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.230	0.58	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.255	0.58	mg/kg	
91-20-3	Naphthalene	12.98	1897443	1.00 mg/kg	6	0.282	0.58	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.431	0.58	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.251	0.58	mg/kg	
91-57-6	2-methylnaphthalene	14.39	4952506	4.29 mg/kg	5	0.303	0.58	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.170	0.58	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.292	0.58	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.357	0.58	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.307	0.58	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.317	0.58	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.304	0.58	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.257	0.58	mg/kg	
83-32-9	Acenaphthene	16.59	298979	0.33 mg/kg	74	0.315	0.58	mg/kg	J
132-64-9	Dibenzofuran			not detected	NLE	0.371	0.58	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.304	0.58	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.291	0.58	mg/kg	
86-73-7	Fluorene	17.65	535511	0.58 mg/kg	110	0.329	0.58	mg/kg	J
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.324	0.58	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.318	0.58	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.315	0.58	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.334	0.58	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.335	0.58	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.349	0.58	mg/kg	
85-01-8	Phenanthrene	19.62	1697920	1.26 mg/kg	300000	0.346	0.58	mg/kg	
120-12-7	Anthracene			not detected	1500	0.348	0.58	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.333	0.58	mg/kg	
206-44-0	Fluoranthene	22.05	564271	0.41 mg/kg	840	0.346	0.58	mg/kg	J

Semi-Volatile Analysis Report
Page 2

Data File Name	**E041.D**	Misc Info	**448 DUPLICATE**	Sample Weight	**10.11 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**85.0 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.116**		
Sample Name	**1003906**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.313	0.58	mg/kg	
129-00-0	Pyrene	22.52	512851	0.37 mg/kg	550	0.369	0.58	mg/kg	J
85-68-7	Butylbenzylphthalate			not detected	50	0.306	0.58	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.347	0.58	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.317	0.58	mg/kg	
218-01-9	Chrysene			not detected	52	0.327	0.58	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.368	0.58	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.308	0.58	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.249	0.58	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.299	0.58	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.268	0.58	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.227	0.58	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.212	0.58	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.215	0.58	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **448 DUPLICATE**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10039 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1003906

Sample wt/vol: 10.11 (g/ml) G Lab File ID: E041.D

Level: (low/med) LOW Date Received: 1/28/2010

% Moisture: 15 decanted: (Y/N) N Date Extracted: 2/1/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/2/2010

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/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	7.36	35000	J
2.	Alkane: Branched	13.83	3200	J
3.	Alkane: Straight-Chain	14.17	4500	J
4. 000090-12-0	Naphthalene, 1-methyl-	14.59	3600	JN
5.	Alkane: Straight-Chain	15.34	3800	J
6.	Naphthalene, dimethyl-	15.69	3900	J
7.	Naphthalene, dimethyl-	15.84	3700	J
8.	Alkane: Straight-Chain	16.43	3000	J
9.	Naphthalene, trimethyl-	16.74	2700	J
10.	Naphthalene, trimethyl-	16.95	3000	J
11.	Alkane: Straight-Chain	17.45	2700	J
12.	Alkane: Branched	17.91	3200	J
13.	Naphthalene, tetramethyl-	18.23	2900	J
14.	Alkane: Branched	18.36	2700	J
15.	Alkane: Straight-Chain	18.42	4600	J
16.	Alkane: Branched	18.46	7500	J
17.	unknown PAH	18.84	6600	J
18.	unknown PAH	19.08	4600	J
19.	unknown PAH	19.28	2800	J
20.	Alkane: Straight-Chain	19.34	4500	J
21.	Alkane: Branched	19.40	5500	J
22.	Alkane: Branched	19.69	3600	J
23.	Alkane: Branched	19.83	3400	J
24.	Alkane: Cyclic	20.03	2700	J
25.	Alkane: Straight-Chain	20.21	3900	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E035.D	Misc Info	C-03 (18-24")	Sample Weight	10.05 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	90.5 %
Date Acquired	2-Feb-10	Sample Multiplier	0.110		
Sample Name	1004012	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.109	0.55	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.185	0.55	mg/kg	
62-53-3	Aniline			not detected	NLE	0.294	0.55	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.212	0.55	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.184	0.55	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.191	0.55	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.284	0.55	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.213	0.55	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.246	0.55	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.278	0.55	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.208	0.55	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.248	0.55	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.264	0.55	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.218	0.55	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.241	0.55	mg/kg	
91-20-3	Naphthalene			not detected	6	0.266	0.55	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.407	0.55	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.237	0.55	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.286	0.55	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.161	0.55	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.276	0.55	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.338	0.55	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.290	0.55	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.299	0.55	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.287	0.55	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.243	0.55	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.298	0.55	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.351	0.55	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.287	0.55	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.275	0.55	mg/kg	
86-73-7	Fluorene			not detected	110	0.311	0.55	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.306	0.55	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.300	0.55	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.298	0.55	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.316	0.55	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.317	0.55	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.330	0.55	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.327	0.55	mg/kg	
120-12-7	Anthracene			not detected	1500	0.329	0.55	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.314	0.55	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.327	0.55	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E035.D**	Misc Info	**C-03 (18-24")**	Sample Weight	**10.05 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**90.5 %**
Date Acquired	**2-Feb-10**	Sample Multiplier	**0.110**		
Sample Name	**1004012**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.296	0.55	mg/kg	
129-00-0	Pyrene			not detected	550	0.349	0.55	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.289	0.55	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.328	0.55	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.299	0.55	mg/kg	
218-01-9	Chrysene			not detected	52	0.309	0.55	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.347	0.55	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.291	0.55	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.235	0.55	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.283	0.55	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.253	0.55	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.214	0.55	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.200	0.55	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.203	0.55	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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

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 #: 10-11823
Location: PARCEL 76
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix: Soil
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Volume: 1 uL
Blank Conc.: 0.00

Date Received: 28-Jan-10
Date Extracted: 29-Jan-10
Extraction Method: Shake
Analysis Complete: 29-Jan-10
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB01291001	MB01291001	1.00	15.20	100.00	23	329	0.00		
LCS01291001	LCS01291001	1.00	15.14	100.00	23	330	1035.95		
1003901	448-A BOTTOM	1.00	15.15	77.2	30	428	0.00		
1003902	448-B NORTH WALL	1.00	15.15	89.5	26	369	1447.91		
1003903	448-C SOUTH WALL	1.00	15.07	83.6	28	397	0.00		
1003904	448-D EAST WALL	1.00	15.05	85.6	27	388	0.00		
1003905	448-E WEST WALL	1.00	15.21	89.4	26	368	0.00		
1003906	448 DUPLICATE	1.00	15.07	85.0	27	390	2840.98		

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

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 [signature]
Date: 2/17/10

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 2/17/10
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: 10-72654

Parcel 79/Bldg. 448

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
448-F/North Wall	1005101	Soil	04-Feb-10 15:00	02/04/10
448-Duplicate	1005102	Soil	04-Feb-10 15:00	02/04/10

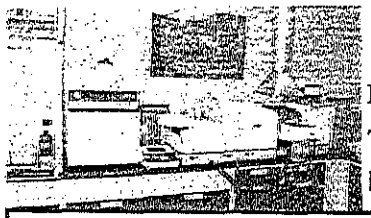
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB.
BN+15, TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff 3/4/10
Dean Tardiff/Date:
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY | Project No: 10-22654
Phone #: X26292 | Location: PARCEL 79 BLDG. 448
( )DERA ( )OMA (X)Other: BRAC
Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: TPH	Analysis Parameters: % SOLIDS	Analysis Parameters:	Analysis Parameters:	Analysis Parameters:	Analysis Parameters:	Analysis Parameters: FID(PPM)	Analysis Parameters: DEPTH(FT)	Comments: Remarks / Preservation Method
16051 01	448-F, NORTH WALL	2-4-10	1500	SOIL	1	X	X					3	5-5.5	ICE
02	448-DUPLICATE	"	"	"	1	X	X					5	5-5.5	"

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	2-4-10 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, ( )EDD
Turnaround time: ( )Standard 3 wks, (X)Rush ~~3WK~~ 10 DAYS, ( )ASAP Verbal ____Hrs.

Comments:

print legibly

new coc._1.XLS8/18/2009

000002

SAMPLE RECEIPT FORM

Date Received: 2-4-10 Work Order ID#: 10057

Site/Proj. Name: Parcel 79/48 Cooler Temp (°C): 3.0 °C

Received By: J. Urquiza Sign: J. Urquiza
(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: _____

Change of Chain of Custody

Lab Project ID#: PACE/79
Date Received: 2-4/2-4
Requested by: *(print)* F. Ahmadi
Turnaround Time: 3 DAYS

Site/Project Name: 10048/10051
Date of Change: 2-9-10
Sign: J. [illegible]

1. Were the correct containers and/or preservatives used for the tests indicated? **Yes** No
2. Was sufficient amount of sample sent for the tests indicated? **Yes** No
3. Are samples within holding time for new analysis? **Yes** No
4. Was the change documented in the receipt logbook? **Yes** No

Received by: *(print)* ______________ Sign: ______________

Sample ID#	New Analysis	Sample ID#	New Analysis
10048 01	BNHS		
02			
10051 01	BNHS		
02			

Comments: ______________

GPS
POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 448 - (1,000 G. UST)

SOIL SAMPLING 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)
448F NORTH WALL	541309.972	622091.697

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10051 Site: Parcel 79/Bldg. 448

The Field Duplicate was performed on 448-F/North Wall (1005101)

METHOD SUMMARY

Method Summary

EPA SW-846 Method 8270
Gas Chromatographic Determination of Semi-volatiles 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 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.

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

10051 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: Dean Tarantino Date: 3/3/10

2/25/10

TPHC 10051

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	N/A
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: Dean Tanaka Date: 3/3/10

2/9/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10051 **Site:** Parcel 79/Bldg. 448

	Date	Hold Time
Date Sampled	02/04/10	NA
Receipt/Refrigeration	02/04/10	NA
Analyses		
1. TPHC	02/05/10	14 Days
2. Semi-Volatiles	02/17/10	14 Days

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**E054.D**	Misc Info	**METHOD 8270 2/17/10**	Sample Weight	**10.19 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**100.0 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.098**		
Sample Name	**MB02121001**	*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		Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	NLE	0.097	0.49	mg/kg	
62-75-9	N-nitroso-dimethylamine			not	detected	0.2	0.165	0.49	mg/kg	
62-53-3	Aniline			not	detected	NLE	0.262	0.49	mg/kg	
108-95-2	Phenol			not	detected	18000	0.243	0.49	mg/kg	
111-44-4	bis-2-chloroethyl ether			not	detected	0.2	0.189	0.49	mg/kg	
95-57-8	2-chlorophenol			not	detected	310	0.229	0.49	mg/kg	
541-73-1	1,3-dichlorobenzene			not	detected	12	0.164	0.49	mg/kg	
106-46-7	1,4-dichlorobenzene			not	detected	1	0.171	0.49	mg/kg	
100-51-6	Benzyl alcohol			not	detected	NLE	0.253	0.49	mg/kg	
95-50-1	1,2-dichlorobenzene			not	detected	11	0.190	0.49	mg/kg	
95-48-7	2-methylphenol			not	detected	310	0.270	0.49	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	3	0.220	0.49	mg/kg	
106-44-5	4-methylphenol			not	detected	31	0.302	0.49	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not	detected	0.2	0.248	0.49	mg/kg	
67-72-1	Hexachloroethane			not	detected	0.2	0.185	0.49	mg/kg	
98-95-3	Nitrobenzene			not	detected	0.2	0.222	0.49	mg/kg	
78-59-1	Isophorone			not	detected	0.2	0.236	0.49	mg/kg	
88-75-5	2-nitrophenol			not	detected	NLE	0.220	0.49	mg/kg	
105-67-9	2,4-dimethylphenol			not	detected	1200	0.250	0.49	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not	detected	NLE	0.194	0.49	mg/kg	
120-83-2	2,4-dichlorophenol			not	detected	0.4	0.247	0.49	mg/kg	
65-85-0	Benzoic acid			not	detected	NLE	0.203	0.49	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not	detected	0.4	0.215	0.49	mg/kg	
91-20-3	Naphthalene			not	detected	6	0.237	0.49	mg/kg	
106-47-8	4-chloroaniline			not	detected	9	0.363	0.49	mg/kg	
87-68-3	Hexachlorobutadiene			not	detected	0.6	0.212	0.49	mg/kg	
59-50-7	4-chloro-3-methylphenol			not	detected	NLE	0.267	0.49	mg/kg	
91-57-6	2-methylnaphthalene			not	detected	5	0.255	0.49	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not	detected	45	0.143	0.49	mg/kg	
88-06-2	2,4,6-trichlorophenol			not	detected	19	0.273	0.49	mg/kg	
95-95-4	2,4,5-trichlorophenol			not	detected	6100	0.284	0.49	mg/kg	
91-58-7	2-chloronaphthalene			not	detected	NLE	0.246	0.49	mg/kg	
88-74-4	2-nitroaniline			not	detected	39	0.301	0.49	mg/kg	
131-11-3	Dimethylphthalate			not	detected	NLE	0.259	0.49	mg/kg	
208-96-8	Acenaphthylene			not	detected	300000	0.267	0.49	mg/kg	
606-20-2	2,6-dinitrotoluene			not	detected	0.7	0.256	0.49	mg/kg	
99-09-2	3-nitroaniline			not	detected	NLE	0.217	0.49	mg/kg	
83-32-9	Acenaphthene			not	detected	74	0.266	0.49	mg/kg	
51-28-5	2,4-dinitrophenol			not	detected	120	0.171	0.49	mg/kg	
132-64-9	Dibenzofuran			not	detected	NLE	0.313	0.49	mg/kg	
100-02-07	4-nitrophenol			not	detected	NLE	0.241	0.49	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E054.D**	Misc Info	**METHOD 8270 2/17/10**	Sample Weight	**10.19 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**100.0 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.098**		
Sample Name	**MB02121001**	*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		Regulatory Level (mg/kg)*		RL		Qualifiers
121-14-2	2,4-dinitrotoluene			not	detected	0.7	0.256	0.49	mg/kg	
84-66-2	Diethylphthalate			not	detected	57	0.245	0.49	mg/kg	
86-73-7	Fluorene			not	detected	110	0.278	0.49	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not	detected	NLE	0.273	0.49	mg/kg	
100-01-6	4-nitroaniline			not	detected	NLE	0.268	0.49	mg/kg	
534-52-1	4,6-dinitro-2-methylphenol			not	detected	6	0.237	0.98	mg/kg	
86-30-6	N-nitrosodiphenylamine			not	detected	0.2	0.266	0.49	mg/kg	
103-33-3	Azobenzene			not	detected	NLE	0.282	0.49	mg/kg	
101-55-3	4-bromophenyl-phenylether			not	detected	NLE	0.283	0.49	mg/kg	
118-74-1	Hexachlorobenzene			not	detected	0.2	0.294	0.49	mg/kg	
87-86-5	Pentachlorophenol			not	detected	3	0.283	0.49	mg/kg	
85-01-8	Phenanthrene			not	detected	300000	0.291	0.49	mg/kg	
120-12-7	Anthracene			not	detected	1500	0.293	0.49	mg/kg	
84-74-2	Di-n-butylphthalate			not	detected	620	0.281	0.49	mg/kg	
206-44-0	Fluoranthene			not	detected	840	0.291	0.49	mg/kg	
92-87-5	Benzidine			not	detected	0.7	0.264	0.49	mg/kg	
129-00-0	Pyrene			not	detected	550	0.311	0.49	mg/kg	
85-68-7	Butylbenzylphthalate			not	detected	50	0.258	0.49	mg/kg	
56-55-3	Benzo[a]anthracene			not	detected	0.5	0.292	0.49	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not	detected	0.2	0.267	0.49	mg/kg	
218-01-9	Chrysene			not	detected	52	0.276	0.49	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	35	0.310	0.49	mg/kg	
117-84-0	Di-n-octylphthalate			not	detected	2400	0.260	0.49	mg/kg	
205-99-2	Benzo[b]fluoranthene			not	detected	0.6	0.210	0.49	mg/kg	
207-08-9	Benzo[k]fluoranthene			not	detected	6	0.252	0.49	mg/kg	
50-32-8	Benzo[a]pyrene			not	detected	0.2	0.226	0.49	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.6	0.191	0.49	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.2	0.179	0.49	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not	detected	30000	0.182	0.49	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
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: **MB02121001**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: 10051 Location: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: MB02121001

Sample wt/vol: 10 (g/ml) G Lab File ID: E054.D

Level: (low/med) LOW Date Received: 2/5/2010

% Moisture: 0 decanted: (Y/N) N Date Extracted: 2/12/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/17/2010

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/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.82	1000	J
2.	extraction by-product	7.41	74000	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E057.D	Misc Info	448-F NORTH WALL	Sample Weight	10.08 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	81.0 %
Date Acquired	17-Feb-10	Sample Multiplier	0.122		
Sample Name	1005101	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.121	0.61	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.206	0.61	mg/kg	
62-53-3	Aniline			not detected	NLE	0.327	0.61	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.236	0.61	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.205	0.61	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.213	0.61	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.316	0.61	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.238	0.61	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.274	0.61	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.310	0.61	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.231	0.61	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.277	0.61	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.294	0.61	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.243	0.61	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.268	0.61	mg/kg	
91-20-3	Naphthalene			not detected	6	0.296	0.61	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.453	0.61	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.265	0.61	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.318	0.61	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.179	0.61	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.307	0.61	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.376	0.61	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.323	0.61	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.333	0.61	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.320	0.61	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.271	0.61	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.332	0.61	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.391	0.61	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.320	0.61	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.306	0.61	mg/kg	
86-73-7	Fluorene			not detected	110	0.347	0.61	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.340	0.61	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.334	0.61	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.332	0.61	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.352	0.61	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.353	0.61	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.367	0.61	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.364	0.61	mg/kg	
120-12-7	Anthracene			not detected	1500	0.366	0.61	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.350	0.61	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.364	0.61	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E057.D**	Misc Info	**448-F NORTH WALL**	Sample Weight	**10.08 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**81.0 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.122**		
Sample Name	**1005101**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.329	0.61	mg/kg	
129-00-0	Pyrene			not detected	550	0.388	0.61	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.322	0.61	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.365	0.61	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.333	0.61	mg/kg	
218-01-9	Chrysene			not detected	52	0.344	0.61	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.387	0.61	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.325	0.61	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.262	0.61	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.315	0.61	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.282	0.61	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.239	0.61	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.223	0.61	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.227	0.61	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **448-F N. WALL**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10051 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1005101

Sample wt/vol: 10.08 (g/ml) G Lab File ID: E057.D

Level: (low/med) LOW Date Received: 2/5/2010

% Moisture: 19 decanted: (Y/N) N Date Extracted: 2/12/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/17/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.02	520	J
2.	extraction by-product	6.85	1600	J
3.	extraction by-product	7.44	110000	J
4.	extraction by-product	8.65	670	J
5.	extraction by-product	19.91	520	J
6.	unknown hydrocarbon	24.68	760	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**E058.D**	Misc Info	**448 DUPLICATE**	Sample Weight	**10.28 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**81.6 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.119**		
Sample Name	**1005102**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.118	0.60	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.200	0.60	mg/kg	
62-53-3	Aniline			not detected	NLE	0.318	0.60	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.230	0.60	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.199	0.60	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.207	0.60	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.308	0.60	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.231	0.60	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.267	0.60	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.302	0.60	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.225	0.60	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.269	0.60	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.286	0.60	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.236	0.60	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.261	0.60	mg/kg	
91-20-3	Naphthalene			not detected	6	0.288	0.60	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.441	0.60	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.257	0.60	mg/kg	
91-57-6	2-methylnaphthalene			not detected	5	0.310	0.60	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.174	0.60	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.299	0.60	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.366	0.60	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.315	0.60	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.324	0.60	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.311	0.60	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.263	0.60	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.323	0.60	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.380	0.60	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.311	0.60	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.298	0.60	mg/kg	
86-73-7	Fluorene			not detected	110	0.337	0.60	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.331	0.60	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.325	0.60	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.323	0.60	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.342	0.60	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.343	0.60	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.358	0.60	mg/kg	
85-01-8	Phenanthrene			not detected	300000	0.354	0.60	mg/kg	
120-12-7	Anthracene			not detected	1500	0.356	0.60	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.341	0.60	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.354	0.60	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E058.D**	Misc Info	**448 DUPLICATE**	Sample Weight	**10.28 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**81.6 %**
Date Acquired	**17-Feb-10**	Sample Multiplier	**0.119**		
Sample Name	**1005102**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.321	0.60	mg/kg	
129-00-0	Pyrene			not detected	550	0.378	0.60	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.314	0.60	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.355	0.60	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.324	0.60	mg/kg	
218-01-9	Chrysene			not detected	52	0.335	0.60	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.377	0.60	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.316	0.60	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.255	0.60	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.306	0.60	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.274	0.60	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.232	0.60	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.217	0.60	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.221	0.60	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **448 DUPLICATE**

Lab Name: FMETL Lab Code 13461

Project: Case No.: 10051 Location: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 1005102

Sample wt/vol: 10.28 (g/ml) G Lab File ID: E058.D

Level: (low/med) LOW Date Received: 2/5/2010

% Moisture: 18.4 decanted: (Y/N) N Date Extracted: 2/12/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 2/17/2010

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	extraction by-product	6.01	580	J
2.	extraction by-product	6.85	1500	J
3.	extraction by-product	7.45	100000	J
4.	extraction by-product	8.65	640	J
5.	extraction by-product	14.49	780	J
6.	unknown hydrocarbon	24.68	760	J

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 #: 10-72654
Location: PARCEL 79
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix: Soil
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Volume: 1 uL
Blank Conc.: 0.00

Date Received: 4-Feb-10
Date Extracted: 5-Feb-10
Extraction Method: Shake
Analysis Complete: 5-Feb-10
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data Qualifiers	
MB02051001	MB02051001	1.00	15.05	100.00	23	332	0.00		
LCS02051001	LCS02051001	1.00	15.06	100.00	23	332	1203.82		
1005101	448-F NORTH WALL	1.00	15.05	81.0	29	410	0.00		
1005102	448 DUPLICATE	1.00	15.27	81.6	28	401	0.00		

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

000060

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 Tardy

Date: 3/4/10

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 3/4/10

Dean Tardiff
Laboratory Manager

ATTACHMENT X

UST 449 File Review and Analyses

PARSONS

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

Date: *March 3, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 449*** Registration ID: *None; no tank found*

Recommended Status of Site: ***Change to Case Closed***

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): 10-06-04-1447-41

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

Tank Description: [ ] Steel [ ] Fiberglass Size: ____ Contents: No. 2 Fuel Oil

[ ] Residential [ ] Commercial/Industrial

Tank Removed? [ ] Yes [X] No If "yes," removal date: *No tank found*

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

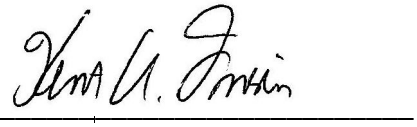
Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

Soil samples were collected in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). A soil sample result from a test trench excavated on May 20, 2010 was 7778 mg/kg; however, no tank was found. Visual evidence and the test trench sample result indicated that a release had occurred, although the tank had apparently been previously removed. Additional excavation of contaminated soil was performed, and six samples from the excavation bottom (two samples) and four side walls were collected on July 22, 2010. The final soil sample results from this excavation ranged from non-detected (ND) to 867 mg/kg for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION:	449	*NJDEP REG ID:*	-
RESIDENTIAL?	NO		

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS):	1000	*CONSTRUCTION:*	STEEL
PRODUCT:	#2 FUEL OIL	*YEAR INSTALLED:*	

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE:		*REMOVAL CONTRACTOR:*	unknown
SRF SEND DATE:		*TMS:*	
DICAR NO.	10-06-04-1447-41	*LEAK DETECT:*	
REMEDIATION COMMENTS:	CA 6-4-2010 After analytical confirmation of soil result, discharge was called into NJDEP.		
REGISTRATION COMMENTS:	UST assumed to be 1000 Steel #2Fuel oil. UST was removed prior. Site located by record reviews for proable UST at this site. Test trench on 5-20-2010 resulted in assessment and collection of one sample (10201.01) for TPHC, result over 7700mg/kg. .		
SAS DONE:	NO	*CONSULTANT:*	DPW
MWs NEEDED:		*MONITORING WELLS:*	
SUB-SURFACE EVALUATOR:	Appleby		

CURRENT UST STATUS

UST STATUS:	REMOVED RI ON-GOING	*CASE STATUS:*	Case Open
SUBMITTAL DATE:		*APPROVAL DATE:*	

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: FRANK ACCORSI
EQUIPMENT OPERATOR: ANTHONY FORGIONE
DATE: 5-19-10
LOCATION: PARCEL 79 EXCAVATION ID: B. 499 - MAGNETIC ANOMOLY

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: (YES) NO
DESCRIBE: ABUNDANT COAL LAYER (6 IN) @ 2 FT. BELOW GROUND SURFACE, SOME BUILDING DEBRIS - BRICK, CONCRETE, CERM. TILE

NATURAL MATERIAL PRESENT: (YES) NO
DESCRIBE: FINE SAND, SILT (TOP), CLAY 2.5'-4'

WATER ENCOUNTERED: YES (NO)
DESCRIBE:

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): X COORDINATE (EASTING):

END OF EXCAVATION
Y COORDINATE (NORTHING): X COORDINATE (EASTING):

EXCAVATION PHOTOGRAPHED: (YES) NO
FINAL EXCAVATION DIMENSIONS IN FEET: 3 FT x 10 FT x 4 FT. DEEP

SAMPLES COLLECTED: YES (LAB ID #) (NO)

NOTES:

ADDITIONAL NOTES ON BACK YES (NO)

SUBSURFACE EVALUATOR SIGNATURE: Frank Accorsi

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione
DATE: 5-19-2010
LOCATION: Parcel 79 (400Area) EXCAVATION ID:BLDG. 449-Magnetic Anomaly

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: Abundant coal layer (6 in) @ 2 ft. below ground surface, some building debris- brick, concrete, cerm. tile

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: Fine sand, silt (top), Clay 2.5'-4'

WATER ENCOUNTERED: YES NO
DESCRIBE:_____

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING):_____ X COORDINATE (EASTING):_____

END OF EXCAVATION
Y COORDINATE (NORTHING):_____ X COORDINATE (EASTING):_____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: 3 ft. x 10 ft. x 4 ft. deep

SAMPLES COLLECTED: YES (LAB ID #_____) NO

NOTES:_____

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE:_____

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: FRANK ACCORSI
EQUIPMENT OPERATOR: ANTHONY FORGIONE
DATE: 5-20-10
LOCATION: PARCEL 79 EXCAVATION ID: BL06.449 - UST GPS LOCATION

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: (YES) NO
DESCRIBE: BUILDING DEMOLITION DEBRIS - CONCRETE, BRICK, CINDER BLOCK

NATURAL MATERIAL PRESENT: (YES) NO
DESCRIBE: 0-2' SAND + SILT 2-5' SILTY CLAY

WATER ENCOUNTERED: YES (NO)
DESCRIBE: ~~0-2' SAND + SILT 2-5' SILTY CLAY~~

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: (YES) NO
FINAL EXCAVATION DIMENSIONS IN FEET: 21 FT x 5 FT x 5 FT DEEP

SAMPLES COLLECTED: (YES) LAB ID # 102010( ) NO

NOTES: NO UST FOUND. SOILS W/ STRONG PETROLEUM ODORS ENCOUNTERED AND SAMPLED. CHUCK APPLEBY SUBSEQUENTLY CALLED A RELEASE TO NJDEP.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: F. Accorsi

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione
DATE: 5-20-2010
LOCATION: Parcel 79 (400Area) EXCAVATION ID:BLDG. 449-UST GPS Location

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: Building demolition debris-concrete, brick, cinder block

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: 0-2' Sand and silt; 2'-5' Silty clay

WATER ENCOUNTERED: YES NO
DESCRIBE: _____

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: 21 ft. x 5 ft. x 5 ft. deep

SAMPLES COLLECTED: YES (LAB ID # 10201.01) NO

NOTES: No UST found. Soils w/strong petroleum odors encountered and sampled. Chuck Appleby subsequently called a release to NJDEP

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 449 REG.#: NA -

DATE: 6-4-10 TOA: NA TOD:

SSE: C. Appleby NJDEP CERT.#: 9974

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: Frank Accosi NJDEP CERT.#:

WEATHER:

ACTIVITY	YES NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	NA
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	NA
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	NA
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	NA
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (877) 927-6337), CASE# 10-06-04-1447-41	Yes
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	NA
GROUNDWATER WAS ENCOUNTERED AT ____ FEET BG; A SHEEN (WAS/WAS NOT) OBSERVED ON GW	NA
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	NA
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	NA
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 2005 August	NA
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	NA
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	NA
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1'' ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	NA
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	NO
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	Yes
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, ~~HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG,~~ SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, ~~SOIL ANALYTICAL RESULTS~~, CLEAN FILL TICKETS (IN YDS³), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS) UST Database Site Created CA	Yes

CHECK ALL BOXES, LEAVE NO BLA

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Subsurface Evaluator (print Name): Charles Appleby Date: 6-4-10

SIGNATURE:

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

2- Aug 2010

Contract Management Division

SUBJECT: PWS-007, UST Removal
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 449. - UST Previously Removed
Soil Remediation.

TVS Inc.
Field Supervisor, PWS-007
ATTN: Harold Hornung
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Hornung:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits or that the site requires further investigation outside the scope of this contract. The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

CC: UST file copy

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Robert Youkas
EQUIPMENT OPERATOR: William Crawley
DATE: 07/22/10
LOCATION: Parcel 79 EXCAVATION ID: #449

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES (NO)
DESCRIBE:

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: Dark brown medium to coarse grain sand, dry from 0-7 ft. Wet at approx. 7-8 ft below grade. No odor or staining observed.

WATER ENCOUNTERED: (YES) NO
DESCRIBE: Encountered at approximately 7-8 ft. below grade. No odor or sheen observed.

GPS POSITIONS See attached table & map
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): X COORDINATE (EASTING):

END OF EXCAVATION
Y COORDINATE (NORTHING): X COORDINATE (EASTING):

EXCAVATION PHOTOGRAPHED: (YES) NO
FINAL EXCAVATION DIMENSIONS IN FEET: 21 ft. x 8 ft. x 8 ft. deep

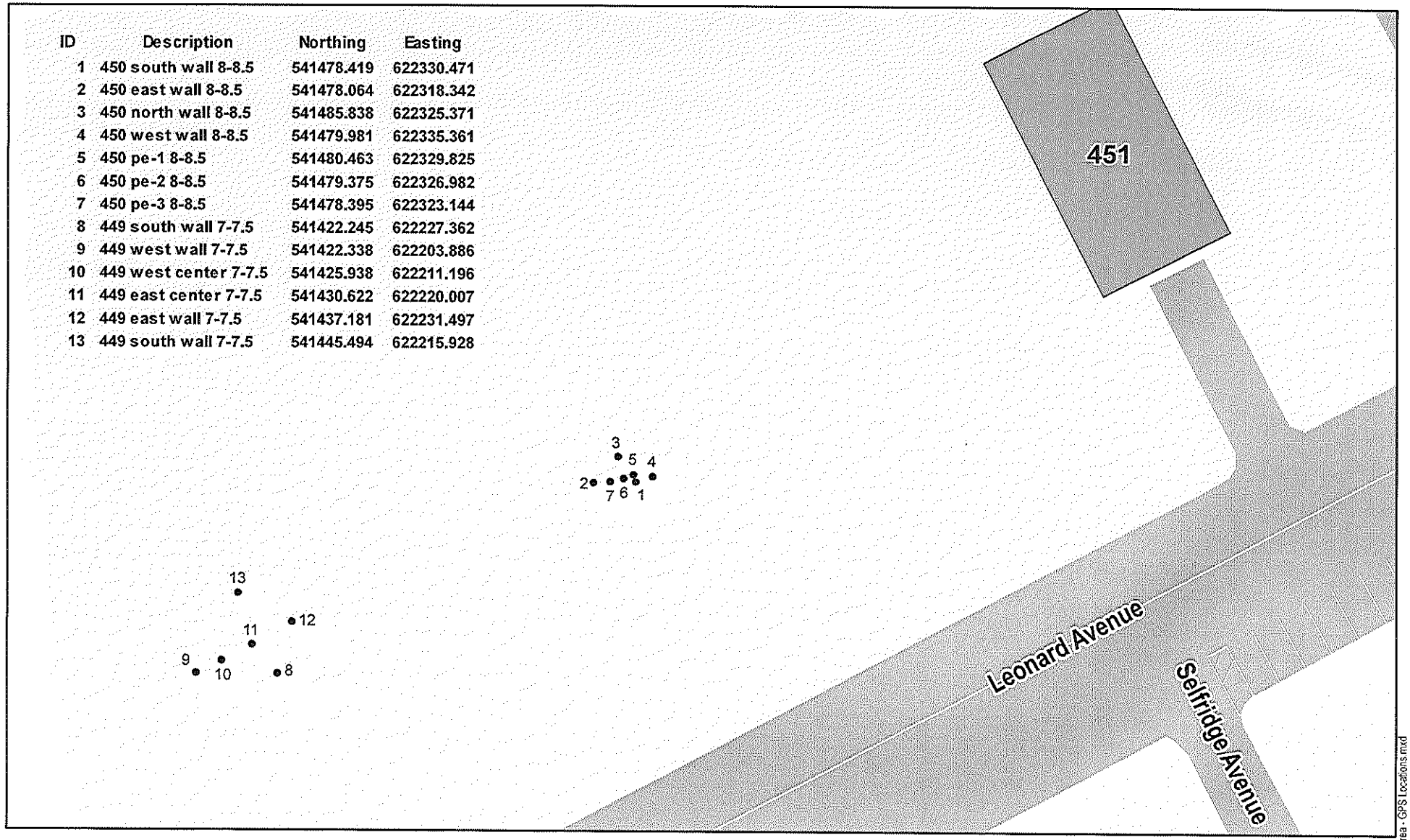
SAMPLES COLLECTED: (YES) (LAB ID # 10317.01-.05) NO

NOTES: Collected six post excavation soil samples and submitted to lab. See attached map for surveyed soil sample locations.

ADDITIONAL NOTES ON BACK YES (NO)

SUBSURFACE EVALUATOR SIGNATURE:

ID	Description	Northing	Easting
1	450 south wall 8-8.5	541478.419	622330.471
2	450 east wall 8-8.5	541478.064	622318.342
3	450 north wall 8-8.5	541485.838	622325.371
4	450 west wall 8-8.5	541479.981	622335.361
5	450 pe-1 8-8.5	541480.463	622329.825
6	450 pe-2 8-8.5	541479.375	622326.982
7	450 pe-3 8-8.5	541478.395	622323.144
8	449 south wall 7-7.5	541422.245	622227.362
9	449 west wall 7-7.5	541422.338	622203.886
10	449 west center 7-7.5	541425.938	622211.196
11	449 east center 7-7.5	541430.622	622220.007
12	449 east wall 7-7.5	541437.181	622231.497
13	449 south wall 7-7.5	541445.494	622215.928



400 Area - GPS Locations
Main Post
Fort Monmouth, New Jersey
FOUO

0 20 40 80 Feet

N
W E
S

Legend

- GPS Location
- Existing Building
- Roadway & Parking
- Post Boundaries

Map Created by:
Fort Monmouth Installation GIO, Environmental Division
Fort Monmouth, New Jersey
Date: August 2, 2010
All drawings must be field verified.
New Jersey State Plane Feet, NAD83

August 2, 2010 X:\GIS\GIS Maps\MXD\PR03\400 Area - GPS Locations.mxd

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: 10-127102

PARCEL 79/Bldg. 449

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
449-UST/Test Pit	1020101	Soil	20-May-10 10:40	05/20/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 6/30/10
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X26292
( )DERA ( )OMA (X)Other: BRAC

Project No: 10-127102
Location: BLDG. 449 PARCEL 79

Samplers Name / Company: FRANK ACCORSI / TVS

Comments:

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	% SOLIDS					FID (ppm)	DEPTH (ft)	Remarks / Preservation Method
10201.01	449 - UST TEST PIT	5-20-10	1040	SOIL	1	X	X					7.5	5-5.5	ICE

Relinquished by (signature):	Date/Time:		Received by (signature):	Relinquished by (signature):	Date/Time:		Received by (signature):
Frank Accorsi	5-20-10	1220	[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 3 wks, (X)Rush ~~2 Wk.~~ DAYS, ( )ASAP Verbal ____Hrs.

Comments:

000002

print legibly

new coc._1.XLS12/16/2009

SAMPLE RECEIPT FORM

Date Received: 5-20-10 Work Order ID#: 10201

Site/Proj. Name: Ame/79/Bay 444 Cooler Temp (°C): N/A

Received By: (Print name) J. Unguan Sign: J. Unguan

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: ____________________

GPS
POINTS

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

10201 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 Date

6/4/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10201 **Site:** Parcel 79/Bldg. 449

	Date	Hold Time
Date Sampled	05/20/10	NA
Receipt/Refrigeration	05/20/10	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 #: 10-127102
Location: PARCEL 79 BLDG 499
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix: .
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Volume: 1 uL

Date Received: 20-May-10
Date Extracted: 21-May-10
Extraction Method: Shake
Analyst: Robert Szot

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		
1020101	499 UST TEST PIT	1.00	15.20	77.2	30	426	7778.41		

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

000010

LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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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 Dawn Teel 6/30/10

Date: 6/30/10

Laboratory Certification # 13461

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

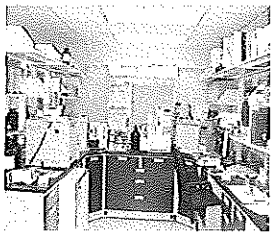
Laboratory Authentication Statement

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 6/30/10

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: Parcel 79

PARCEL/79

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
449/North Wall (7.0-7.5')	1031701	Soil	22-Jul-10 13:30	07/22/10
449/South Wall (7.0-7.5')	1031702	Soil	22-Jul-10 13:35	07/22/10
449/East Wall (7.0-7.5')	1031703	Soil	22-Jul-10 13:40	07/22/10
449/West Wall (7.0-7.5')	1031704	Soil	22-Jul-10 13:45	07/22/10
449/West Center (7.0-7.5')	1031705	Soil	22-Jul-10 13:50	07/22/10
449/East Center (7.0-7.5')	1031706	Soil	22-Jul-10 13:55	07/22/10

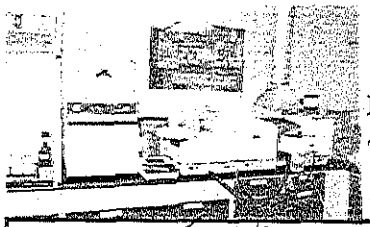
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 7/25/10
Laboratory Manager

Table of Contents

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: Fort Monmouth
Phone #:
( )DERA ( )OMA ( )Other:_____
Project No:
Location: Parcel 79
Samplers Name / Company: Robert Youhas / TUS

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH								Remarks / Preservation Method
10317 01	449-NorthWall(7-7.5)	07/22/10	13:30	Soil	1	✓	✓							
02	449-SouthWall(7-7.5)	07/22/10	13:35	Soil	1	✓								
03	449-EastWall(7-7.5)	07/22/10	13:40	Soil	1	✓	✓							
04	449-WestWall(7-7.5)	07/22/10	13:45	Soil	1	✓								
05	449-WestCenter(7-7.5)	07/22/10	13:50	Soil	1	✓	✓							
10	449-EastCenter(7-7.5)	07/22/10	13:55	Soil	1	✓								

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	07/22/10 15:00				
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 24 Hrs.

Comments: If TPH Exceeds 1,000mg/kg, run BN analysis.

print legibly

new coc._1.XLS6/2/2010

SAMPLE RECEIPT FORM

Date Received: 7-21-10 Work Order ID#: 10317

Site/Proj. Name: Parcel 79 Cooler Temp (°C): 5.0°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: _____

_____

_____

_____

GPS POINTS

US ARMY-FT. MONMOUTH, NJ
PARCEL 79 (UST 449) SOIL SAMPLES
SOIL SAMPLING GPS POSITIONS & COORDINATES
US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

Position/Description	Y Coordinate Northing	X Coordinate (Easting)
449 south wall 7-7.5	541422.245	622227.362
449 west wall 7-7.5	541422.338	622203.886
449 west center 7-7.5	541425.938	622211.196
449 east center 7-7.5	541430.622	622220.007
449 east wall 7-7.5	541437.181	622231.497
449 south wall 7-7.5	541445.494	622215.928

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

TPHC 10317

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: _____

Dean Tudor — Laboratory Manager

7/27/10 — Date

7/27/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10317 **Site:** Parcel 79

	Date	Hold Time
Date Sampled	07/22/10	NA
Receipt/Refrigeration	07/22/10	NA
Analyses		
1. TPHC	07/26/10	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: Parcel 79
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix:
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Vol.: 1 uL

Date Received: 22-Jul-10
Date Extracted: 26-Jul-10
Extraction Method: Shake
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data		Qualifiers
MB07261001	MB07261001	1.00	15.00	100.00	23	333	not detected			
LCS07261001	LCS07261001	1.00	15.00	100.00	23	333	1089.12			
1031701	449 NORTH WALL (7-7.5')	1.00	15.07	80.8	29	411	not detected			
1031702	449 SOUTH WALL (7-7.5')	1.00	15.17	78.2	30	421	not detected			
1031703	449 EAST WALL (7-7.5')	1.00	15.27	78.6	29	417	not detected			
1031704	449 WEST WALL (7-7.5')	1.00	15.21	76.6	30	429	not detected			
1031705	449 WEST CENTER (7-7.5')	1.00	15.78	81.4	27	389	867.31			
1031706	449 EAST CENTER (7-7.5')	1.00	15.21	76.2	30	431	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

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 Dean Tarabilda

Date: 2/27/10

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

ATTACHMENT Y

UST 450 File Review and Analyses

PARSONS

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

Date: *March 3, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 450*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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): 10-07-30-1106-23

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 7/27/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

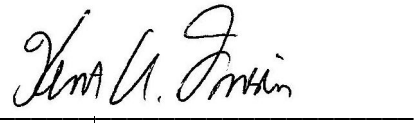
Were closure soil sample results less than comparison criteria? ? [X] Yes [ ] No

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). During the tank excavation, there was visual evidence of soil contamination that was limited to shallow soil, and believed to be related to piping leaks based on the shallow contamination and the poor condition of the piping. Following tank removal and contaminated soil excavation, seven samples were collected from the excavation and side walls (plus one field duplicate) on July 27, 2010. The final soil sample results from this excavation were all non-detected (ND) for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: 

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 450 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 7/27/2010 ***REMOVAL CONTRACTOR:***

SRF SEND DATE: ***TMS:***

DICAR NO. 10-07-30-1106-23 ***LEAK DETECT:***

REMEDIATION COMMENTS: CA- UST was steel and in good condition, 975 gal of oil removed, no water. Building was removed prior. UST identified by metal detector scan. Discharge limited to shallow soil, casue assigned to piping leak (pipes were observed to be in poor condition). Soil remediation completed.

REGISTRATION COMMENTS: UHOT as per US Army BRAC Determination

SAS DONE: NO ***CONSULTANT:*** DPW

MWs NEEDED: ***MONITORING WELLS:***

SUB-SURFACE EVALUATOR: C. Appleby

CURRENT UST STATUS

UST STATUS: REMOVED RI ON-GOING ***CASE STATUS:*** Case Open

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 450 REG.#: URH01 -

DATE: 7-31-10 TOA: 10:45 TOD: 1115

SSE: Charles Appel NJDEP CERT.#: 9974

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: Robert Youhas TVS Inc NJDEP CERT.#:

WEATHER: ~~~ - 80° Clear

ACTIVITY	YES NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	NA
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	↓
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	↓
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	↓
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	↓
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (877)927-6337), CASE# 10-07-30-1101-23 operator 25	✓
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	N/A
GROUNDWATER WAS ENCOUNTERED AT 8.0 FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	NO
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN) 7k type	All 21000
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 2005 August	NA
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	↓
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	↓
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1'' ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	↓
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	TBD
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	yes
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS) Report to Document NJDEP Notification.	

CHECK ALL BOXES, LEAVE NO BLA

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Subsurface Evaluator(print Name): Charles Appel Date: 7-31-10

SIGNATURE: [signature]

ca\ms\ust\removal\sitessls499.doc

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG.#: 450 REG.#: Parcel 79 -

DATE: 07/27/10 TOA: _____ TOD: _____

CLOSURE TECH: Robert Youhas NJDEP CERT.#: 265843

PERSONNEL: Mark Taylor, Will Crowley

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Yes
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Yes
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Yes
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. YES/NO)	Yes
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	Yes
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	Yes
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	Yes
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS CLEANED AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	Yes
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Yes
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP,CW,EV) HWSA	
975 GALLONS OF Non-Haz WASTE WERE REMOVED (MANIFEST#: 35899-Lorco)	Yes
20 total CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	Yes
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) Joe Fallon via email	Yes
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Yes
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: RY 07/30/10	Yes
THE UST WAS TRANSPORTED TO _____ FOR DISPOSAL (ATTACH SCRAP TICKET)	
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM Field Book Notes Attached	
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	

CHECK ALL BOXES, LEAVE NO BLANKS

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.

CLOSURE TECH (PRINT NAME): Robert Youhas

SIGNATURE: _____ DATE: 07/27/10

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

BLDG.#: 450 REG.#: Parcel 79 -

DATE: 07/27/10 TOA: TOD:

SSE: Robert Youhas NJDEP CERT.#: 265845

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: Robert Youhas NJDEP CERT.#: 265845

WEATHER: Sunny, Hot, Humid 90°F

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Yes
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Yes
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Yes
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Yes
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172), CASE# _____	
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Yes
GROUNDWATER WAS ENCOUNTERED AT 8.5 FEET BG, A SHEEN (WAS/~~WAS NOT~~) OBSERVED ON GW	Yes
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	NA
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Yes
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Yes
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	NA
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Yes
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	Yes
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	Yes - 07/30/10
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	NA
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH)	
SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): Robert Youhas Date: 07/27/10

SIGNATURE:

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Robert Yahas
EQUIPMENT OPERATOR: Will Crowley
DATE: 07/27/10
LOCATION: Page/79 EXCAVATION ID: #450

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: (YES) NO
DESCRIBE: Construction debris - bricks, burnt wood, concrete observed - dry.

NATURAL MATERIAL PRESENT: (YES) NO
DESCRIBE: Medium-grain brown sand w/ gravel, dry.

WATER ENCOUNTERED: (YES) NO
DESCRIBE: Groundwater table encountered at approximately 8.5 feet below grade. No sheen was observed.

GPS POSITIONS Attached on Separate Sheet.
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING):_____ X COORDINATE (EASTING):_____

END OF EXCAVATION
Y COORDINATE (NORTHING):_____ X COORDINATE (EASTING):_____

EXCAVATION PHOTOGRAPHED: (YES) NO
FINAL EXCAVATION DIMENSIONS IN FEET: 18 ft. x 8 ft. x 8.5 ft. deep

SAMPLES COLLECTED: (YES) (LAB ID #_____) NO

NOTES:_____

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: [signature] 07/27/10

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 7-31-2010
LOCATION: Parcel 79 EXCAVATION ID: BLDG. 450

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 8 ft. below grade; Sheen was not observed on groundwater.

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10322) NO

NOTES: A discharge was reportd by the DPW to NJDEP Case# 10-07-30-1106-23, operator 25. UST Found and removed on 7/27/2010. UST in good condition, piping had leak. 975 gallons of oil were removed. C. Appleby of DPW was notified of any discharge to the environment.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

7-30-10

Contract Management Division

SUBJECT: PWS-007, UST Removal
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 450

TVS Inc.
Field Supervisor, PWS-007
ATTN: Harold Hornung
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Hornung:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits or that the site requires further investigation outside the scope of this contract. The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

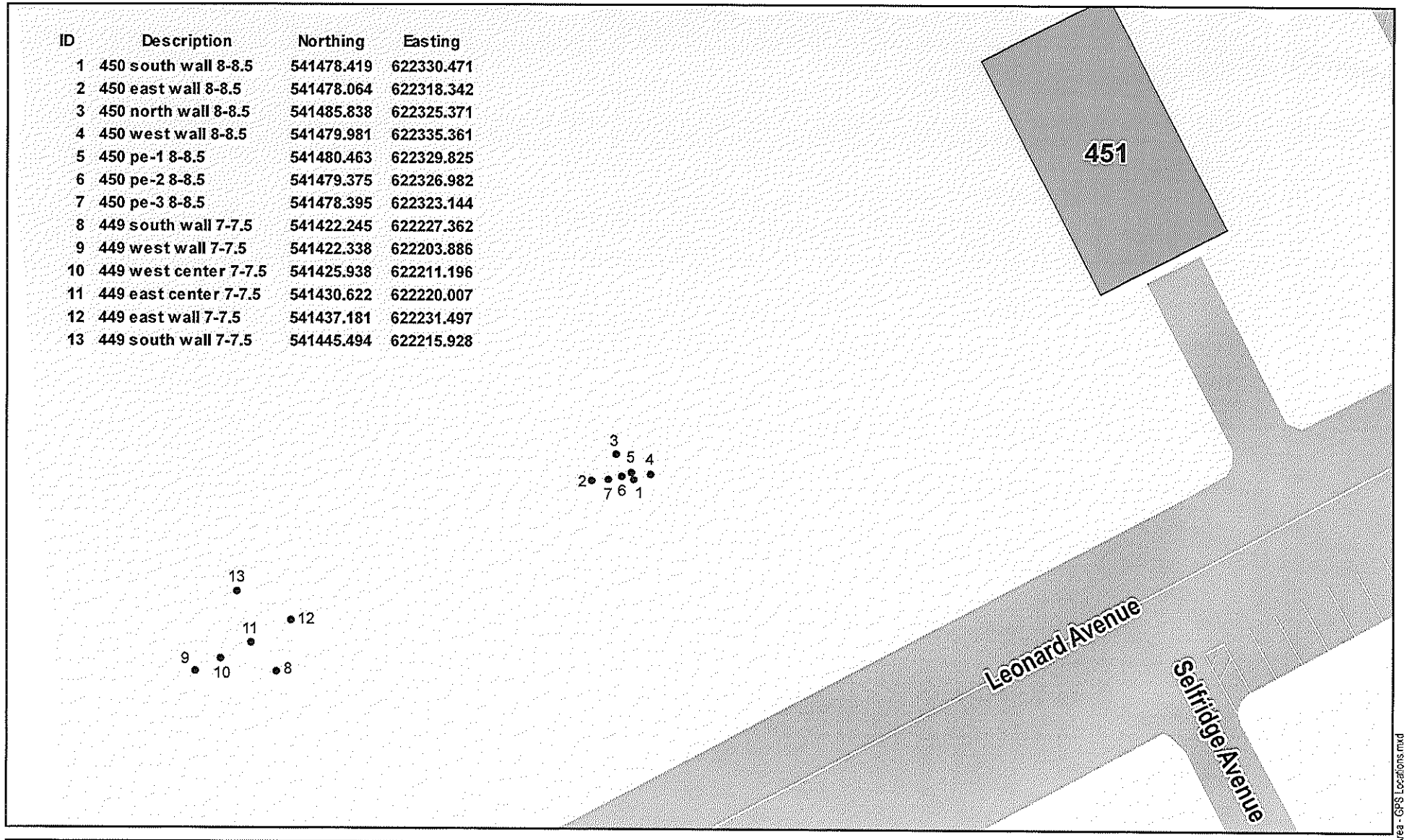
Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

CC: UST file copy

US ARMY-FT. MONMOUTH, NJ
PARCEL 79 (UST 450) SOIL SAMPLES
SOIL SAMPLING GPS POSITIONS & COORDINATES
US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

Position/Description	Y Coordinate Northing	X Coordinate (Easting)
450 south wall 8-8.5	541478.419	622330.471
450 east wall 8-8.5	541478.064	622318.342
450 north wall 8-8.5	541485.838	622325.371
450 west wall 8-8.5	541479.981	622335.361
450 pe-1 8-8.5	541480.463	622329.825
450 pe-2 8-8.5	541479.375	622326.982
450 pe-3 8-8.5	541478.395	622323.144

ID	Description	Northing	Easting
1	450 south wall 8-8.5	541478.419	622330.471
2	450 east wall 8-8.5	541478.064	622318.342
3	450 north wall 8-8.5	541485.838	622325.371
4	450 west wall 8-8.5	541479.981	622335.361
5	450 pe-1 8-8.5	541480.463	622329.825
6	450 pe-2 8-8.5	541479.375	622326.982
7	450 pe-3 8-8.5	541478.395	622323.144
8	449 south wall 7-7.5	541422.245	622227.362
9	449 west wall 7-7.5	541422.338	622203.886
10	449 west center 7-7.5	541425.938	622211.196
11	449 east center 7-7.5	541430.622	622220.007
12	449 east wall 7-7.5	541437.181	622231.497
13	449 south wall 7-7.5	541445.494	622215.928



400 Area - GPS Locations
Main Post
Fort Monmouth, New Jersey
FOUO

0 20 40 80 Feet

N
W E
S

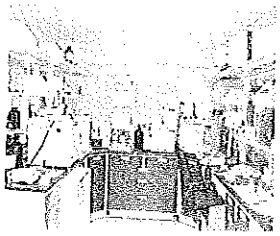
Legend
- GPS Location
- Existing Building
- Roadway & Parking
- Post Boundaries

Map Created by:
Fort Monmouth Installation GIO, Environmental Division
Fort Monmouth, New Jersey
Date: August 2, 2010
All drawings must be field verified.
New Jersey State Plane Feet, NAD83

August 2, 2010 X:\GIS\GIS Maps\JTPR\63400 Area - GPS Locations.mxd

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: Parcel 79

PARCEL/79

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
450/PE-1 (8.0-8.5')	1032201	Soil	27-Jul-10 14:20	07/27/10
450/PE-2 (8.0-8.5')	1032202	Soil	27-Jul-1014:22	07/27/10
450/PE-3 (8.0-8.5')	1032203	Soil	27-Jul-1014:24	07/27/10
450/North Wall (8.0-8.5')	1032204	Soil	27-Jul-1014:30	07/27/10
450/South Wall (8.0-8.5')	1032205	Soil	27-Jul-1014:32	07/27/10
450/East Wall (8.0-8.5')	1032206	Soil	27-Jul-1014:34	07/27/10
450/West Wall (8.0-8.5')	1032207	Soil	27-Jul-1014:36	07/27/10
Duplicate	1032208	Soil	27-Jul-1014:32	07/27/10

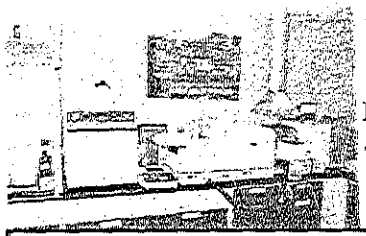
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 8/2/10
Laboratory Manager

Table of Contents

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 #: 732 532 6352
( )DERA ( )OMA ( )Other:_____

Project No: Parcel 79
Location: Parcel 79 UST 450

Samplers Name / Company: Robert Youhas / TUS

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	Volatiles	Comments: Remarks / Preservation Method
10322.01	450PE-1(8-8.5')	07/27/10	14:20	Soil	1	✓	✓	
.02	450PE-2(8-8.5')	07/27/10	14:22	Soil	1	✓	✓	
.03	450PE-3(8-8.5')	07/27/10	14:24	Soil	1	✓	✓	
.04	450Northwall(8-8.5')	07/27/10	14:30	Soil	1	✓	✓	
.05 *	450Southwall(8-8.5')	07/27/10	14:32	Soil	1	✓	✓	
.06	450Eastwall(8-8.5')	07/27/10	14:34	Soil	1	✓	✓	
.07	450Westwall(8-8.5')	07/27/10	14:36	Soil	1	✓	✓	
.08	DUPLICATE	07/27/10		Soil	1	✓	✓	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	07/27/10 1510				
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 24 Hrs.

Remarks: * = DUPLICATE
If TPH conc. exceeds 1,000 mg/kg, run Base Neutral analysis

000002

print legibly

COC Copy xls7/2/2010

SAMPLE RECEIPT FORM

Date Received: 7-27-10 Work Order ID#: 10322

Site/Proj. Name: Parcel 79 Cooler Temp (°C): 4.5°C

Received By: J. Delgado Sign: J. Delgado
(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: _____

GPS POINTS

US ARMY-FT. MONMOUTH, NJ
PARCEL 79 (UST 450) SOIL SAMPLES
SOIL SAMPLING GPS POSITIONS & COORDINATES
US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

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450 pe-2 8-8.5	541479.375	622326.982
450 pe-3 8-8.5	541478.395	622323.144

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10322 Site: Parcel 79

The Field Duplicate was performed on 450-South Wall 8.0-8.5 (1032205).

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

TPHC 10322

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).	Yes
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: ______________________

[signature] 7/30/10

Laboratory Manager Date

[signature] 7/29/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10322 **Site:** Parcel 79

	Date	Hold Time
Date Sampled	07/27/11	NA
Receipt/Refrigeration	07/27/10	NA
Analyses		
1. TPHC	07/28/10	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: Parcel 79
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix:
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Vol.: 1 uL

Date Received: 27-Jul-10
Date Extracted: 28-Jul-10
Extraction Method: Shake
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data		Qualifiers
MB07281001	MB07281001	1.00	15.00	100.00	23	333	not detected			
LCS07281001	LCS07281001	1.00	15.00	100.00	23	333	1187.77			
1032201	450 PE-1 (8-8.5')	1.00	15.54	78.7	29	409	not detected			
1032202	450 PE-2 (8-8.5')	1.00	15.55	84.4	27	381	not detected			
1032203	450 PE-3 (8-8.5')	1.00	15.34	84.2	27	387	not detected			
1032204	450 NORTH WALL (8-8.5')	1.00	15.62	80.2	28	399	not detected			
1032205	450 SOUTH WALL (8-8.5')	1.00	15.22	83.4	28	394	not detected			
1032206	450 EAST WALL (8-8.5')	1.00	15.51	82.5	27	391	not detected			
1032207	450 WEST WALL (8-8.5')	1.00	15.41	82.0	28	396	not detected			
1032208	DUPLICATE	1.00	15.64	83.6	27	382	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

000015

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 Dawn Tandy

Date: 7/30/10

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 7/30/10

000054

ATTACHMENT Z

UST 451 File Review and Analyses

PARSONS

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

Date: *March 3, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 451*** Registration ID: *None*

Recommended Status of Site: ***Change to Case Closed***

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): 10-04-16-1504-47

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 4/16/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

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

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). Visual evidence of soil contamination and "impact to groundwater" was noted during tank removal in April 2010; the release appeared to be from the associated piping and fill port above the UST. One sample was initially collected from the loading dock area located southeast of existing Bldg. 451, which is also near the location UST 451 (existing Bldg. 451 and former Bldg. 451 are not the same buildings, although they were located in proximity to each other). This initial sample was collected on May 10, 2010 from 5.5 ft bgs and contained 1688 mg/kg of TPH. Remedial soil excavation was performed, and five samples (plus one field duplicate) from the excavation bottom, three side walls, and from below the area of piping (at 2 to 2.5 ft bgs) were collected on May 11, 2010. The final soil sample results from this excavation were all non-detected (ND) for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. Therefore, soil remediation was completed, and no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Change to "Case Closed", request NFA from NJDEP

Signed: Kent A. Friesen

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 451 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 4/16/2010 ***REMOVAL CONTRACTOR:*** TVS Inc

SRF SEND DATE: ***TMS:***

DICAR NO. 10-04-16-1504-47 ***LEAK DETECT:***

REMEDIATION COMMENTS: contaminated soil and impact to GW at 5ft BGS observed. Leak appears to be from piping and UST fill port (above UST) assumed. Soil remediation completed.

REGISTRATION COMMENTS: UHOT as per BRAC Legal office determination

SAS DONE: NO ***CONSULTANT:*** DPW

MWs NEEDED: ***MONITORING WELLS:***

SUB-SURFACE EVALUATOR: C. Appleby

CURRENT UST STATUS

UST STATUS: REMOVED RI ON-GOING ***CASE STATUS:*** Case Open

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG.#: 451 REG.#: _____ - _____

DATE: 4-16-10 TOA: _____ TOD: _____

CLOSURE TECH: FRANK ACCORSI NJDEP CERT.#: 001 0042

PERSONNEL: ANTHONY FORGIONE, MARC TAYLOR

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Y
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. (YES)/NO)	Y
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	NA
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	Y
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS CLEANED AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	Y
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
_____ DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	NA
_____ DRUMS OF WASTE WERE TRANSPORTED TO THE (MP,CW,EV) HWSA	NA
550 (OIL) 425 (H_2O) 975 GALLONS OF OIL/WATER WASTE WERE REMOVED (MANIFEST#: 20220)	Y
NA CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	Y
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) CAPLEBY	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED: _____	
THE UST WAS TRANSPORTED TO 103 → RB RECYCLING FOR DISPOSAL (ATTACH SCRAP TICKET)	Y
ADDITIONAL NOTES WERE TAKEN AND RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE GIVEN TO THE SSE TODAY: (CIRCLE EACH OR ADD ITEMS) SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, _____	N

CHECK ALL BOXES, LEAVE NO BLANKS

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.

CLOSURE TECH (PRINT NAME): FRANK ACCORSI

SIGNATURE: Frank Accorsi DATE: 4-16-10

US ARMY, SELFM-PW-EV

DAILY UST SUBSURFACE REMOVAL LOG

(FORMER) BLDG.#: 451 REG.#: _____ - _____

DATE: 4-15-10 TOA: _____ TOD: _____

SSE: FRANK ACCORSI NJDEP CERT.#: 0010092

REMOVAL CONTRACTOR: TVS Inc. PWS-007

CLOSURE SUPERVISOR: FRANK ACCORSI NJDEP CERT.#: 0010092

WEATHER: SUNNY, 60's

ACTIVITY	YES / NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Y
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172), CASE# _____	Y
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 4.5 FEET BG, A SHEEN (WAS/(WAS NOT)) OBSERVED ON GW	Y
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	Y
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	Y
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	Y
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/(FID) RECORDED SITES IAW 7:26E-3.6 et seq.	Y
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Y
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER) AND A BACKFILL AUTH. LTR. IS ATTACHED	
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	N
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH)	
SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG, SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN FILL TICKETS (IN YDS^3), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)	Y

CHECK ALL BOXES, LEAVE NO BLANKS

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 and 7:26 et seq.. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Closure Tech (print Name): FRANK ACCORSI Date: 5-10-10

SIGNATURE: Frank Accorsi

UST INVESTIGATION PROJECT LOG

SUBSURFACE EVALUATOR: Frank Accorsi
EQUIPMENT OPERATOR: Anthony Forgione, Marc Taylor
DATE: 4-15/16-2010
LOCATION: Parcel 79 EXCAVATION ID: BLDG. 451 (Former Bldg.)

EXCAVATION DESCRIPTION

DEBRIS MATERIAL PRESENT: YES NO
DESCRIBE: _____

NATURAL MATERIAL PRESENT: YES NO
DESCRIBE: _____

WATER ENCOUNTERED: YES NO
DESCRIBE: 4.5 ft. below grade; Sheen was not observed on groundwater.

GPS POSITIONS
BEGINNING OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

END OF EXCAVATION
Y COORDINATE (NORTHING): _____ X COORDINATE (EASTING): _____

EXCAVATION PHOTOGRAPHED: YES NO
FINAL EXCAVATION DIMENSIONS IN FEET: _____

SAMPLES COLLECTED: YES (LAB ID # 10183,10185) NO

NOTES: UST Found and removed on 4/16/2010. UST cleaned and no residual liquids were left in the tank. 550 gallons of oil and 425 gallons of H2O were removed. 80 cubic yards of petrol. cont. soil were excavated and transported. UST was transported to 108 yard and then to Red Bank Recycling. C. Appleby of DPW was notified of any discharge to the environment.

ADDITIONAL NOTES ON BACK YES NO

SUBSURFACE EVALUATOR SIGNATURE: _____

DIRECTORATE OF PUBLIC WORKS
FORT MONMOUTH, NEW JERSEY 07703

Contract Management Division 5-20-10

SUBJECT: PWS-007, UST Removal
Contractor: TVS Inc.

RE: Backfilling of excavation,

BUILDING #: 451 Partial - Line w/plastic

TVS Inc.
Field Supervisor, PWS-007
ATTN: Harold Hornung
Building 166
Fort Monmouth, New Jersey 07703-5000

Dear Mr. Hornung:

The above referenced area has been sampled and analyzed as described in the NJDEP Regulations. The results indicate levels of petroleum contamination below the NJDEP allowable limits or that the site requires further investigation outside the scope of this contract. The contractor may proceed with the backfilling of the excavation with stone to groundwater and clean fill to grade as required in the above referenced contract specification.

Regards,

Mr. Charles Appleby
Subsurface Evaluator NJDEP #9974
Environmental Protection Specialist
Directorate of Public Works

CC: UST file copy

451

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

State of New Jersey
Department of Environmental Protection
P.O. Box 434, Trenton, NJ 08625-0434

BOB MARTIN
Commissioner

April 20, 2010

Attn: U.S. ARMY
BLDG 173
OCEANPORT BORO, NJ 07703

Re : U.S. ARMY, BLDG 451, LEONARD AVE, OCEANPORT BORO-MONMOUTH CO
Incident #: 10-04-16-1504-47

Dear Sir or Madam:

A suspected release of hazardous substances at the above referenced property has been reported to the Department of Environmental Protection (Department). Since the discharge occurred as the result of a leaking underground or above ground heating oil tank at a residential property or an underground heating oil tank with a capacity of less than 2001 gallons at a non residential property, oversight will be provided by the Unregulated Heating Oil Tank Program (UHOT).

In addition to a Remedial Action Report, you or your contractor will need to submit a UHOT Questionnaire, UHOT Certification, and a certified check, attorney check, money order or by personal check made payable to "Treasurer, State of New Jersey" for $400.00. *Please be sure to write the incident number on the check.*

Please submit your documents and payment to:

NJDEP, Bureau of Case Assignment & Initial Notice
401 East State Street, PO Box 434
Trenton, NJ 08625-0434
Attention: Bureau Chief

Additional information about the UHOT program is available at **www.state.nj.us/dep/srp/unregulatedtanks**, or by contacting the Department's General Questions Line at (609) 984-3081.

Loans and grants to qualifying owners of non-regulated petroleum underground storage tanks are available from the Underground Storage Tank (UST) Fund. To find out if you are eligible, as well as to obtain an application package, please go to **www.state.nj.us/dep/srp/finance/ustfund**, or contact the Bureau of Contract and Fund Management, at (609) 777-0101.

If the source of the release is from something other than an underground storage tank, you are required to complete a Request for Department Oversight form, which must be submitted along with your cleanup report to the above address. This form is available at http://www.state.nj.us/dep/srp/forms/, or by contacting the Case Assignment Section at (609) 292-2943.

Once the required documents and payment are received, the case will be assigned to a case manager who will review the submittals to ensure that the cleanup has been completed.

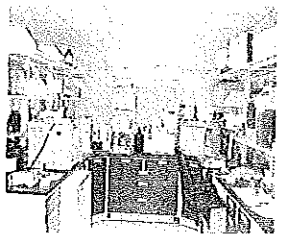
Sincerely

Kirstin Hahn

Kirstin Hahn, Bureau Chief
Bureau of Case Assignment & Initial Notice

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: 10-127102

PARCEL79/Bldg. 451

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
451-Loading Dock	1018301	Soil	10-May-10 15:35	05/10/10

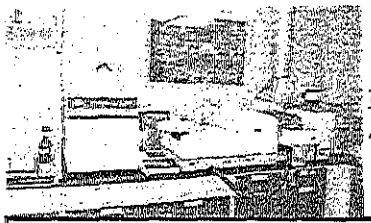
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 6/1/10
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X26292
( )DERA ( )OMA (X)Other: GRAC

Project No: 10-127102
Location: PARCEL 79
BLDG. 951

Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	* TPH	* Metals					FID (ppm)	Density	Comments: Remarks / Preservation Method
10183 01	451-LOADING DOCK	5-10-10	1535	SOIL	1	X	X					110	55-6	ICE

Analysis Parameters

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	5-10-10 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: ( )Standard 3 wks, (X)Rush 3 WK., ( )ASAP Verbal ___ Hrs.
DAYS

Comments: * FIELD SCREENING ONLY

000002

print legibly

new coc._1.XLS12/16/2009

SAMPLE RECEIPT FORM

Date Received: 5-10-10 Work Order ID#: 10183

Site/Proj. Name: Axel 79 Cooler Temp (°C): 4.0°C

Received By: T. Ventura Sign: T. Ventura
(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: _____

_____

_____

_____

GPS
POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 451- (1,000 G. UST)

SOIL SAMPLING 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)
451A BOTTOM	541504.707	622482.225
451B SOUTH WALL	541497.548	622486.615
451D NORTH WALL	541510.425	622478.895
451C WEST WALL	541499.268	622473.134
451E PIPING	541504.472	622471.954
451 LOADING DOCK	541511.808	622491.604

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

10183 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.	Yes
7.	Analysis holding time met. (If not met, list number of days exceeded for each sample).	Yes

Additional comments: _____

Laboratory Manager — Date 6/1/10

5/24/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10183 **Site:** Parcel 79/Bldg. 451

	Date	Hold Time
Date Sampled	05/10/10	NA
Receipt/Refrigeration	05/10/10	NA
Analyses		
1. TPHC	05/12/10	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 #: 10-127102
Location: PARCEL 79
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix:
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Volume: 1 uL

Date Received: 10-May-10
Date Extracted: 12-May-10
Extraction Method: Shake
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data	Qualifiers
MB05121001	MB05121001	1.00	15.00	100.00	23	333	not detected		
LCS05121001	LCS05121001	1.00	15.00	100.00	23	333	1139.37		
1018301	451 LOADING DOCK	1.00	15.23	88.7	26	370	1688.33		

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

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: 6/1/16

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 6/1/10
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: 10-127102

PARCEL 79/Bldg.451

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
451-A/Bottom	1018501	Soil	11-May-10 09:00	05/11/10
451-B/South Wall	1018502	Soil	11-May-10 09:30	05/11/10
451-C/West Wall	1018503	Soil	11-May-10 10:10	05/11/10
451-D/North Wall	1018504	Soil	11-May-10 10:40	05/11/10
451-E/Piping	1018505	Soil	11-May-10 11:00	05/11/10
451-Duplicate	1018506	Soil	11-May-10 10:40	05/11/10

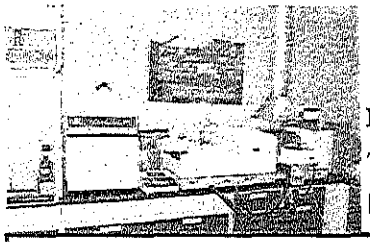
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 6/16/10
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY
Phone #: X 26292
( )DERA ( )OMA (X)Other: BRAC

Project No: 10-127102
Location: PARCEL 79, BLDG, 451

Samplers Name / Company: FRANK ACCORSI / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	T-PH *	% SOLIDS					FID (ppm)	DEPTH (FT)	Remarks / Preservation Method
10185 01	451-A, BOTTOM	5-11-10	0900	SOIL	1	X	X					0	7-7.5	ICE
02	451-B, SOUTH WALL		0930			X	X					1	5-5.5	
03	451-C, WEST WALL		1010			X	X					1	5-5.5	
04	451-D, NORTH WALL		1040			X	X					2	5-5.5	
05	451-E, PIPING		1100			X	X					2	2-2.5	
06	451 - DUPLICATE		1040			X	X					2	5-5.5	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	5-11-10 1125				
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 ~~wks~~ 3 DAYS ( )ASAP Verbal ___ Hrs.

Comments:

000002

print legibly

new coc._1.XLS12/16/2009

SAMPLE RECEIPT FORM

Date Received: 5-11-10 Work Order ID#: 10185

Site/Proj. Name: Parcel 79 Cooler Temp (°C): 2.5

Received By: (Print name) J. [illegible] Sign: [signature]

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:

GPS POINTS

U.S. ARMY - FT. MONMOUTH, NJ

(former)BUILDING 451- (1,000 G. UST)

SOIL SAMPLING 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)
451A BOTTOM	541504.707	622482.225
451B SOUTH WALL	541497.548	622486.615
451D NORTH WALL	541510.425	622478.895
451C WEST WALL	541499.268	622473.134
451E PIPING	541504.472	622471.954
451 LOADING DOCK	541511.808	622491.604

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10185 Site: Parcel 79/Bldg. 451

The Field Duplicate was performed on 451-D/North Wall (1018504)

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

10185 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).	Yes
5.	IR Spectra submitted for standards, blanks and samples.	N/A
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 6/1/10

5/24/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10185 **Site:** Parcel 79/Bldg. 451

	Date	Hold Time
Date Sampled	05/11/10	NA
Receipt/Refrigeration	05/11/10	NA
Analyses		
1. TPHC	05/12/10	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 #: 10-127102
Location: PARCEL 79
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix: .
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Volume: 1 uL

Date Received: 11-May-10
Date Extracted: 12-May-10
Extraction Method: Shake
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data	Qualifiers
MB05121001	MB05121001	1.00	15.00	100.00	23	333	not detected		
LCS05121001	LCS05121001	1.00	15.00	100.00	23	333	1139.37		
1018501	451-A BOTTOM	1.00	15.10	82.0	28	404	not detected		
1018502	451-B SOUTH WALL	1.00	15.13	83.0	28	398	not detected		
1018503	451-C WEST WALL	1.00	15.11	84.8	27	390	not detected		
1018504	451-D NORTH WALL	1.00	15.26	84.4	27	388	not detected		
1018505	451-E PIPING	1.00	15.18	79.1	29	416	not detected		
1018506	451 DUPLICATE	1.00	15.21	83.3	28	395	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

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 Tardy

Date: 6/1/10

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 6/1/10

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: 10-127102

Bldg. 451/Parcel 79

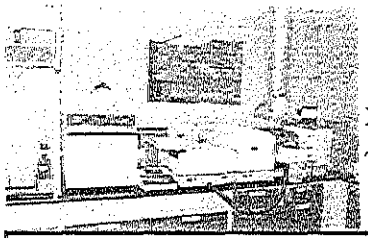
Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
451-PX5/East Wall	1049001	Soil	15-Nov-10 15:00	11/15/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL TESTING LAB
TPHC, %SOLIDS

Dean Tardiff/Date: 12/14/10
Laboratory Manager

Table of Contents

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: CHUCK APPLEBY	Project No: 10-127102	Analysis Parameters								Comments:
Phone #: X26292	Location: BLDG. 451									
( )DERA ( )OMA (X)Other: BRAC	PARCEL 79									
Samplers Name / Company: FRANK ACCORSI / TVS										

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH *	TCL SVOCs					PID (ppm)	DEPTH (FT)	Remarks / Preservation Method
104190 01	451-PX5, EAST WALL	11-15-10	1500	SOIL	1	X	X					0	5.5-6	ICE

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	11-15-10 1520				
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 ~~3 Wks~~ 5 DAYS, ( )ASAP Verbal ____ Hrs.

Comments: IF TPH > 1,000 PPM, CONTIGENT ANALYSIS ~~FOR~~ FOR BNFS

2000100

print legibly

COC .xls10/23/2010

SAMPLE RECEIPT FORM

Date Received: 11-15-10 Work Order ID#: 10490

Site/Proj. Name: Bldg 451 / Phase I Cooler Temp (°C): 4.0°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: _____

GPS POINTS

U.S. ARMY-FT. MONMOUTH, NJ

BLDG 451

SOIL SAMPLING GPS POSITIONS & COORDINATES

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

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
451-PX5 East Wall	541507.522	622496.926

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

10490 TPH

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 — Date 12/14/10

12/3/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10490 **Site:** Bldg. 451/Parcel 79

	Date	Hold Time
Date Sampled	11/15/10	NA
Receipt/Refrigeration	11/15/10	NA

Analyses

1. TPHC	11/20/10	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:**	10-127102 BLDG. 451
Analysis: **Matrix:** **Inst. ID:** **Column Type:** **Injection Vol.:**	OQA-QAM-025 GC TPHC INST. #1 RTX-5, 0.32mm ID, 30 m 1 uL	**Date Received:** **Date Extracted:** **Extraction Method:** **Analyst:**	15-Nov-10 20-Nov-10 Shake Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data		Qualifiers
MB11201001	MB11201001	1.00	15.00	100.00	23	333	not detected			
LCS11201001	LCS11201001	1.00	15.00	100.00	23	333	1027.67			
1049001	451 PX-5 EAST WALL	1.00	15.19	80.0	29	411	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

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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 Jean Tardi

Date: 12/14/10

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 12/14/10
Dean Tardiff
Laboratory Manager

ATTACHMENT AA

Bldg. 456 Analyses

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. 456

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
456-PX1	1114701	Soil	14-Apr-11 15:00	04/14/11

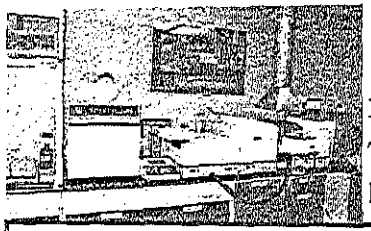
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
EPH, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 6/7/11
Laboratory Manager

Table of Contents

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
Phone #: X26223
( )DERA ( )OMA (X)Other:_____

Project No:
Location: B. 456

Samplers Name / Company: FRANK ACCORSI / TVS

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: TPH						PID (ppm)	Depth (ft)	Comments: Remarks / Preservation Method
11147.01	456-FX1	4-14-11	1500	SOIL	1	X						0	0.5-1	ICE

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	4-14-11 1515				
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 3 ~~Wk.~~ PAHs, (_)ASAP Verbal ___Hrs.

Comments: *IF TPH > 100 PPM, ANALYZE FOR PAH

print legibly

Page 1 of 1

COC .xls3/2/2011

000002

SAMPLE RECEIPT FORM

Date Received: 4-14-11 Work Order ID#: 11147

Site/Proj. Name: B.456 Cooler Temp (°C): 4°

Received By: Shannon Burk Sign: Shannon 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
NA					

Comments: _____

METHOD SUMMARY

Method Summary

NJDEP Method ORG-10-08
Gas Chromatographic Determination of Extractable Petroleum Hydrocarbons in Soil

Ten grams (10g) of soil is added to an extraction thimble. 10g anhydrous Sodium Sulfate is added to dry the sample. Surrogate standard spiking solution is then added to the flask.

One hundred mL of Methylene Chloride is added to the Soxhlet jar and it is placed onto the Soxtherm extractor. The extraction is set to run for one hour at 160°C. The jar is removed from the Soxtherm and the particulate matter is allowed to settle. Next, the extract is concentrated under a stream of nitrogen. The methylene chloride is then solvent exchanged with ~10mL of hexane. The final volume is adjusted to 1.0mL under nitrogen. 1.0mL of fractionation surrogate is added to the final hexane extract. The resulting 2.0mL of extract is transferred to a Teflon capped vial. Samples determined to require fractionation shall be separated into an aliphatic and an aromatic fraction by passing through a silica gel cartridge with consecutive portions of hexane and methylene chloride.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for aliphatic and aromatic Petroleum Hydrocarbons covering ranges of C9-12, C12-26, C16-21, and C21-40 for aliphatics and ranges C10-12, C12-16, C16-21, and C21-36 for aromatics. The final concentration of Extractable Petroleum Hydrocarbons is calculated using percent moisture, sample weight, and summing the total concentrations of the two fractions.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

11147 EPH

NJ EPH/GC 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.	Standards Summary Meet Criteria	Yes
4.	Calibration – Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis	Yes
5.	Blank Contamination – If yes, list compounds and concentrations in each blank:	NO
6.	Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:	Yes
	If not met, were the calculations checked and the results qualified as "estimated"?	—
7.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range	Yes

Additional Comments: _____

Analyst: _____

Laboratory Manager: _____

Date: 6/7/11

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 11147 **Site:** Bldg. 456

	Date	Hold Time
Date Sampled	04/14/11	NA
Receipt/Refrigeration	04/14/11	NA

Analyses

1. EPH	04/15/11	14 Days

EPH

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
Analysis: NJ EPH
Matrix: Soil
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Vol.: 1 uL

Project #:
Location: BLDG. 456
ECP:
Work Order:
Date Received: 14-Apr-11
Date Extracted: 15-Apr-11
Extraction Method: Soxhlet
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	Total EPH Result (mg/kg)	Data		Qualifiers
MB04151101	MB04151101	1.00	10.00	100.00	4.19	91.5	not detected			
LCS04151101	LCS04151101	1.00	10.00	100.00	4.19	91.5	215.46			
LCSD04151101	LCSD04151101	1.00	10.00	100.00	4.19	91.5	221.92			
1114701	456-PX1	1.00	10.10	84.0	4.94	107.8	77.35			J
1114701MS	456-PX1	1.00	10.19	84.0	4.90	106.9	406.98			
1114701MSD	456-PX1	1.00	10.22	84.0	4.88	106.6	403.46			

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

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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 Steven Tarsa

Date: 6/7/11

Laboratory Certification # 13461

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Dean Tardiff
Laboratory Manager 6/7/11

ATTACHMENT BB

UST 474 File Review and Analyses

PARSONS

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

Date: *March 3, 2014* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 474*** Registration ID: *None*

Recommended Status of Site: ***Case Closed*** ***(no change)***

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

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

NJDEP Release No. or DICAR (If applicable): *None*

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gals. Contents: No. 2 Fuel Oil

[X] Residential [ ] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: 12/9/2010

Were closure soil samples taken? [X] Yes [ ] No Analyses: TPH

Comparison criteria: 5,100 mg/kg TPH

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

Brief Narrative

Soil samples were collected from the tank excavation in 2010 and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). Four samples from the excavation (plus one field duplicate) were collected on December 9, 2010. The soil sample results from this excavation ranged from non-detected (ND) to 579 mg/kg for TPH. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Results were also less than 1,000 mg/kg, which is the current NJDEP threshold criterion for additional required analyses. Therefore, no additional sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): Request NFA from NJDEP

Signed: Kent A. Friesen

Kent A. Friesen, Parsons

Fort Monmouth UST Status Summary Report

UST REGISTRATION INFORMATION SUMMARY

LOCATION: 474 ***NJDEP REG ID:*** -

RESIDENTIAL? YES

UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000 ***CONSTRUCTION:*** STEEL

PRODUCT: #2 FUEL OIL ***YEAR INSTALLED:***

UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE: 12/9/2010 ***REMOVAL CONTRACTOR:*** TVS Inc

SRF SEND DATE: ***TMS:***

DICAR NO. ***LEAK DETECT:***

REMEDIATION COMMENTS: CA clean site not contamination.NJDEP case manager Larry Quinn on-site for removal.

REGISTRATION COMMENTS: UHOT as per BRAC legal Office determination

SAS DONE: NO ***CONSULTANT:***

MWs NEEDED: no ***MONITORING WELLS:*** 0

SUB-SURFACE EVALUATOR: H. Hornung

CURRENT UST STATUS

UST STATUS: REMOVED CLEAN SITE SAS CONT ***CASE STATUS:*** Case Closed

SUBMITTAL DATE: ***APPROVAL DATE:***

FINALIZED: No

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: 11-33212

Bldg. /474

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
474/South	1054001	Soil	09-Dec-10 13:30	12/09/10
474/Center	1054002	Soil	09-Dec-10 13:35	12/09/10
474/North	1054003	Soil	09-Dec-10 13:40	12/09/10
474/Duplicate	1054004	Soil	09-Dec-10 13:40	12/09/10
474/Piping	1054005	Soil	09-Dec-10 13:50	12/09/10

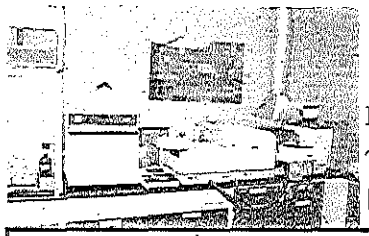
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL TESTING LAB
TPHC, %SOLIDS

(QC and raw data not included for brevity)

Dean Tardiff/Date: 1/5/11
Laboratory Manager

Table of Contents

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
Phone #: 2257
( )DERA ( )OMA (X)Other: UHOT Removal
Project No: 11-33212
Location: ~~UHOT 747~~ 474 UHOT ~~747~~
Samplers Name / Company: Hornung / TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	Pb-Solids		Depth	PID Reading				Remarks / Preservation Method
10540 01	747 474-South	12/9/10	1330	Solid	1	X	X		6'	0.2				4°C
02	747 Center		1335		1	X	X		6'	0.1				4°C
03	747 North		1340		1	X	X		6'	0.2				4°C
04	747 Dup		1340		1	X	X		6'	.2				4C
05	747 Piping	↓	1350	↓	1	X	X		2'	0.1				4°C

Analysis Parameters

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	12/9/10 1450	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
		[signature]			

Report Type: ( )Full, (X)Reduced, (X)Standard, ( )Screen / non-certified, ( )EDD
Turnaround time: ( )Standard 3 wks, ( )Rush Wk., (X)ASAP Verbal ___ Hrs.

Comments: If TPH result is ≥1000 ppm run 2-Methyl Naphthalene & Naphthalene

000002

print legibly

COC .xls10/23/2010

SAMPLE RECEIPT FORM

Date Received: 12-9-10 — Work Order ID#: 10540

Site/Proj. Name: [illegible] — Cooler Temp (°C): 2.5

Received By: J. Vergara — Sign: [signature]
(Print name)

Check the appropriate box

1. Did the samples come in a cooler? yes no n/a [yes circled]
2. Were samples rec'd in good condition? yes no [yes circled]
3. Was the chain of custody filled out correctly and legibly? yes no [yes circled]
4. Was the chain of custody signed in the appropriate place? yes no [yes circled]
5. Did the labels agree with the chain of custody? yes no [yes circled]
6. Were the correct containers/preservatives used? yes no [yes circled]
7. Was a sufficient amount of sample supplied? yes no [yes circled]
8. Were air bubbles present in VOA vials? yes no n/a [n/a circled]
9. Were samples received on ice? yes no [yes circled]
10. Were analyze-immediately tests perform within 15 minutes yes no n/a [n/a circled]

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative

Comments: ______

GPS POINTS

U.S. ARMY-FT. MONMOUTH, NJ

SITE 474

SOIL SAMPLING GPS POSITIONS & COORDINATES

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

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
474 South	541044.14	622897.804
474 Center	541047.737	622896.128
474 North	541053.424	622893.065
474 Piping	542062.674	622896.414

FIELD DUPLICATE

Field Duplicate Identification

Lab ID: 10540 Site: Bldg. 474

The Field Duplicate was performed on 474-North (105404)

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

TPH 10540

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). Sample amount is 5794 mg/Kg, dup is 0 mg/Kg	NO
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 — Date 1/5/11

12/13/10

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10540 **Site:** 474

	Date	Hold Time
Date Sampled	12/09/10	NA
Receipt/Refrigeration	12/09/10	NA

Analyses

1. TPHC	12/10/10	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 #: 11-33212
Location: BLDG. 474
ECP:
Work Order:

Analysis: OQA-QAM-025
Matrix:
Inst. ID: GC TPHC INST. #1
Column Type: RTX-5, 0.32mm ID, 30 m
Injection Vol.: 1 uL

Date Received: 9-Dec-10
Date Extracted: 10-Dec-10
Extraction Method: Shake
Analyst: Robert Szot

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL (mg/kg)	TPHC Result (mg/kg)	Data		Qualifiers
MB12101001	MB12101001	1.00	15.00	100.00	23	333	not detected			
LCS12101001	LCS12101001	1.00	15.00	100.00	23	333	1117.10			
1054001	474 SOUTH	1.00	15.29	77.7	29	421	not detected			
1054002	474 CENTER	1.00	15.32	76.5	30	427	not detected			
1054003	474 NORTH	1.00	15.18	79.7	29	413	579.46			
1054004	474 DUP	1.00	15.28	78.9	29	415	not detected			
1054005	474 PIPING	1.00	15.15	83.9	28	393	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

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: ____/____/____

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 1/5/11
Dean Tardiff
Laboratory Manager

ATTACHMENT CC

UST 490 File Review and Analyses

Contents:

- Underground Storage Tank File Review for UST 490
- Enclosure 1 - Report: *Underground Storage Tank Closure Report, Main Post – Building 490, Tilly Ave.*
- Enclosure 2 – Analyses from May 26, 2010 Sampling
- Enclosure 3 – Analyses from July 21, 2010 Sampling

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

Date: *March 3, 2015* Review Performed By: *Kent Friesen, Parsons*

Site ID: ***Bldg. 490*** Registration ID: 90010-58

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): None

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

Tank Description: [X] Steel [ ] Fiberglass Size: 1000 gal. Contents: No. 2 Fuel Oil

[ ] Residential [X] Commercial/Industrial

Tank Removed? [X] Yes [ ] No If "yes," removal date: May 25, 1990

Were closure soil samples taken? [ ] Yes [X] No Analyses: _____

Comparison criteria: _____

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 490. The tank was removed in 1990, but closure soil samples were not collected because contamination was not observed, which was the standard Army procedure at the time. A Site Assessment Compliance Statement and Standard Reporting Form (SRF) for tank removal were submitted to the State in 1991, but there is no record of NFA approval from the NJDEP.

Additional soil sampling was performed using a Geoprobe in 2005 to assess the site for petroleum contamination, and the results were reported in *Underground Storage Tank Closure Report, Main Post – Building 490, Tilly Ave.* (Tecom-Vinnell Services, Inc., 2007; attached as Enclosure 1). Three soil samples were collected from the site for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs) analysis, and one groundwater sample for VOCs and semivolatile organic compounds (SVOCs). The soil results ranged from 2981 mg/kg to 8762 mg/kg for TPH, which was less than the then-current remediation standards of 10,000 mg/kg. The VOCs ethyl benzene and xylenes were detected in soil but at concentrations well below the current Residential Direct Contact Soil Remediation Standard (RDCSRS). The VOC benzene and SVOCs naphthalene, 2-methylnaphthalene, acenaphthene, dibenzofuran, fluorene, and phenanthrene were detected in groundwater at concentrations less than the then-current NJDEP Class II Ground Water Quality Criteria.

An additional Geoprobe soil and groundwater sampling program was conducted on May 26, 2010 at the UST 490 site; analyses are attached as Enclosure 2. The soil TPH results ranged from ND to 5941 mg/kg; one of the six sample results exceeded the current TPH remediation criterion of 5,100 mg/kg for TPH. The arithmetic average of all TPH soil results for this sampling was 1350 mg/kg, which is less than the current TPH remediation criterion of 5,100 mg/kg for TPH. The analytes 2-methylnaphthalene and phenanthrene were detected in soil SVOC results but at concentrations well below the current RDCSRS. VOCs and SVOCs detected in groundwater from one temporary well (TMP-1) included benzene, ethylbenzene, xylenes,

acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, and phenanthrene, which were detected in groundwater at concentrations less than the NJDEP Class IIA Ground Water Quality Criteria. However, 2-methylnaphthalene was detected at a concentration of 70.8 ug/L, which exceeded the NJDEP interim Ground Water Quality Criteria of 30 ug/L.

Three temporary wells were then sampled in July 21, 2010, and analyzed for SVOCs; analyses are attached as Enclosure 3. Detected analytes included naphthalene, 2-methylnaphthalene, fluorene, phenanthrene, and pyrene; all but 2-methylnapthalene were detected in groundwater at concentrations less than the NJDEP Class IIA Ground Water Quality Criteria. 2-Methylnapthalene concentrations ranged from ND to 115 ug/L, which exceeded the NJDEP interim Ground Water Quality Criteria of 30 ug/L.

In conclusion, the analytical results support the UST Case Status of "Case Closed" for soils. However, there is evidence of groundwater contamination in excess of NJDEP criteria (specifically 2-methylnaphthalene).

Recommendations (if any): Request NFA from NJDEP

Signed: _____

Kent A. Friesen, Parsons

ATTACHMENT CC, Enclosure 1

Report: *Underground Storage Tank Closure Report, Main Post – Building 490, Tilly Ave.*

U.S. Army Garrison
Fort Monmouth, New Jersey

Underground Storage Tank Closure Report

Main Post –Building 490
Tilly Ave.

NJDEP UST Registration No. 90010-58

August 2007

UNDERGROUND STORAGE TANK CLOSURE REPORT

MAIN POST –BUILDING 490
NJDEP UST REGISTRATION NO. 90010-58

AUGUST 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 on May 25, 1990. The UST was located on the north side of Building 490 in the Main Post area of Fort Monmouth. UST No. 90010-58 was a 1,000-gallon No. 2 heating oil tank.

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 UST removal, no closure soil samples were collected. Soil sampling was not required at the time. However, in order to confirm that the tank did not leak, a subsurface investigation was conducted. On December 14, 2005, a Geoprobe was utilized to collect samples 490-A, 490-B, 490-C and 490-D-Duplicate 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 7.5 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. 90010-58, 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). TPH concentrations of 8,762 mg/kg, 2,981 mg/kg, 4,523 mg/kg and 4,145 mg/kg were detected in samples 490-A, 490-B, 490-C and 490-D-Duplicate, respectively. A groundwater sample was analyzed for volatile organics and semi-volatile organics. This sample did not contain compounds that exceed the NJDEP Class II Ground Water Quality Criteria.

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. Based on the closure groundwater sample there is no volatile organic or semi volatile organic contamination in the location of the former UST.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-58 at Building 490.

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. 90010-58, was closed at Building 490 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 and removal of the UST was conducted on May 25, 1990.

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 490, Tilly Ave., is located in the eastern portion (400 Area) of the Main Post of Fort Monmouth, as shown on Figure 1. UST No. 90010-58 was located on the north side of Building 490. Historical maps were used to determine the exact location of the former tank. A site location map is provided on Figure 2.

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 490 is located approximately 800 feet north 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 490 is anticipated to be to the south.

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) 532-6223

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

- Analytical Laboratory: Fort Monmouth Environmental Testing Laboratory
  Contact Person: 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. During the field investigation, potentially contaminated soils were found.

2.3 SOIL SAMPLING

On December 14, 2005, closure soil samples 490-A, 490-B, 490-C and 490-D (Duplicate B) were collected from a total of three (3) locations along the tank centerline bottom of the former UST. Groundwater was encountered at approximately seven feet (7.0) below ground surface in the borings. All soil samples were analyzed for TPH. A soil sample site location map is provided on Figure 2.

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 14, 2005, sample 490-Groundwater was collected from soil borehole 490-B to assess the groundwater quality in the location of the former tank. A temporary piezometer was installed in the borehole for sample collection. 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 14, 2005 to evaluate soil conditions in the location of the former UST. All samples were analyzed for TPH. Contingient VOA analysis was conducted on the highest TPH sample (490A). 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 14, 2005 from UST 90010-58 contained concentrations of TPH below the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants. TPH concentrations of 8,762 mg/kg, 2,981 mg/kg, 4,523 mg/kg and 4,145 mg/kg were detected in samples 490-A, 490-B, 490-C and 490-D(Duplicate B), respectively. Sample 490-A was further analyzed for VOA in which ethylbenzene and total xylenes were detected at concentrations of 4.7 mg/kg and 3.0 mg/kg, respectively. These are below the NJDEP Residential Direct Contact Soil Cleanup Criteria of 1,000 mg/kg and 410 mg/kg, respectively.

3.2 GROUNDWATER SAMPLING RESULTS

One groundwater sample was collected via a temporary piezometer installed in soil borehole 490-B and was analyzed for VOA and SVOA. Sample 490-Groundwater contained several compounds, including some common laboratory contaminants, but all were below the NJDEP Class II Ground Water Quality Criteria. Refer to Table 4 and Appendix B for complete analytical details.

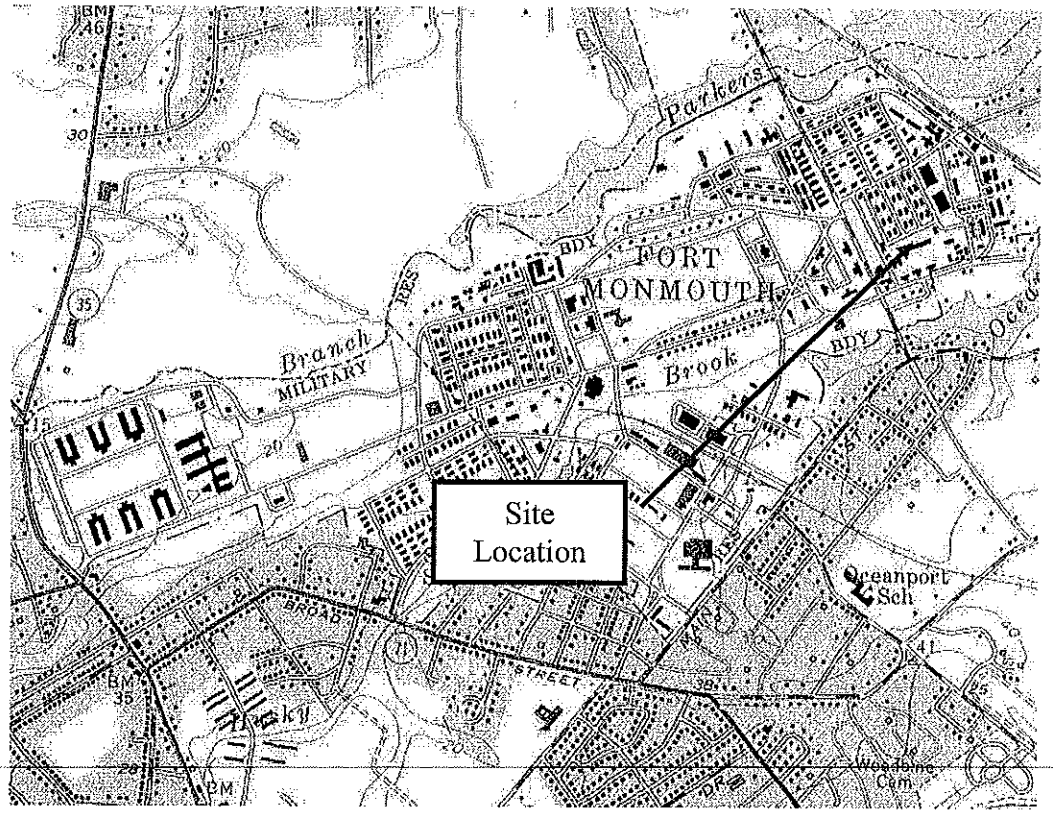
3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all soil samples collected from the UST closure assessment at UST No. 90010-58 were below the NJDEP Residential Direct Contact Soil Cleanup Criteria. The analytical results for the groundwater sample are below the NJDEP Class II Ground Water Quality Criteria.

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. 90010-58.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-58 at Building 490.

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 490
UST NO. 90010-58
FT. MONMOUTH, NJ

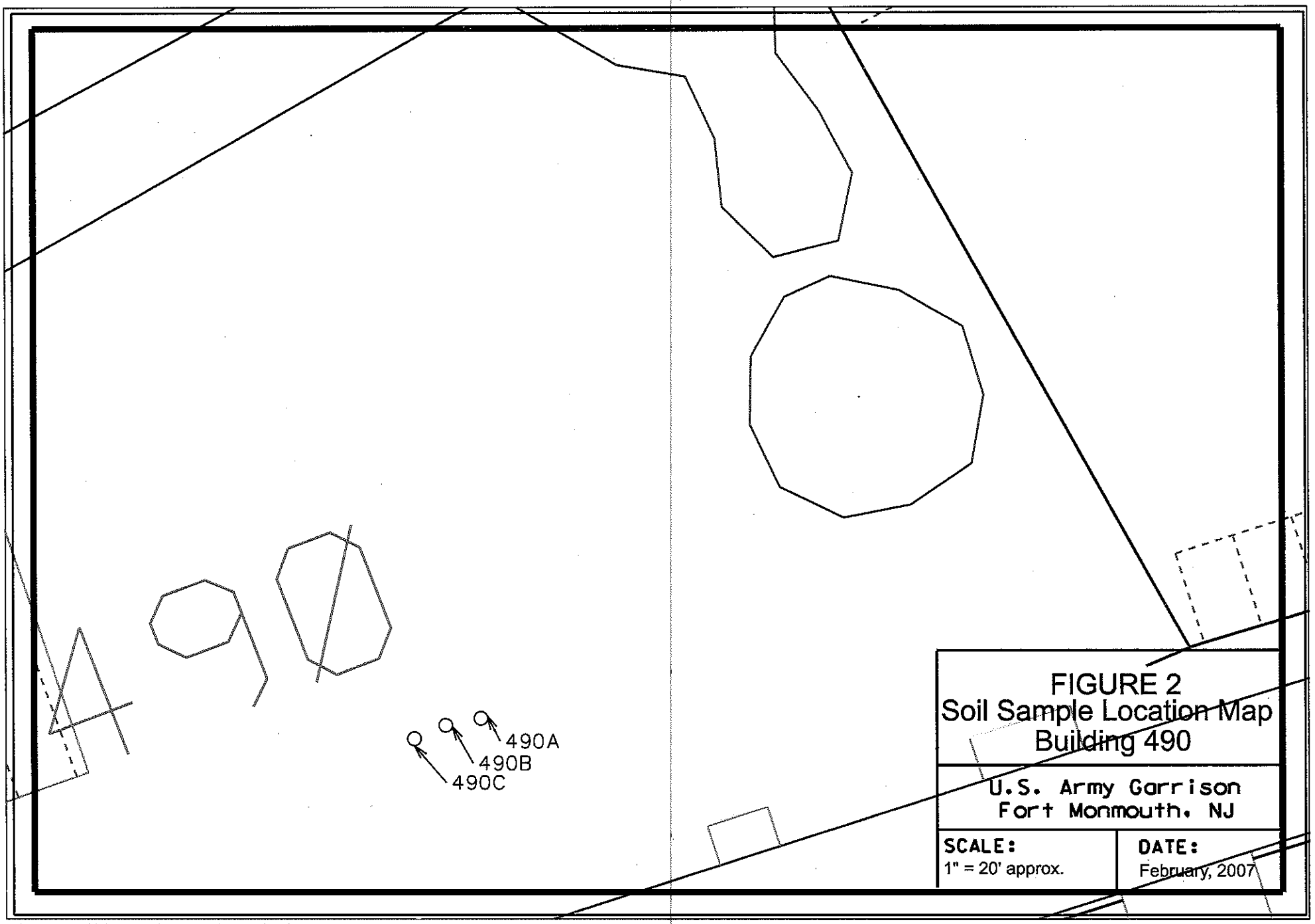


FIGURE 2
Soil Sample Location Map
Building 490

U.S. Army Garrison
Fort Monmouth, NJ

SCALE:
1" = 20' approx.

DATE:
February, 2007

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TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

FT. MONMOUTH, BUILDING 490, UST No. 90010-58
14 December 2005

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
490-A	5064301	14-Dec-05	SOIL	TPH,VOA	OQA-QAM-25, SW-846, 8260
490-B	5064302	14-Dec-05	SOIL	TPH	OQA-QAM-25
490-C	5064303	14-Dec-05	SOIL	TPH	OQA-QAM-25
490-D (dupl. B)	5064304	14-Dec-05	SOIL	TPH	OQA-QAM-25
TRIP BLANK	5064305	14-Dec-05	METHANOL	VOA	SW-846, 8260
490-Groundwater	5064306	14-Dec-05	AQUEOUS	VOA, SVOA	SW-846, 8260 SW-846, 8270
TRIP BLANK	5064307	14-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 490, UST No. 90010-58
14 December 2005

TOTAL PETROLEUM HYDROCARBONS

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH	MATRIX	TPH RESULT S
			(in feet)		mg/kg
490-A	5064301	EAST END UST	6.0 – 6.5	Soil	8762*
490-B	5064302	CENTER	6.0 – 6.5	Soil	2981
490-C	5064303	WEST END UST	6.0 – 6.5	Soil	4523
490-D (dupl. B)	5064304	DUPLICATE (CENTER)	6.0 – 6.5	Soil	4145
Trip Blank	5064307	---	---	Methanol	--

ABBREVIATIONS:
mg/kg = milligrams per kilogram = parts per million
ND = Compound Not Detected
*= 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-SOIL

FT. MONMOUTH, BUILDING 490, UST No. 90010-58
14 December 2005

VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Benzene	Toluene	Ethylbenzene	Xylenes (total)
UNITS		mg/kg	mg/kg	mg/kg	mg/kg
490-A	5064301	ND	ND	4.7	3.0
Trip Blank	5064307	ND	ND	ND	ND
NJDEP Criteria	Residential	1	1,000	1,000	410

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 4

SUMMARY OF LABORATORY ANALYTICAL RESULTS-GROUNDWATER

FT. MONMOUTH, BUILDING 490, UST No. 90010-58

14 December 2005

VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Benzene	Ethyl-benzene
	UNITS	ug/L	ug/L
490-Groundwater	5064305	0.5	0.3
Trip Blank	5064306	ND	ND
NJDEP Criteria	Ground Water Quality Crireria	1	700

SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Naphtha-lene	2-Methyl-naphthalene	Acenaph-thene	Dibenzo-furan	Fluorene	n-Nitrosodi-phenylamine	Phenan-threne
	UNITS	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
490-Groundwater	5064305	14.7	32.1	4.9	4.5	7.5	4.6	9.1
NJDEP Criteria	Ground Water Quality Crireria	NLE	NLE	400	NLE	300	20	NLE

ABBREVIATIONS:
ug/L = Micrograms Per Liter = parts per billion
ND = Compound Not Detected
NA = Compound Not Analyzed
NLE= No Limit Established

Notes:
Gray shading indicates exceedance of NJDEP Class II Ground Water Quality Criteria

APPENDIX A

CERTIFICATIONS

Site Remediation Program
UST Site Remedial Investigation Report

A. Facility Name: Ft. Monmouth, Building 490

Facility Street Address: Tilly Ave.

Municipality: Oceanport County: Monmouth

Block: NA Lot(s): NA Telephone Number: Redacted - Privacy Act

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

Street Address: 167 Riverside Ave. City: Ft.Monmouth

State: N.J. 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: 90010-58 (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: _____ 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: N.J. 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

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

(QC and raw data included for review)

ANALYTICAL DATA REPORT
Fort Monmouth Environmental Laboratory
ENVIRONMENTAL DIVISION
Fort Monmouth, New Jersey
PROJECT: BLDG. 490

Bldg. 490

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
490-A, East End	5064301	Soil	14-Dec-05 11:30	12/14/05
490-B, Center	5064302	Soil	14-Dec-05 13:30	12/14/05
490-C, West End	5064303	Soil	14-Dec-05 14:45	12/14/05
490-D, (Duplicate)	5064304	Soil	14-Dec-05 13:30	12/14/05
490-Groundwater	5064305	Aqueous	14-Dec-05 15:15	12/14/05
Trip Blank	5064306	Aqueous	14-Dec-05	12/14/05
Trip Blank	5064307	Methanol	14-Dec-05	12/14/05

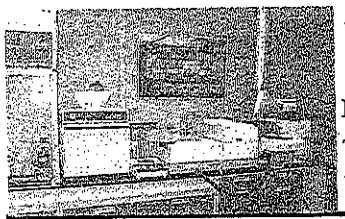
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, BN+15, TPHC, % SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

1-23-06
Daniel Wright/Date
Laboratory Director

Table of Contents

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: JOHN MCCARTHY
Phone: X 26224
( )DERA ( )OMA (X)Other:_____

Project No: 06-34880
Location: BLDG. 490 (FORMER UST)

Samplers Name / Company: FRANK ACCORSI/TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOA+10	BN+15				DEPTH(FT.)	VOA #	Remarks / Preservation Method
20602 01	490-A, EAST END	12-14-05	1130	SOIL	2	X	*					6-6.5	4374	ICE
02	490-B, CENTER		1330		2	X	*					6-6.5	4375	
03	490-C, WEST END		1445		2	X	*					6-6.5	4376	
04	490-D, DUPLICATE		1330		2	X	*					6-6.5	4377	
05	490- GROUNDWATER		1515	AQ	3		X	X				5	4378	
06	TRIP BLANK		—	"	1		X					—	—	
07	TRIP BLANK		—	MeOH	1		X					—	—	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Frank Accorsi	12-14-05 1530				
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+10 ON 25% >1,000 ppm TPH, ON HIGHEST, MIN. ONE

20060002

print legibly

COC.XLS9/16/2005

Change of Chain of Custody

Lab Project ID#: 50643
Date Received: 12/14/05
Requested by: *(print)* F Accorsi
Turnaround Time: 5d

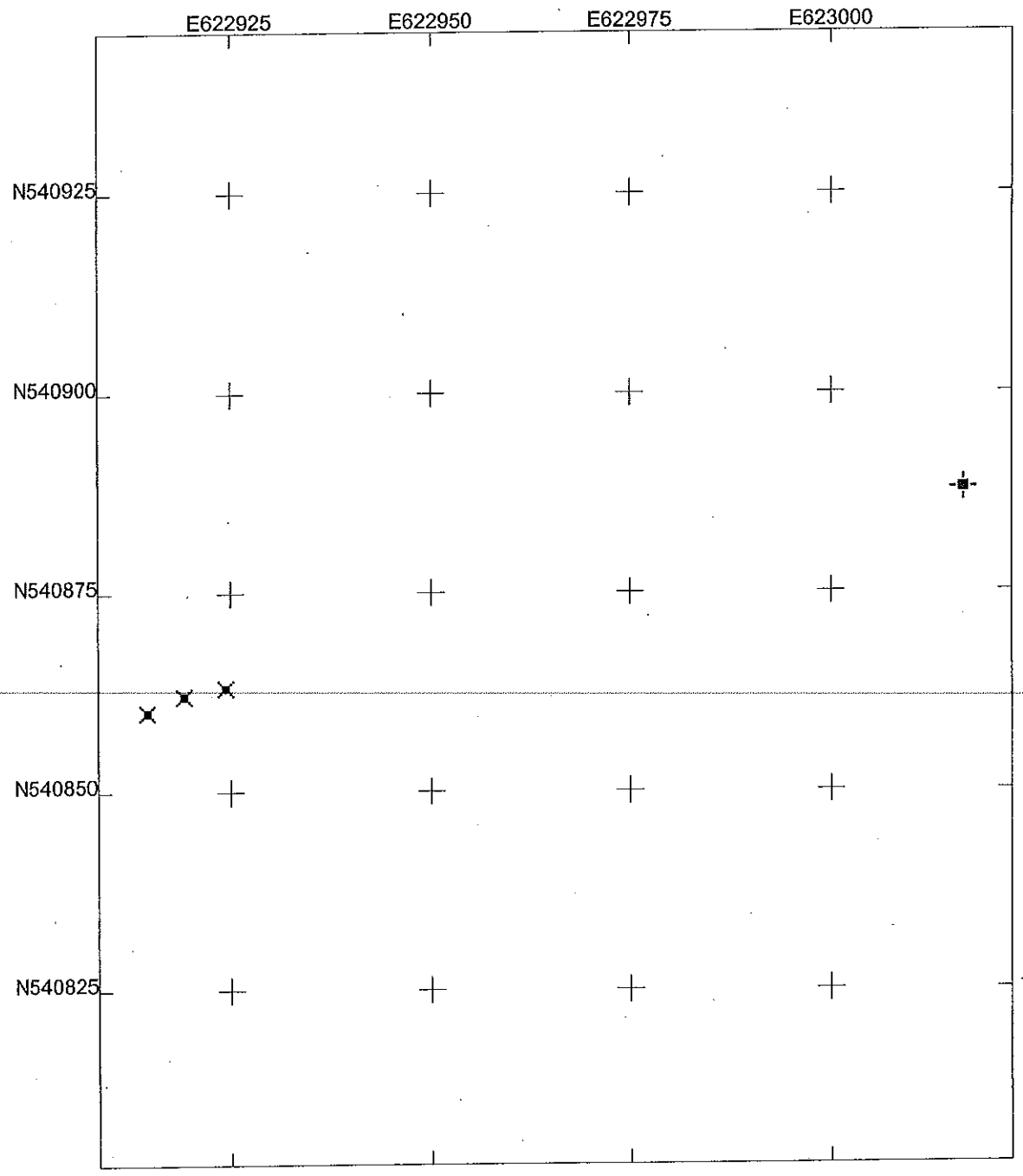
Site/Project Name: Bldg 490
Date of Change: 12/21
Sign: _____

1.	Were the correct containers and/or preservatives used for the tests indicated?	Yes	No
2.	Was sufficient amount of sample sent for the tests indicated?	Yes	No
3.	Are samples within holding time for new analysis?	Yes	No
4.	Was the change documented in the receipt logbook?	Yes	No

Received by: *(print)* _____ Sign: _____

Sample ID#	New Analysis	Sample ID#	New Analysis
5064301 07	VOA +15 ↓		

Comments: _____



U.S. Army - Ft. Monmouth Bldg. 490
UST Soil Sample GPS Map

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

N

Scale 1:250
0 0.006
Miles

BLDG490.cor
12/20/2005
GPS Pathfinder
Trimble

US ARMY - FT. MONMOUTH, NJ

BLDG. 490 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)
490A EAST END UST	540863.159	622924.301
490B CENTER UST	540862.13	622919.116
490C WEST END UST	540860.147	622914.53

REFERENCE POINT

POSITION/DESCRIPTION	Y COORDINATE (NORTHING)	X COORDINATE (EASTING)
BLDG490 NE CORNER	540887.905	623016.556

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: 50643

Site: UST
Bldg. 490

	Date	Hold Time
Date Sampled	12/14/05	NA
Receipt/Refrigeration	12/14/05	NA
Extractions		
1. BN	12/15/05	7 days
2. TPHC	12/15/05	14 days
Analyses		
1. VOA (AQ)	12/14,15/05	14 days
2. VOA (Soil)	12/22/05	14 days
3. BN	12/19/05	40 days
4. TPHC	12/16/05	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	
8. Surrogate Recoveries Meet Criteria	NO
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
a. VOA Fraction BFB 143% in 490A	
b. B/N Fraction	
c. Acid Fraction	
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)	NO
a. VOA Fraction Various out of criteria	
b. B/N Fraction Benzidine 3% MSD 120.1% RPD	
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_____

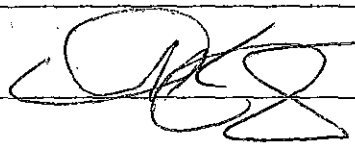
11. Extraction Holding Time Met — yes

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: 1-23-06

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: 1-23-06

VOLATILE ORGANICS (AQUEOUS)

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

U: The compound was analyzed for but not detected.

B: Indicates that the compound was found in the associated method blank as well as in the sample.

J: Indicates an estimated value. This flag is used:

(1) When the mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

(2) When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.

D: This flag is used to identify all compounds (target or TIC) that required a dilution.

E: Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.

N: This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

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

Data File	**VB021036.D**	Sample Name	**MB 14Dec2005**
Operator	**Skelton**	Field ID	**MB 14Dec2005**
Date Acquired	**14 Dec 2005 2:32 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 (e).

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 14Dec2005**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: MB 14Dec2005

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021036.D

Level: (low/med) LOW Date Received: 12/12/2005

% Moisture: not dec. Date Analyzed: 12/14/2005

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	**VB021062.D**	Sample Name	**5064306**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Acquired	**15 Dec 2005 7:59 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

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5064306

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021062.D

Level: (low/med) LOW Date Received: 12/14/2005

% Moisture: not dec. Date Analyzed: 12/15/2005

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	**VB021061.D**	Sample Name	**5064305**
Operator	**Skelton**	Field ID	**490-GW**
Date Acquired	**15 Dec 2005 7:19 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	11.93	70294	7.28 ug/L	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	17.58	23974	2.47 ug/L	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	18.14	59159	0.53 ug/L	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	25.72	44404	0.33 ug/L	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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12/29/2005 10:18 AM

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **490-GW**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5064305

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021061.D

Level: (low/med) LOW Date Received: 12/14/2005

% Moisture: not dec. Date Analyzed: 12/15/2005

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: 10

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000098-82-8	Benzene, (1-methylethyl)-	27.44	9	JN
2. 000103-65-1	Benzene, propyl-	28.24	10	JN
3. 000496-11-7	Indane	30.50	42	JN
4. 000099-87-6	Benzene, 1-methyl-4-(1-methylet	31.32	14	JN
5. 000768-00-3	Benzene, (1-methyl-1-propenyl)-,	31.48	8	JN
6. 027133-93-3	2,3-Dihydro-1-methylindene	31.59	24	JN
7. 000095-93-2	Benzene, 1,2,4,5-tetramethyl-	32.12	9	JN
8. 000824-22-6	1H-Indene, 2,3-dihydro-4-methyl-	32.69	11	JN
9. 027133-93-3	2,3-Dihydro-1-methylindene	33.08	38	JN
10. 000119-64-2	Naphthalene, 1,2,3,4-tetrahydro-	33.42	13	JN

VOLATILE ORGANICS (SOIL)

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 22Dec2005

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: MB 22Dec2005

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB021140.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 0 Date Analyzed: 12/22/2005

GC Column: RTX502. 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	1000	U
107131	Acrylonitrile	1000	U
75650	tert-Butyl alcohol	1000	U
1634044	Methyl-tert-Butyl ether	100	U
108203	Di-isopropyl ether	100	U
75718	Dichlorodifluoromethane	100	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	100	U
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	100	U
75-69-4	Trichlorofluoromethane	100	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
108-05-4	Vinyl Acetate	100	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	100	U
67-66-3	Chloroform	100	U
71-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	100	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	100	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	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

MB 22Dec2005

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: MB 22Dec2005

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB021140.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 0 Date Analyzed: 12/22/2005

GC Column: RTX502. 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	200	U
95-47-6	o-Xylene	100	U
100-42-5	Styrene	100	U
75-25-2	Bromoform	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-50-1	1,2-Dichlorobenzene	100	U
91-20-3	Naphthalene	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 22Dec2005**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: MB 22Dec2005

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB021140.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 0 Date Analyzed: 12/22/2005

GC Column: RTX502. 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: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: 5064307

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB021141.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 0 Date Analyzed: 12/22/2005

GC Column: RTX502. 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	1000	U
107131	Acrylonitrile	1000	U
75650	tert-Butyl alcohol	1000	U
1634044	Methyl-tert-Butyl ether	100	U
108203	Di-isopropyl ether	100	U
75718	Dichlorodifluoromethane	100	U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	100	U
74-83-9	Bromomethane	100	U
75-00-3	Chloroethane	100	U
75-69-4	Trichlorofluoromethane	100	U
75-35-4	1,1-Dichloroethene	100	U
67-64-1	Acetone	100	U
75-15-0	Carbon Disulfide	100	U
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	U
75-34-3	1,1-Dichloroethane	100	U
108-05-4	Vinyl Acetate	100	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	100	U
67-66-3	Chloroform	100	U
71-55-6	1,1,1-Trichloroethane	100	U
56-23-5	Carbon Tetrachloride	100	U
71-43-2	Benzene	100	U
107-06-2	1,2-Dichloroethane	100	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	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
108-88-3	Toluene	100	U
10061-02-6	trans-1,3-Dichloropropene	100	U
79-00-5	1,1,2-Trichloroethane	100	U
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: 5064307

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB021141.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 0 Date Analyzed: 12/22/2005

GC Column: RTX502. 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	200	U
95-47-6	o-Xylene	100	U
100-42-5	Styrene	100	U
75-25-2	Bromoform	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
541-73-1	1,3-Dichlorobenzene	100	U
106-46-7	1,4-Dichlorobenzene	100	U
95-50-1	1,2-Dichlorobenzene	100	U
91-20-3	Naphthalene	100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: 5064307

Sample wt/vol: 10.0 (g/ml) G Lab File ID: VB021141.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 0 Date Analyzed: 12/22/2005

GC Column: RTX502. 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: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 001112-39-6	Silane, dimethoxydimethyl-	17.40	320	JN

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

490-A,East End

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: 5064301

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VB021142.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 20.95 Date Analyzed: 12/22/2005

GC Column: RTX502. 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	1200	U
107131	Acrylonitrile	1200	U
75650	tert-Butyl alcohol	1200	U
1634044	Methyl-tert-Butyl ether	120	U
108203	Di-isopropyl ether	120	U
75718	Dichlorodifluoromethane	120	U
74-87-3	Chloromethane	120	U
75-01-4	Vinyl Chloride	120	U
74-83-9	Bromomethane	120	U
75-00-3	Chloroethane	120	U
75-69-4	Trichlorofluoromethane	120	U
75-35-4	1,1-Dichloroethene	120	U
67-64-1	Acetone	120	U
75-15-0	Carbon Disulfide	120	U
75-09-2	Methylene Chloride	120	U
156-60-5	trans-1,2-Dichloroethene	120	U
75-34-3	1,1-Dichloroethane	120	U
108-05-4	Vinyl Acetate	120	U
78-93-3	2-Butanone	120	U
156-59-2	cis-1,2-Dichloroethene	120	U
67-66-3	Chloroform	120	U
71-55-6	1,1,1-Trichloroethane	120	U
56-23-5	Carbon Tetrachloride	120	U
71-43-2	Benzene	120	U
107-06-2	1,2-Dichloroethane	120	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	120	U
10061-01-5	cis-1,3-Dichloropropene	120	U
108-10-1	4-Methyl-2-Pentanone	120	U
108-88-3	Toluene	120	U
10061-02-6	trans-1,3-Dichloropropene	120	U
79-00-5	1,1,2-Trichloroethane	120	U
127-18-4	Tetrachloroethene	120	U
591-78-6	2-Hexanone	120	U
124-48-1	Dibromochloromethane	120	U
108-90-7	Chlorobenzene	120	U
100-41-4	Ethylbenzene	4700	

1A

FIELD ID:

VOLATILE ORGANICS ANALYSIS DATA SHEET

490-A,East End

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: 5064301

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VB021142.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 20.95 Date Analyzed: 12/22/2005

GC Column: RTX502. 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	3000	
95-47-6	o-Xylene	120	U
100-42-5	Styrene	120	U
75-25-2	Bromoform	120	U
79-34-5	1,1,2,2-Tetrachloroethane	120	U
541-73-1	1,3-Dichlorobenzene	120	U
106-46-7	1,4-Dichlorobenzene	120	U
95-50-1	1,2-Dichlorobenzene	120	U
91-20-3	Naphthalene	120	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **490-A,East End**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50643 Location: Bldg49 SDG No.: 06-34880

Matrix: (soil/water) SOIL Lab Sample ID: 5064301

Sample wt/vol: 10.5 (g/ml) G Lab File ID: VB021142.D

Level: (low/med) MED Date Received: 12/14/2005

% Moisture: not dec. 20.95 Date Analyzed: 12/22/2005

GC Column: RTX502. 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: 10

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 001678-92-8	Cyclohexane, propyl-	26.79	5300	JN
2. 000526-73-8	Benzene, 1,2,3-trimethyl-	29.36	18000	JN
3. 000493-02-7	Naphthalene, decahydro-, trans-	30.36	12000	JN
4. 000934-80-5	Benzene, 4-ethyl-1,2-dimethyl-	31.14	5200	JN
5. 000535-77-3	Benzene, 1-methyl-3-(1-methylet	31.19	5700	JN
6.	unknown	31.32	7700	J
7.	unknown	31.60	9500	J
8.	unknown	31.67	7500	J
9. 000095-93-2	Benzene, 1,2,4,5-tetramethyl-	32.23	7800	JN
10. 001587-04-8	Benzene, 1-methyl-2-(2-propenyl)	33.09	9400	JN

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA11411.D**	Sample Name	**MB-121505-01**
Operator	**BPatel**	Misc Info	**MB-121505-01**
Date Acquired	**19-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	**BNA11411.D**	Sample Name	**MB-121505-01**
Operator	**BPatel**	Misc Info	**MB-121505-01**
Date Acquired	**19-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.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-121505-01

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50643 Location: BI.490 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-121505-01

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11411.D

Level: (low/med) LOW Date Received: 12/14/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005

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	**BNA11415.D**	Sample Name	**5064305**
Operator	**BPatel**	Misc Info	**490-Ground Water**
Date Acquired	**19-Dec-05**	Sample Multiplier	**3.333333**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
110-86-1	Pyridine			not detected	NLE	3.77	33.33	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	2.00	33.33	ug/L	
62-53-3	Aniline			not detected	NLE	7.93	33.33	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	2.37	33.33	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	3.40	33.33	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	3.30	33.33	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	2.20	33.33	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	3.20	33.33	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	2.93	33.33	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	2.53	33.33	ug/L	
67-72-1	Hexachloroethane			not detected	10	3.20	33.33	ug/L	
98-95-3	Nitrobenzene			not detected	10	2.87	33.33	ug/L	
78-59-1	Isophorone			not detected	100	2.53	33.33	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	2.63	33.33	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	2.97	33.33	ug/L	
91-20-3	Naphthalene	13.34	244185	14.71 ug/L	NLE	2.53	33.33	ug/L	D
106-47-8	4-Chloroaniline			not detected	NLE	4.57	33.33	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	3.30	33.33	ug/L	
91-57-6	2-Methylnaphthalene	15.01	345848	32.13 ug/L	NLE	3.37	33.33	ug/L	D
77-47-4	Hexachlorocyclopentadiene			not detected	50	3.07	33.33	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	2.40	33.33	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	2.57	33.33	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	2.60	33.33	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	2.23	33.33	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	2.37	33.33	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	3.93	33.33	ug/L	
83-32-9	Acenaphthene	17.59	47464	4.91 ug/L	400	2.43	33.33	ug/L	D
132-64-9	Dibenzofuran	18.01	64009	4.53 ug/L	NLE	2.30	33.33	ug/L	D
121-14-2	2,4-Dinitrotoluene			not detected	10	2.70	33.33	ug/L	
84-66-2	Diethylphthalate			not detected	5000	3.20	33.33	ug/L	
86-73-7	Fluorene	18.84	88397	7.47 ug/L	300	2.37	33.33	ug/L	D
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	2.43	33.33	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	3.70	33.33	ug/L	
86-30-6	n-Nitrosodiphenylamine	19.12	36230	4.56 ug/L	20	2.07	33.33	ug/L	D
103-33-3	Azobenzene			not detected	NLE	2.40	33.33	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	3.07	33.33	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	3.17	33.33	ug/L	
85-01-8	Phenanthrene	21.15	153210	9.07 ug/L	NLE	2.70	33.33	ug/L	D
120-12-7	Anthracene			not detected	2000	2.53	33.33	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	3.07	33.33	ug/L	
206-44-0	Fluoranthene			not detected	300	2.73	33.33	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA11415.D**	Sample Name	**5064305**
Operator	**BPatel**	Misc Info	**490-Ground Water**
Date Acquired	**19-Dec-05**	Sample Multiplier	**3.333333**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	50	3.27	33.33	ug/L	
129-00-0	Pyrene			not detected	200	2.63	33.33	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	2.87	33.33	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.73	33.33	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	4.37	33.33	ug/L	
218-01-9	Chrysene			not detected	20	2.57	33.33	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	4.27	33.33	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	3.40	33.33	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	3.27	33.33	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	3.07	33.33	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.37	33.33	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.53	33.33	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	2.53	33.33	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.67	33.33	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.

490-Gr.Water

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50643 Location: BI.490 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5064305

Sample wt/vol: 300 (g/ml) ML Lab File ID: BNA11415.D

Level: (low/med) LOW Date Received: 12/14/2005

% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 017301-23-4	Undecane, 2,6-dimethyl-	13.59	40	JN
2.	unknown	14.47	43	J
3. 000264-09-5	Benzocycloheptatriene	15.24	66	JN
4.	unknown	16.28	26	J
5. 001127-76-0	Naphthalene, 1-ethyl-	16.36	28	JN
6. 000571-61-9	Naphthalene, 1,5-dimethyl-	16.53	27	JN
7. 000581-42-0	Naphthalene, 2,6-dimethyl-	16.72	76	JN
8. 000571-61-9	Naphthalene, 1,5-dimethyl-	16.77	42	JN
9.	unknown	16.83	26	J
10. 000575-41-7	Naphthalene, 1,3-dimethyl-	16.98	27	JN
11. 000629-62-9	Pentadecane	17.03	64	JN
12. 000000-00-0	Decahydro-4,4,8,9,10-pentameth	17.32	27	JN
13. 002131-42-2	Naphthalene, 1,4,6-trimethyl-	18.53	28	JN
14.	unknown	19.30	53	J
15. 001921-70-6	Pentadecane, 2,6,10,14-tetramet	19.95	78	JN

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 # :**	50643
		Location :	Bldg.490
		UST Reg. # :	
Analysis :	OQA-QAM-025	**Date Received :**	14-Dec-05
Matrix :	Soil	**Date Extracted :**	15-Dec-05
Inst. ID. :	GC TPHC INST. #1	**Extraction Method :**	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	**Analysis Complete :**	16-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)
5064301	490-A	2.00	15.17	79.05	80	834	8761.46
5064302	490-B	1.00	15.67	83.26	74	383	2980.82
5064303	490-C	1.00	15.17	79.25	80	416	4522.65
5064304	490-D	1.00	15.16	80.66	79	409	4145.02
METHOD BLANK	MB-121505-01	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

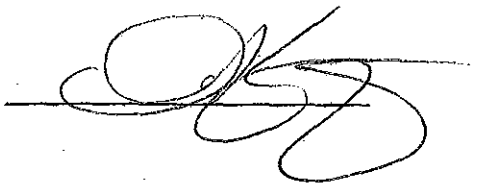
LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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: 1/23/06

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 CC, Enclosure 2

Analyses from May 26, 2010 Sampling

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: 10-130679

Bldg. /490

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
B1 (3.5-4.0)	1021801	Soil	26-May-10 09:10	05/26/10
B2 (3.5-4.0)	1021802	Soil	26-May-10 09:35	05/26/10
B3 (3.5-4.0)	1021803	Soil	26-May-10 10:00	05/26/10
B4 (3.5-4.0)	1021804	Soil	26-May-10 10:20	05/26/10
B5 (3.5-4.0)	1021805	Soil	26-May-10 10:45	05/26/10
B6 (3.5-4.0)	1021806	Soil	26-May-10 11:10	05/26/10
Trip Blank	1021807	Aqueous	26-May-10 08:45	05/26/10
Field Blank	1021808	Aqueous	26-May-10 14:30	05/26/10
TMP-1	1021809	Aqueous	26-May-10 15:22	05/26/10

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL TESTING LAB
VOA+15, TPHC, %SOLIDS

ANALYSIS:
ACCUTEST LABORATORIES
BN+15

(QC and raw data not included for brevity)

Dean Tardiff/Date: 6/8/10
Laboratory Manager

Table of Contents

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: 10-130679
Location: Bldg 490
Samplers Name / Company: George Boyce / TVS

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	TPH	VOA+10	B/N+15						Remarks / Preservation Method
10218-01	B1 3.5-4.0	5/26/10	0910	Soil	1	X								
-02	B2 3.5-4.0		0935		1	X								
-03	B3 3.5-4.0		10:00		1	X								
-04	B4 3.5-4.0		10:20		1	X								
-05	B5 3.5-4.0		10:45		1	X								
-06	B6 3.5-4.0		11:10		1	X								
-07	Trip		0845	Ag	2		X							
-08	Field Blank		1430		3		X	X						
-09	TMP-1		1522		3		X	X						

Comments:

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
George Boyce	1545 5/26/10				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

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

Comments: * Naphthalene & 2 methyl naphalene > 1000 ppm TPH

new coc._1.XLS4/19/2010

COC100

SAMPLE RECEIPT FORM

Date Received: 5/26/10 Work Order ID#: 10218

Site/Proj. Name: Bldg 490 Cooler Temp (°C): on ice

Received By: Dean Tarditi Sign: Dean Tarditi
(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

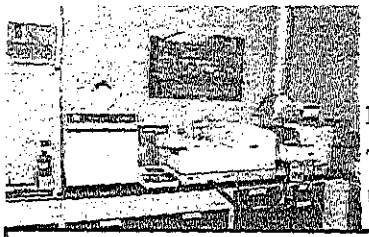
Lims ID	pH	Preservative	Sample ID	pH	Preservative
			10218-01		Unp.
			-02		
			-03		
			-04		
			-05		
			-06		
			-07		HCl/N/a
			-08		HCl/unp
			-09		HCl/unp

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. 490

Samplers Name / Company:

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: BN+15	Analysis Parameters: SIMS	Comments: Remarks / Preservation Method
1021808	Field Blank	5/26/2010	14:30	AQ	1	X	X	
1021809	TMP-1	5/26/2010	15:22	AQ	1	X	X	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
	5/27/2010 1450				
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: **PO C09-20650**

SUBOUT FOR BN 10166._1.xls5/27/2010

CONFORMANCE/ NON-CONFORMANCE SUMMARY

10218 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: 6/18/10

[signature] 6/17/10

ACCUTEST Laboratories

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Fort Monmouth Environmental Testing Lab.	**Job No**	JA47579
Site:	Building 490	**Report Date**	6/15/2010 2:53:20 PM

On 05/27/2010, 1 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 5.8 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA47579 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:** OP43810

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA47481-5MS, JA47481-5MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Acetophenone, Benzaldehyde, 2-Methylnaphthalene are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for Acetophenone, Benzaldehyde are outside control limits.
- JA47579-2 for Nitrobenzene-d5: There is no sample left to reextract for confirmation.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix: AQ **Batch ID:** OP43810A

- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA47481-5MS, JA47481-5MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Naphthalene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- JA47579-2 for Nitrobenzene-d5: There is no sample left to reextract for confirmation.

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

10218 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 Date

6/4/10

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.

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 3510/8270
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.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10218 **Site:** Bldg. 490

	Date	Hold Time
Date Sampled	05/26/10	NA
Receipt/Refrigeration	05/26/10	NA
Analyses		
1. Volatiles	06/06/10	14 Days
2. Semi-Volatiles	06/04,10/10	7 Days
3. TPHC	05/27/10	14 Days

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	VA6626.D	Sample Name	MB06051001
Operator	ROBERTS	Field ID	METHOD 624 6/5/10
Date Acquired	5 Jun 2010 7:52 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	2.09 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	2	1.64 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	1.89 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.18 ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.12 ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.22 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not detected	nle	0.10 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	0.25 ug/L	0.50 ug/L	
75-00-3	Chloroethane			not detected	nle	0.22 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.18 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.20 ug/L	0.50 ug/L	
67-64-1	Acetone			not detected	6000	0.18 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.18 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.16 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.20 ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not detected	50	0.19 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	0.16 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.14 ug/L	0.50 ug/L	
67-66-3	Chloroform			not detected	70	0.21 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.17 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene			not detected	1	0.16 ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.19 ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not detected	1	0.18 ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.16 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.14 ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.25 ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.16 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.26 ug/L	0.50 ug/L	
108-88-3	Toluene			not detected	1000	0.15 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.12 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	0.18 ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.20 ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not detected	1	0.14 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.15 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.16 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.27 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	0.12 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	0.12 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.12 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.12 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.12 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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB06051001

Lab Name: FMETL Contract:

Lab Code: 13461 Case No.: MW SAS No.: SDG No.: 10218

Matrix: (soil/water) WATER Lab Sample ID: MB06051001

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA6626.D

Level: (low/med) LOW Date Received: 5/26/2010

% Moisture: not dec. Date Analyzed: 6/5/2010

GC Column: RTX-VM ID: 0.60 (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	VA6636.D		Sample Name	1021807
Operator	ROBERTS		Field ID	490 TRIP BLANK
Date Acquired	6 Jun 2010 1:00 am		Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result		Regulatory Level (ug/l)*	MDL		RL	Qualifiers
107028	Acrolein			not	detected	5	2.09	ug/L	5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100	1.89	ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.18	ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12	ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22	ug/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected	nle	0.10	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	0.25	ug/L	0.50 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22	ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	1	0.20	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	6000	0.18	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	700	0.18	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	3	0.16	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20	ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not	detected	50	0.19	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	0.16	ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not	detected	70	0.14	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected	70	0.21	ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not	detected	30	0.17	ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	1	0.27	ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	1	0.16	ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	2	0.19	ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not	detected	1	0.18	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not	detected	1	0.16	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected	1	0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle	0.25	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	1	0.16	ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0.26	ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	1000	0.15	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12	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	0.18	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20	ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14	ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not	detected	50	0.15	ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not	detected	700	0.16	ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	1	0.15	ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27	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	0.12	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	0.12	ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	detected	600	0.12	ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	detected	75	0.12	ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not	detected	600	0.12	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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

490 TRIP BLANK

Lab Name: FMETL Contract:

Lab Code: 13461 Case No.: MW SAS No.: SDG No.: 10218

Matrix: (soil/water) WATER Lab Sample ID: 1021807

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA6636.D

Level: (low/med) LOW Date Received: 5/26/2010

% Moisture: not dec. Date Analyzed: 6/6/2010

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	VA6637.D	Sample Name	1021808
Operator	ROBERTS	Field ID	490 FIELD BLANK
Date Acquired	6 Jun 2010 1:31 am	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not detected	5	2.09 ug/L	5.00 ug/L	
107131	Acrylonitrile			not detected	2	1.64 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	1.89 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.18 ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.12 ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not detected	1000	0.22 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not detected	nle	0.10 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	0.25 ug/L	0.50 ug/L	
75-00-3	Chloroethane			not detected	nle	0.22 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not detected	2000	0.18 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	1	0.20 ug/L	0.50 ug/L	
67-64-1	Acetone			not detected	6000	0.18 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not detected	700	0.18 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.16 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.20 ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not detected	50	0.19 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	0.16 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.14 ug/L	0.50 ug/L	
67-66-3	Chloroform			not detected	70	0.21 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.17 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not detected	1	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene			not detected	1	0.16 ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.19 ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not detected	1	0.18 ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.16 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.14 ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.25 ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	1	0.16 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	nle	0.26 ug/L	0.50 ug/L	
108-88-3	Toluene			not detected	1000	0.15 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	1	0.12 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	0.18 ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.20 ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not detected	1	0.14 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.15 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.16 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.27 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	0.12 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	0.12 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.12 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.12 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.12 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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

490 FIELD BLANK

Lab Name: FMETL Contract:

Lab Code: 13461 Case No.: MW SAS No.: SDG No.: 10218

Matrix: (soil/water) WATER Lab Sample ID: 1021808

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA6637.D

Level: (low/med) LOW Date Received: 5/26/2010

% Moisture: not dec. Date Analyzed: 6/6/2010

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	VA6638.D	Sample Name	1021809
Operator	ROBERTS	Field ID	490 TMP1
Date Acquired	6 Jun 2010 2:02 am	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result		Regulatory Level (ug/l)*	MDL	RL	Qualifiers
107028	Acrolein			not	detected	5	2.09 ug/L	5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.64 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100	1.89 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.18 ug/L	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12 ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected	nle	0.10 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	0.25 ug/L	0.50 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	1	0.20 ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	6000	0.18 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	700	0.18 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	3	0.16 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20 ug/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane			not	detected	50	0.19 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	0.16 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene			not	detected	70	0.14 ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected	70	0.21 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			not	detected	30	0.17 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	1	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene	10.60	82623	0.97	ug/L	1	0.16 ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	2	0.19 ug/L	0.50 ug/L	
79-01-6	Trichloroethene			not	detected	1	0.18 ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane			not	detected	1	0.16 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected	1	0.14 ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle	0.25 ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	1	0.16 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0.26 ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 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	0.18 ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene			not	detected	50	0.15 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene	15.83	109872	1.13	ug/L	700	0.16 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27 ug/L	1.00 ug/L	
1330-20-7	o-Xylene	16.88	56791	0.71	ug/L	nle	0.14 ug/L	0.50 ug/L	
100-42-5	Styrene			not	detected	100	0.12 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	0.12 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	detected	600	0.12 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	detected	75	0.12 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not	detected	600	0.12 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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

490 TMP-1

Lab Name: FMETL Contract:

Lab Code: 13461 Case No.: MW SAS No.: SDG No.: 10218

Matrix: (soil/water) WATER Lab Sample ID: 1021809

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA6638.D

Level: (low/med) LOW Date Received: 5/26/2010

% Moisture: not dec. Date Analyzed: 6/6/2010

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. 000496-11-7	Indane	20.71	100	JN
2.	C4 alkyl benzene	21.46	54	J
3.	1H-Indene-dihydro-methyl-	21.64	24	J
4.	1H-Indene-dihydro-methyl-	21.78	65	J
5.	C4 alkyl benzene	22.27	40	J
6.	1H-Indene-dihydro-methyl-	23.02	57	J
7.	C4 alkyl benzene	23.29	83	J
8.	1H-Indene-dihydro-methyl-	23.36	110	J
9.	1H-Indene-dihydro-dimethyl-	23.90	43	J
10.	1H-Indene-dihydro-dimethyl-	24.00	25	J
11.	1H-Indene-dihydro-dimethyl-	24.17	26	J
12. 000091-20-3	Naphthalene	24.56	23	JN
13.	1H-Indene-dihydro-dimethyl-	25.08	29	J
14.	1H-Indene-dihydro-dimethyl-	25.42	26	J
15.	Naphthalene, tetrahydro-methyl-	25.47	43	J

SEMI-VOLATILE ORGANICS

SEMI-VOLATILE ORGANICS

(SOIL)

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E333.D	Misc Info	B1 3.5-4.0	Sample Weight	10.05 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	84.9 %
Date Acquired	10-Jun-10	Sample Multiplier	0.117		
Sample Name	1021801	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.116	0.59	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.197	0.59	mg/kg	
62-53-3	Aniline			not detected	NLE	0.313	0.59	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.226	0.59	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.196	0.59	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.204	0.59	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.302	0.59	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.227	0.59	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.263	0.59	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.297	0.59	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.222	0.59	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.265	0.59	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.281	0.59	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.232	0.59	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.257	0.59	mg/kg	
91-20-3	Naphthalene			not detected	6	0.284	0.59	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.434	0.59	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.253	0.59	mg/kg	
91-57-6	2-methylnaphthalene	14.03	1515182	1.37 mg/kg	5	0.305	0.59	mg/kg	
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.171	0.59	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.294	0.59	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.360	0.59	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.309	0.59	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.319	0.59	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.306	0.59	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.259	0.59	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.318	0.59	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.374	0.59	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.306	0.59	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.293	0.59	mg/kg	
86-73-7	Fluorene			not detected	110	0.332	0.59	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.326	0.59	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.320	0.59	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.318	0.59	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.336	0.59	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.338	0.59	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.352	0.59	mg/kg	
85-01-8	Phenanthrene	19.26	2306006	1.88 mg/kg	300000	0.348	0.59	mg/kg	
120-12-7	Anthracene			not detected	1500	0.350	0.59	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.335	0.59	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.348	0.59	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	E333.D	Misc Info	B1 3.5-4.0	Sample Weight	10.05 g
Operator	ROBERTS	Dilution factor	1	Percent Solids	84.9 %
Date Acquired	10-Jun-10	Sample Multiplier	0.117		
Sample Name	1021801	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.315	0.59	mg/kg	
129-00-0	Pyrene			not detected	550	0.372	0.59	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.308	0.59	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.349	0.59	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.319	0.59	mg/kg	
218-01-9	Chrysene			not detected	52	0.329	0.59	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.370	0.59	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.311	0.59	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.251	0.59	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.301	0.59	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.270	0.59	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.229	0.59	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.213	0.59	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.217	0.59	mg/kg	

* 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.
J = Estimated concentration, value lies between RL and MDL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**E334.D**	Misc Info	**B4 3.5-4.0**	Sample Weight	**10.13 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**79.5 %**
Date Acquired	**11-Jun-10**	Sample Multiplier	**0.124**		
Sample Name	**1021804**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
110-86-1	pyridine			not detected	NLE	0.123	0.62	mg/kg	
62-75-9	N-nitroso-dimethylamine			not detected	0.2	0.209	0.62	mg/kg	
62-53-3	Aniline			not detected	NLE	0.332	0.62	mg/kg	
111-44-4	bis-2-chloroethyl ether			not detected	0.2	0.240	0.62	mg/kg	
541-73-1	1,3-dichlorobenzene			not detected	12	0.207	0.62	mg/kg	
106-46-7	1,4-dichlorobenzene			not detected	1	0.216	0.62	mg/kg	
100-51-6	Benzyl alcohol			not detected	NLE	0.320	0.62	mg/kg	
95-50-1	1,2-dichlorobenzene			not detected	11	0.241	0.62	mg/kg	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	3	0.278	0.62	mg/kg	
621-64-7	N-nitroso-di-n-propylamine			not detected	0.2	0.314	0.62	mg/kg	
67-72-1	Hexachloroethane			not detected	0.2	0.235	0.62	mg/kg	
98-95-3	Nitrobenzene			not detected	0.2	0.281	0.62	mg/kg	
78-59-1	Isophorone			not detected	0.2	0.298	0.62	mg/kg	
111-91-1	bis(2-chloroethoxy)methane			not detected	NLE	0.246	0.62	mg/kg	
120-82-1	1,2,4-trichlorobenzene			not detected	0.4	0.272	0.62	mg/kg	
91-20-3	Naphthalene			not detected	6	0.300	0.62	mg/kg	
106-47-8	4-chloroaniline			not detected	9	0.459	0.62	mg/kg	
87-68-3	Hexachlorobutadiene			not detected	0.6	0.268	0.62	mg/kg	
91-57-6	2-methylnaphthalene	14.09	27812296	30.32 mg/kg	5	0.323	0.62	mg/kg	E
77-47-4	Hexachlorocyclopentadiene			not detected	45	0.181	0.62	mg/kg	
91-58-7	2-chloronaphthalene			not detected	NLE	0.312	0.62	mg/kg	
88-74-4	2-nitroaniline			not detected	39	0.381	0.62	mg/kg	
131-11-3	Dimethylphthalate			not detected	NLE	0.328	0.62	mg/kg	
208-96-8	Acenaphthylene			not detected	300000	0.338	0.62	mg/kg	
606-20-2	2,6-dinitrotoluene			not detected	0.7	0.324	0.62	mg/kg	
99-09-2	3-nitroaniline			not detected	NLE	0.274	0.62	mg/kg	
83-32-9	Acenaphthene			not detected	74	0.337	0.62	mg/kg	
132-64-9	Dibenzofuran			not detected	NLE	0.396	0.62	mg/kg	
121-14-2	2,4-dinitrotoluene			not detected	0.7	0.324	0.62	mg/kg	
84-66-2	Diethylphthalate			not detected	57	0.310	0.62	mg/kg	
86-73-7	Fluorene			not detected	110	0.351	0.62	mg/kg	
7005-72-3	4-chlorophenyl-phenylether			not detected	NLE	0.345	0.62	mg/kg	
100-01-6	4-nitroaniline			not detected	NLE	0.339	0.62	mg/kg	
86-30-6	N-nitrosodiphenylamine			not detected	0.2	0.337	0.62	mg/kg	
103-33-3	Azobenzene			not detected	NLE	0.356	0.62	mg/kg	
101-55-3	4-bromophenyl-phenylether			not detected	NLE	0.358	0.62	mg/kg	
118-74-1	Hexachlorobenzene			not detected	0.2	0.373	0.62	mg/kg	
85-01-8	Phenanthrene	19.32	6952814	6.71 mg/kg	300000	0.369	0.62	mg/kg	
120-12-7	Anthracene			not detected	1500	0.371	0.62	mg/kg	
84-74-2	Di-n-butylphthalate			not detected	620	0.355	0.62	mg/kg	
206-44-0	Fluoranthene			not detected	840	0.369	0.62	mg/kg	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E334.D**	Misc Info	**B4 3.5-4.0**	Sample Weight	**10.13 g**
Operator	**ROBERTS**	Dilution factor	**1**	Percent Solids	**79.5 %**
Date Acquired	**11-Jun-10**	Sample Multiplier	**0.124**		
Sample Name	**1021804**	*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	Regulatory Level (mg/kg)*	MDL	RL		Qualifiers
92-87-5	Benzidine			not detected	0.7	0.334	0.62	mg/kg	
129-00-0	Pyrene			not detected	550	0.394	0.62	mg/kg	
85-68-7	Butylbenzylphthalate			not detected	50	0.327	0.62	mg/kg	
56-55-3	Benzo[a]anthracene			not detected	0.5	0.370	0.62	mg/kg	
91-94-1	3,3'-dichlorobenzidine			not detected	0.2	0.338	0.62	mg/kg	
218-01-9	Chrysene			not detected	52	0.349	0.62	mg/kg	
117-81-7	bis(2-ethylhexyl)phthalate			not detected	35	0.392	0.62	mg/kg	
117-84-0	Di-n-octylphthalate			not detected	2400	0.329	0.62	mg/kg	
205-99-2	Benzo[b]fluoranthene			not detected	0.6	0.266	0.62	mg/kg	
207-08-9	Benzo[k]fluoranthene			not detected	6	0.319	0.62	mg/kg	
50-32-8	Benzo[a]pyrene			not detected	0.2	0.286	0.62	mg/kg	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	0.6	0.242	0.62	mg/kg	
53-70-3	Dibenz[a,h]anthracene			not detected	0.2	0.226	0.62	mg/kg	
191-24-2	Benzo[g,h,i]perylene			not detected	30000	0.230	0.62	mg/kg	

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

Qualifiers

E= Value Exceeds Linear Range
MDL= Method Detection Limit
D= Value from dilution
NLE= No Limit Established
B= Compound in Related Blank
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

SEMI-VOLATILE ORGANICS

(AQUEOUS)

Raw Data: F89385.D

Accutest Laboratories

Report of Analysis

Client Sample ID:	1021808 FIELD BLANK		
Lab Sample ID:	JA47579-1	Date Sampled:	05/26/10
Matrix:	AQ - Field Blank Water	Date Received:	05/27/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 490		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F89385.D	1	06/04/10	NAP	05/28/10	OP43810	EF4195
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:	1021808 FIELD BLANK		
Lab Sample ID:	JA47579-1	Date Sampled:	05/26/10
Matrix:	AQ - Field Blank Water	Date Received:	05/27/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 490		

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	88%		25-112%
321-60-8	2-Fluorobiphenyl	75%		31-106%
1718-51-0	Terphenyl-d14	65%		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

Raw Data: 4M18645.D

Accutest Laboratories

Report of Analysis

Client Sample ID:	1021808 FIELD BLANK		
Lab Sample ID:	JA47579-1	Date Sampled:	05/26/10
Matrix:	AQ - Field Blank Water	Date Received:	05/27/10
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	Building 490		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M18645.D	1	06/10/10	NAP	05/28/10	OP43810A	E4M808
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	75%		18-119%
321-60-8	2-Fluorobiphenyl	72%		18-104%
1718-51-0	Terphenyl-d14	72%		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: F89384.D

Accutest Laboratories

Report of Analysis

Client Sample ID:	1021809 TMP-1		
Lab Sample ID:	JA47579-2	Date Sampled:	05/26/10
Matrix:	AQ - Ground Water	Date Received:	05/27/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 490		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F89384.D	1	06/04/10	NAP	05/28/10	OP43810	EF4195
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	0.51	1.0	0.42	ug/l	J
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	7.5	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	3.1	5.0	0.30	ug/l	J
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	3.0	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	70.8	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:	1021809 TMP-1		
Lab Sample ID:	JA47579-2	Date Sampled:	05/26/10
Matrix:	AQ - Ground Water	Date Received:	05/27/10
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	Building 490		

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	14% [a]		25-112%
321-60-8	2-Fluorobiphenyl	53%		31-106%
1718-51-0	Terphenyl-d14	37%		14-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
496-11-7	Indane	3.33	21	ug/l	JN
	Indan, -methyl-	4.43	25	ug/l	J
	Naphthalene tetrahydro-methyl	5.51	12	ug/l	J
	Naphthalene, -methyl-	5.93	61	ug/l	J
	Naphthalene, -ethyl-	6.65	16	ug/l	J
	Naphthalene dimethyl	6.75	37	ug/l	J
	Naphthalene dimethyl	6.87	55	ug/l	J
	Naphthalene dimethyl	6.91	18	ug/l	J
	Naphthalene dimethyl	7.04	20	ug/l	J
	Naphthalene dimethyl	7.17	15	ug/l	J
	Naphthalene trimethyl	7.57	11	ug/l	J
	Naphthalene trimethyl	7.79	9.8	ug/l	J
	Naphthalene trimethyl	7.93	42	ug/l	J
	Naphthalene trimethyl	8.05	10	ug/l	J
	alkane	9.08	14	ug/l	J
	Total TIC, Semi-Volatile		366.8	ug/l	J

(a) There is no sample left to reextract for confirmation.

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:	1021809 TMP-1		
Lab Sample ID:	JA47579-2	Date Sampled:	05/26/10
Matrix:	AQ - Ground Water	Date Received:	05/27/10
Method:	SW846 8270C BY SIM SW846 3510C	Percent Solids:	n/a
Project:	Building 490		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M18646.D	1	06/10/10	NAP	05/28/10	OP43810A	E4M808
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	2.98	0.10	0.029	ug/l	
208-96-8	Acenaphthylene	0.223	0.10	0.039	ug/l	
120-12-7	Anthracene	0.202	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	4.60	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	4.13	0.10	0.019	ug/l	
85-01-8	Phenanthrene	4.75	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	8% [a]		18-119%
321-60-8	2-Fluorobiphenyl	40%		18-104%
1718-51-0	Terphenyl-d14	40%		13-109%

(a) There is no sample left to reextract for confirmation.

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

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:**	10-130679 BLDG 490
Analysis:	OQA-QAM-025	**Date Received:**	26-May-10
Matrix:	.	**Date Extracted:**	27-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	
MB05271001	MB05271001	1.00	15.00	100.00	23	333	not detected		
LCS05271001	LCS05271001	1.00	15.00	100.00	23	333	1259.24		
1021801	B1 3.5-4.0	1.00	15.13	84.9	27	389	1526.55		
1021802	B2 3.5-4.0	1.00	15.29	80.8	28	405	not detected		
1021803	B3 3.5-4.0	1.00	15.20	79.2	29	415	547.12		
1021804	B4 3.5-4.0	1.00	15.13	79.5	29	416	5941.76		
1021805	B5 3.5-4.0	1.00	15.03	81.4	29	409	not detected		
1021806	B6 3.5-4.0	1.00	15.38	80.2	28	405	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

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: ____/____/____

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

ATTACHMENT CC, Enclosure 3

Analyses from July 21, 2010 Sampling

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: 10-130780

Bldg./490

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
Field Blank	1031301	Aqueous	21-Jul-10 09:20	07/21/10
TMP-1A	1031302	Aqueous	21-Jul-10 14:04	07/21/10
TMP-2	1031303	Aqueous	21-Jul-10 11:10	07/21/10
TMP-3	1031304	Aqueous	21-Jul-10 13:32	07/21/10

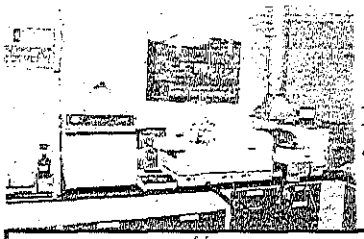
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
BN+15

(QC and raw data not included for brevity)

Dean Tardiff/Date: 8/2/10
Laboratory Manager

Table of Contents

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: Howard Syracth
Phone #: 29254
( )DERA ( )OMA ( )Other:_____

Project No: 10-130780
Location: Bldg 490

Samplers Name / Company:

Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: BTEX	Comments: Remarks / Preservation Method
10313 01	Field Blank	7/21/10	920	Ag	1	X	
02	TMP-1A		1404		1		screen 4'-9'
03	TMP-2		1110		1		screen 3'-8'
04	TMP-3		1332		1		screen 3'-8'

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
George Boyce	7-21-10 1500				
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.

Remarks:

print legibly

COC Copy.xls7/2/2010

SAMPLE RECEIPT FORM

Date Received: 7-21-10 Work Order ID#: 10313

Site/Proj. Name: Bldg 440 Cooler Temp (°C): 4.5°C

Received By: J. Delgado Sign: J. Delgado
(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: _____

CONFORMANCE/ NON-CONFORMANCE SUMMARY

10313 BW

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	No
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
a. VOA Fraction	
b. B/N Fraction Sample 103103 has low recoveries, Confirmed by dilution run.	
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)	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:_____ Date:_____

7/29/10

METHOD SUMMARY

Method Summary

EPA Method 3510/8270
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.

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 10313 **Site:** Bldg. 490

	Date	Hold Time
Date Sampled	07/21/10	NA
Receipt/Refrigeration	07/21/10	NA

Analyses

1. Semi-Volatiles	07/27/10	7 Days

SEMI-VOLATILE ORGANICS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E439.D	Sample Name	MB07261001
Operator	ROBERTS	Misc Info	METHOD 8270 7/27/10
Date Acquired	27-Jul-10	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	nle	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	0.8	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	6	2.75	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	7	3.23	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	600	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	75	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	2000	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	600	2.92	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	300	2.67	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	10	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	7	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	6	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	40	2.93	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	nle	2.74	5.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	9	2.99	5.00	ug/L	
91-20-3	Naphthalene			not	detected	300	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	30	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	3.07	5.00	ug/L	
91-57-6	2-methylnaphthalene			not	detected	nle	3.35	5.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not	detected	40	2.07	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	600	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	nle	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	nle	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	400	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	nle	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	400	3.58	5.00	ug/L	
132-64-9	Dibenzofuran			not	detected	nle	2.94	5.00	ug/L	
121-14-2	2,4-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	6000	3.54	5.00	ug/L	
86-73-7	Fluorene			not	detected	300	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	nle	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	nle	2.92	5.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	10	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	nle	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	nle	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	0.02	3.73	5.00	ug/L	
85-01-8	Phenanthrene			not	detected	nle	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	2000	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	700	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	300	3.08	5.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	E439.D	Misc Info	METHOD 8270 7/27/10
Operator	ROBERTS	Sample Mutliplier	1
Date Acquired	27-Jul-10		
Sample Name	MB07261001		

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
92-87-5	Benzidine			not	detected	20	16.11	16.11	ug/L	
129-00-0	Pyrene			not	detected	200	2.59	5.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	100	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	0.1	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	30	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	5	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	100	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	0.2	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	0.5	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	0.1	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.2	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.3	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	nle	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: **MB07261001**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: _____ Location: _____ SDG No.: 10313

Matrix: (soil/water) WATER Lab Sample ID: MB07261001

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E439.D

Level: (low/med) LOW Date Received: 7/21/2010

% Moisture: _____ decanted: (Y/N) N Date Extracted: 7/26/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/27/2010

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	**E442.D**	Sample Name	**1031301**
Operator	**ROBERTS**	Misc Info	**490 FIELD BLANK**
Date Acquired	**27-Jul-10**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	nle	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	0.8	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	6	2.75	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	7	3.23	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	600	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	75	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	2000	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	600	2.92	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	300	2.67	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	10	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	7	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	6	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	40	2.93	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	nle	2.74	5.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	9	2.99	5.00	ug/L	
91-20-3	Naphthalene			not	detected	300	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	30	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	3.07	5.00	ug/L	
91-57-6	2-methylnaphthalene			not	detected	30	3.35	5.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not	detected	40	2.07	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	600	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	nle	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	100	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	100	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	nle	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	400	3.58	5.00	ug/L	
132-64-9	Dibenzofuran			not	detected	nle	2.94	5.00	ug/L	
121-14-2	2,4-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	6000	3.54	5.00	ug/L	
86-73-7	Fluorene			not	detected	300	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	nle	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	nle	2.92	5.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	10	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	nle	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	nle	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	0.02	3.73	5.00	ug/L	
85-01-8	Phenanthrene			not	detected	100	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	2000	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	700	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	300	3.08	5.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	E442.D	Misc Info	490 FIELD BLANK
Operator	ROBERTS	Sample Mutliplier	1
Date Acquired	27-Jul-10		
Sample Name	1031301		

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
92-87-5	Benzidine			not	detected	20	16.11	16.11	ug/L	
129-00-0	Pyrene			not	detected	200	2.59	5.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	100	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	0.1	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	30	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	5	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	100	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	0.2	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	0.5	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	0.1	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.2	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.3	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	100	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.: 10313

Matrix: (soil/water) WATER Lab Sample ID: 1031301

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E442.D

Level: (low/med) LOW Date Received: 7/21/2010

% Moisture: _____ decanted: (Y/N) N Date Extracted: 7/26/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/27/2010

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	E443.D	Sample Name	1031302
Operator	ROBERTS	Misc Info	490 TMP-1A
Date Acquired	27-Jul-10	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	nle	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	0.8	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	6	2.75	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	7	3.23	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	600	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	75	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	2000	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	600	2.92	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	300	2.67	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	10	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	7	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	6	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	40	2.93	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	nle	2.74	5.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	9	2.99	5.00	ug/L	
91-20-3	Naphthalene	12.52	6505382	30.63	detected	300	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	30	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	3.07	5.00	ug/L	
91-57-6	2-methylnaphthalene	13.93	14686657	107.73	detected	30	3.35	5.00	ug/L	E
77-47-4	Hexachlorocyclopentadiene			not	detected	40	2.07	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	600	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	nle	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	100	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	100	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	nle	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	400	3.58	5.00	ug/L	
132-64-9	Dibenzofuran			not	detected	nle	2.94	5.00	ug/L	
121-14-2	2,4-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	6000	3.54	5.00	ug/L	
86-73-7	Fluorene	17.16	1050552	9.61	detected	300	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	nle	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	nle	2.92	5.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	10	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	nle	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	nle	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	0.02	3.73	5.00	ug/L	
85-01-8	Phenanthrene	19.13	1982571	15.95	detected	100	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	2000	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	700	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	300	3.08	5.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E443.D**	Misc Info	**490 TMP-1A**
Operator	**ROBERTS**	Sample Mutliplier	**1**
Date Acquired	**27-Jul-10**		
Sample Name	**1031302**		

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
92-87-5	Benzidine			not	detected	20	16.11	16.11	ug/L	
129-00-0	Pyrene			not	detected	200	2.59	5.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	100	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	0.1	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	30	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	5	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	100	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	0.2	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	0.5	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	0.1	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.2	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.3	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	100	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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**E444.D**	Sample Name	**1031302 2x**
Operator	**ROBERTS**	Misc Info	**490 TMP-1A**
Date Acquired	**27-Jul-10**	Sample Multiplier	**2**

CAS#	Name	R.T.	Respouse	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	nle	3.12	10.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	0.8	7.14	10.00	ug/L	
62-53-3	Aniline			not	detected	6	5.50	10.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	7	6.46	10.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	600	5.94	10.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	75	6.10	10.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	2000	2.98	10.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	600	5.84	10.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	300	5.34	10.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	10	5.22	10.00	ug/L	
67-72-1	Hexachloroethane			not	detected	7	5.50	10.00	ug/L	
98-95-3	Nitrobenzene			not	detected	6	5.82	10.00	ug/L	
78-59-1	Isophorone			not	detected	40	5.86	10.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	nle	5.48	10.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	9	5.98	10.00	ug/L	
91-20-3	Naphthalene	12.52	3479800	33.25	detected	300	6.12	10.00	ug/L	D
106-47-8	4-chloroaniline			not	detected	30	7.44	10.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	6.14	10.00	ug/L	
91-57-6	2-methylnaphthalene	13.90	7722328	114.95	detected	30	6.70	10.00	ug/L	D
77-47-4	Hexachlorocyclopentadiene			not	detected	40	4.14	10.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	600	7.98	10.00	ug/L	
88-74-4	2-nitroaniline			not	detected	nle	6.92	10.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	100	6.52	10.00	ug/L	
208-96-8	Acenaphthylene			not	detected	100	6.92	10.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	10	6.94	10.00	ug/L	
99-09-2	3-nitroaniline			not	detected	nle	8.24	10.00	ug/L	
83-32-9	Acenaphthene			not	detected	400	7.16	10.00	ug/L	
132-64-9	Dibenzofuran			not	detected	nle	5.88	10.00	ug/L	
121-14-2	2,4-dinitrotoluene			not	detected	10	6.94	10.00	ug/L	
84-66-2	Diethylphthalate			not	detected	6000	7.08	10.00	ug/L	
86-73-7	Fluorene	17.14	523297	9.82	detected	300	7.28	10.00	ug/L	D J
7005-72-3	4-chlorophenyl-phenylether			not	detected	nle	7.48	10.00	ug/L	
100-01-6	4-nitroaniline			not	detected	nle	5.84	10.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	10	6.98	10.00	ug/L	
103-33-3	Azobenzene			not	detected	nle	6.86	10.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	nle	7.96	10.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	0.02	7.46	10.00	ug/L	
85-01-8	Phenanthrene	19.12	1039527	17.23	detected	100	6.84	10.00	ug/L	D
120-12-7	Anthracene			not	detected	2000	6.54	10.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	700	5.66	10.00	ug/L	
206-44-0	Fluoranthene			not	detected	300	6.16	10.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E444.D**	Misc Info	**490 TMP-1A**
Operator	**ROBERTS**	Sample Mutliplier	**2**
Date Acquired	**27-Jul-10**		
Sample Name	**1031302 2x**		

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
92-87-5	Benzidine			not	detected	20	32.22	32.22	ug/L	
129-00-0	Pyrene			not	detected	200	5.18	10.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	100	5.14	10.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	0.1	5.42	10.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	30	23.24	23.24	ug/L	
218-01-9	Chrysene			not	detected	5	4.94	10.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3	7.48	10.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	100	4.82	10.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	0.2	4.56	10.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	0.5	5.12	10.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	0.1	5.20	10.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.2	5.34	10.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.3	5.36	10.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	100	6.32	10.00	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: **TMP-1A**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: _____ Location: _____ SDG No.: 10313

Matrix: (soil/water) WATER Lab Sample ID: 1031302

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E443.D

Level: (low/med) LOW Date Received: 7/21/2010

% Moisture: _____ decanted: (Y/N) N Date Extracted: 7/26/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/27/2010

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. 000090-12-0	Naphthalene, 1-methyl-	14.13	48	JN
2.	Alkane: Branched	14.60	23	J
3.	Naphthalene, ethyl-	15.06	36	J
4.	Naphthalene, dimethyl-	15.21	49	J
5.	Naphthalene, dimethyl-	15.36	58	J
6.	Alkane: Branched	15.52	27	J
7.	Naphthalene, dimethyl-	15.59	36	J
8.	Naphthalene, dimethyl-	15.74	31	J
9.	Naphthalene, trimethyl-	16.26	32	J
10.	Naphthalene, trimethyl-	16.55	23	J
11.	Naphthalene, trimethyl-	16.70	24	J
12.	Alkane: Branched	17.43	44	J
13.	Alkane: Branched	17.99	95	J
14.	9H-Fluorene, methyl-	18.34	34	J
15.	Alkane: Branched	18.40	21	J
16.	Alkane: Branched	18.92	47	J
17. 000086-74-8	Carbazole	19.55	28	JN
18.	Alkane: Straight-Chain	19.65	33	J
19.	unknown PAH	20.17	22	J
20.	unknown PAH	21.23	22	J
21.	unknown hydrocarbon	23.05	21	J
22.	unknown hydrocarbon	26.42	26	J
23.	unknown hydrocarbon	27.36	26	J
24.	unknown hydrocarbon	28.46	24	J
25.	unknown hydrocarbon	29.80	24	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E447.D	Sample Name	1031303
Operator	ROBERTS	Misc Info	490 TMP-2
Date Acquired	27-Jul-10	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	nle	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	0.8	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	6	2.75	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	7	3.23	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	600	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	75	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	2000	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	600	2.92	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	300	2.67	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	10	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	7	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	6	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	40	2.93	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	nle	2.74	5.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	9	2.99	5.00	ug/L	
91-20-3	Naphthalene			not	detected	300	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	30	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	3.07	5.00	ug/L	
91-57-6	2-methylnaphthalene	13.95	14613504	107.63	detected	30	3.35	5.00	ug/L	E
77-47-4	Hexachlorocyclopentadiene			not	detected	40	2.07	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	600	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	nle	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	100	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	100	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	nle	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	400	3.58	5.00	ug/L	
132-64-9	Dibenzofuran			not	detected	nle	2.94	5.00	ug/L	
121-14-2	2,4-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	6000	3.54	5.00	ug/L	
86-73-7	Fluorene			not	detected	300	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	nle	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	nle	2.92	5.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	10	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	nle	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	nle	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	0.02	3.73	5.00	ug/L	
85-01-8	Phenanthrene	19.15	3030839	22.83	detected	100	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	2000	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	700	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	300	3.08	5.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E447.D**	Misc Info	**490 TMP-2**
Operator	**ROBERTS**	Sample Mutliplier	**1**
Date Acquired	**27-Jul-10**		
Sample Name	**1031303**		

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
92-87-5	Benzidine			not	detected	20	16.11	16.11	ug/L	
129-00-0	Pyrene	22.03	468168	3.63	detected	200	2.59	5.00	ug/L	J
85-68-7	Butylbenzylphthalate			not	detected	100	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	0.1	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	30	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	5	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	100	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	0.2	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	0.5	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	0.1	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.2	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.3	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	100	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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E445.D	Sample Name	1031303 5x
Operator	ROBERTS	Misc Info	490 TMP-2
Date Acquired	27-Jul-10	Sample Multiplier	5

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	nle	7.80	25.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	0.8	17.85	25.00	ug/L	
62-53-3	Aniline			not	detected	6	13.75	25.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	7	16.15	25.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	600	14.85	25.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	75	15.25	25.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	2000	7.45	25.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	600	14.60	25.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	300	13.35	25.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	10	13.05	25.00	ug/L	
67-72-1	Hexachloroethane			not	detected	7	13.75	25.00	ug/L	
98-95-3	Nitrobenzene			not	detected	6	14.55	25.00	ug/L	
78-59-1	Isophorone			not	detected	40	14.65	25.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	nle	13.70	25.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	9	14.95	25.00	ug/L	
91-20-3	Naphthalene			not	detected	300	15.30	25.00	ug/L	
106-47-8	4-chloroaniline			not	detected	30	18.60	25.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	15.35	25.00	ug/L	
91-57-6	2-methylnaphthalene	13.91	3317358	113.43	detected	30	16.75	25.00	ug/L	D
77-47-4	Hexachlorocyclopentadiene			not	detected	40	10.35	25.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	600	19.95	25.00	ug/L	
88-74-4	2-nitroaniline			not	detected	nle	17.30	25.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	100	16.30	25.00	ug/L	
208-96-8	Acenaphthylene			not	detected	100	17.30	25.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	10	17.35	25.00	ug/L	
99-09-2	3-nitroaniline			not	detected	nle	20.60	25.00	ug/L	
83-32-9	Acenaphthene			not	detected	400	17.90	25.00	ug/L	
132-64-9	Dibenzofuran			not	detected	nle	14.70	25.00	ug/L	
121-14-2	2,4-dinitrotoluene			not	detected	10	17.35	25.00	ug/L	
84-66-2	Diethylphthalate			not	detected	6000	17.70	25.00	ug/L	
86-73-7	Fluorene	17.15	297202	12.31	detected	300	18.20	25.00	ug/L	D J
7005-72-3	4-chlorophenyl-phenylether			not	detected	nle	18.70	25.00	ug/L	
100-01-6	4-nitroaniline			not	detected	nle	14.60	25.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	10	17.45	25.00	ug/L	
103-33-3	Azobenzene			not	detected	nle	17.15	25.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	nle	19.90	25.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	0.02	18.65	25.00	ug/L	
85-01-8	Phenanthrene	19.11	624049	22.98	detected	100	17.10	25.00	ug/L	D J
120-12-7	Anthracene			not	detected	2000	16.35	25.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	700	14.15	25.00	ug/L	
206-44-0	Fluoranthene			not	detected	300	15.40	25.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E445.D**	Misc Info	**490 TMP-2**
Operator	**ROBERTS**	Sample Mutliplier	**5**
Date Acquired	**27-Jul-10**		
Sample Name	**1031303 5x**		

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
92-87-5	Benzidine			not	detected	20	80.55	80.55	ug/L	
129-00-0	Pyrene			not	detected	200	12.95	25.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	100	12.85	25.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	0.1	13.55	25.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	30	58.10	58.10	ug/L	
218-01-9	Chrysene			not	detected	5	12.35	25.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3	18.70	25.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	100	12.05	25.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	0.2	11.40	25.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	0.5	12.80	25.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	0.1	13.00	25.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.2	13.35	25.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.3	13.40	25.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	100	15.80	25.00	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: **TMP-2**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: _____ Location: _____ SDG No.: 10313

Matrix: (soil/water) WATER Lab Sample ID: 1031303

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E447.D

Level: (low/med) LOW Date Received: 7/21/2010

% Moisture: _____ decanted: (Y/N) N Date Extracted: 7/26/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/27/2010

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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkane: Branched	12.66	18	J
2.	1H-Indene-dihydro-dimethyl	13.28	16	J
3.	Alkane: Branched	13.40	21	J
4. 000090-12-0	Naphthalene, 1-methyl-	14.15	42	JN
5.	Alkane: Branched	14.62	46	J
6.	Naphthalene, ethyl-	15.07	24	J
7.	Naphthalene, dimethyl-	15.23	36	J
8.	Naphthalene, dimethyl-	15.39	34	J
9.	Naphthalene, dimethyl-	15.44	18	J
10.	Alkane: Straight-Chain	15.55	17	J
11.	Naphthalene, dimethyl-	15.62	21	J
12.	Naphthalene, dimethyl-	15.77	23	J
13.	unknown hydrocarbon	15.91	18	J
14.	Naphthalene, trimethyl-	16.29	25	J
15.	Naphthalene, trimethyl-	16.49	18	J
16.	Naphthalene, trimethyl-	16.58	16	J
17.	Alkane: Branched	17.45	29	J
18.	Alkane: Branched	18.01	31	J
19.	unknown hydrocarbon	18.10	20	J
20.	Alkane: Straight-Chain	18.94	25	J
21.	unknown hydrocarbon	21.88	16	J
22.	unknown hydrocarbon	21.96	23	J
23.	unknown PAH	22.09	17	J
24.	unknown PAH	22.18	24	J
25.	Alkane: Branched	22.54	17	J

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	E448.D	Sample Name	1031304
Operator	ROBERTS	Misc Info	490 TMP-3
Date Acquired	27-Jul-10	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
110-86-1	pyridine			not	detected	nle	1.56	5.00	ug/L	
62-75-9	N-nitroso-dimethylamine			not	detected	0.8	3.57	5.00	ug/L	
62-53-3	Aniline			not	detected	6	2.75	5.00	ug/L	
111-44-4	bis-2-chloroethyl ether			not	detected	7	3.23	5.00	ug/L	
541-73-1	1,3-dichlorobenzene			not	detected	600	2.97	5.00	ug/L	
106-46-7	1,4-dichlorobenzene			not	detected	75	3.05	5.00	ug/L	
100-51-6	Benzyl alcohol			not	detected	2000	1.49	5.00	ug/L	
95-50-1	1,2-dichlorobenzene			not	detected	600	2.92	5.00	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not	detected	300	2.67	5.00	ug/L	
621-64-7	N-nitroso-di-n-propylamine			not	detected	10	2.61	5.00	ug/L	
67-72-1	Hexachloroethane			not	detected	7	2.75	5.00	ug/L	
98-95-3	Nitrobenzene			not	detected	6	2.91	5.00	ug/L	
78-59-1	Isophorone			not	detected	40	2.93	5.00	ug/L	
111-91-1	bis(2-chloroethoxy)methane			not	detected	nle	2.74	5.00	ug/L	
120-82-1	1,2,4-trichlorobenzene			not	detected	9	2.99	5.00	ug/L	
91-20-3	Naphthalene			not	detected	300	3.06	5.00	ug/L	
106-47-8	4-chloroaniline			not	detected	30	3.72	5.00	ug/L	
87-68-3	Hexachlorobutadiene			not	detected	1	3.07	5.00	ug/L	
91-57-6	2-methylnaphthalene			not	detected	30	3.35	5.00	ug/L	
77-47-4	Hexachlorocyclopentadiene			not	detected	40	2.07	5.00	ug/L	
91-58-7	2-chloronaphthalene			not	detected	600	3.99	5.00	ug/L	
88-74-4	2-nitroaniline			not	detected	nle	3.46	5.00	ug/L	
131-11-3	Dimethylphthalate			not	detected	100	3.26	5.00	ug/L	
208-96-8	Acenaphthylene			not	detected	100	3.46	5.00	ug/L	
606-20-2	2,6-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
99-09-2	3-nitroaniline			not	detected	nle	4.12	5.00	ug/L	
83-32-9	Acenaphthene			not	detected	400	3.58	5.00	ug/L	
132-64-9	Dibenzofuran			not	detected	nle	2.94	5.00	ug/L	
121-14-2	2,4-dinitrotoluene			not	detected	10	3.47	5.00	ug/L	
84-66-2	Diethylphthalate			not	detected	6000	3.54	5.00	ug/L	
86-73-7	Fluorene			not	detected	300	3.64	5.00	ug/L	
7005-72-3	4-chlorophenyl-phenylether			not	detected	nle	3.74	5.00	ug/L	
100-01-6	4-nitroaniline			not	detected	nle	2.92	5.00	ug/L	
86-30-6	N-nitrosodiphenylamine			not	detected	10	3.49	5.00	ug/L	
103-33-3	Azobenzene			not	detected	nle	3.43	5.00	ug/L	
101-55-3	4-bromophenyl-phenylether			not	detected	nle	3.98	5.00	ug/L	
118-74-1	Hexachlorobenzene			not	detected	0.02	3.73	5.00	ug/L	
85-01-8	Phenanthrene			not	detected	100	3.42	5.00	ug/L	
120-12-7	Anthracene			not	detected	2000	3.27	5.00	ug/L	
84-74-2	Di-n-butylphthalate			not	detected	700	2.83	5.00	ug/L	
206-44-0	Fluoranthene			not	detected	300	3.08	5.00	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**E448.D**	Misc Info	**490 TMP-3**
Operator	**ROBERTS**	Sample Mutliplier	**1**
Date Acquired	**27-Jul-10**		
Sample Name	**1031304**		

CAS#	Name	R.T.	Response	Result		Regulatory Level (ug/L)	MDL	RL		Qualifiers
92-87-5	Benzidine			not	detected	20	16.11	16.11	ug/L	
129-00-0	Pyrene			not	detected	200	2.59	5.00	ug/L	
85-68-7	Butylbenzylphthalate			not	detected	100	2.57	5.00	ug/L	
56-55-3	Benzo[a]anthracene			not	detected	0.1	2.71	5.00	ug/L	
91-94-1	3,3'-dichlorobenzidine			not	detected	30	11.62	11.62	ug/L	
218-01-9	Chrysene			not	detected	5	2.47	5.00	ug/L	
117-81-7	bis(2-ethylhexyl)phthalate			not	detected	3	3.74	5.00	ug/L	
117-84-0	Di-n-octylphthalate			not	detected	100	2.41	5.00	ug/L	
205-99-2	Benzo[b]fluoranthene			not	detected	0.2	2.28	5.00	ug/L	
207-08-9	Benzo[k]fluoranthene			not	detected	0.5	2.56	5.00	ug/L	
50-32-8	Benzo[a]pyrene			not	detected	0.1	2.60	5.00	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not	detected	0.2	2.67	5.00	ug/L	
53-70-3	Dibenz[a,h]anthracene			not	detected	0.3	2.68	5.00	ug/L	
191-24-2	Benzo[g,h,i]perylene			not	detected	100	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

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **TMP-3**

Lab Name: FMETL Lab Code 13461

Project: _____ Case No.: _____ Location: _____ SDG No.: 10313

Matrix: (soil/water) WATER Lab Sample ID: 1031304

Sample wt/vol: 1000 (g/ml) ML Lab File ID: E448.D

Level: (low/med) LOW Date Received: 7/21/2010

% Moisture: _____ decanted: (Y/N) N Date Extracted: 7/26/2010

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/27/2010

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

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: ____/____/____

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

ATTACHMENT DD

Geophysical Survey Report

Final Report
Geophysical Survey
Compilation and Re-evaluation of Previous Survey Data
Fort Monmouth, Oceanport, NJ
Enviroscan Project Number 111019

(Only Parcel 79/400 Area tables and figures included, for brevity)

Prepared for: US Army, Fort Monmouth
Prepared By: Enviroscan, Inc.
March 10, 2011

1051 Columbia Avenue ● Lancaster, PA 17603 ● 717.396.8922 ● Fax 717.396.8746 ● email@enviroscan.com ● www.enviroscan.com

March 10, 2011

Mr. Joseph Fallon
US Army, Fort Monmouth
Directorate of Public Works
ATTN: IMNE-MON-PWE
Building 173
Fort Monmouth, NJ 07703

RE: Geophysical Survey
Compilation and Re-evaluation of Previous Survey Data
Fort Monmouth, Oceanport, NJ
Enviroscan Project Number 111019

Dear Mr. Fallon:

Pursuant to our phone conversations, meetings, and subsequent email communications, Enviroscan, Inc. (Enviroscan) has completed a compilation and reevaluation of all projects performed to date at Fort Monmouth, Oceanport, NJ. The methods and results of this work are described below.

Survey Purpose

The purpose of this survey and report is twofold:

1. To compile the final reports from all work performed by Enviroscan on this site into a single resource document and organize all findings into a single uniform database. This report consolidates Enviroscan projects numbered:

    i. 030301
    ii. 080303
    iii. 060421
    iv. 070521
    v. 060706d
    vi. 100814

2. To perform a final reevaluation of the data and results from previous surveys, leading to a final site visit to scan areas requiring further investigation based on the data reevaluation.

The site project history below summarizes the timing of all work done to date on the site and describes the decision-making processes through time that drove the reevaluation of the survey data, and the further investigative actions required as a result of these processes.

Site Project History

Enviroscan has performed multiple surveys for the Directorate of Public Works (DPW) of Fort Monmouth. The table below lists these surveys in order of completion.

Project #	Location(s)	Purpose	Field Survey End Date
030301	800 Area	Detect and delineate possible underground storage tanks (USTs) and construction debris	05/22/2003
080303	700 Area	Same	10/08/2003
060421	400 Area	Same	08/04/2004
070521	200 Area	Same	08/18/2005
060706d	Parcels 13, 14, 15, 28, 27, 51, 76, and 79	Same	10/11/2007
100814	200, 400, 700, 800	Re-evaluate data to locate anomalies not identified in previous reports	09/18/2008
111019	All previous areas	Scan areas found in final data reevaluation	10/27/2010

Projects 030301, 080303, 060421, 070521 were performed for Douglas Guenther, formerly of the Fort Monmouth DPW. Project 060706d was performed for Shaw Environmental, Inc. for the Environmental Condition of Property (ECP) report under the current Fort Monmouth DPW, Joseph Fallon.

For all of these projects, the areas of concern were first digitally mapped with an EM instrument, either an EM-31 or an EM-61 (described in the Methods section). The processed EM data were then utilized to identify EM anomalies characteristic of underground storage tanks (USTs) and buried debris. Identified anomalies were then re-acquired and further characterized with a TW-6 handheld metal detector and ground penetrating radar (GPR). The classification of anomalies was determined utilizing the results of the handheld metal detector and GPR data. Classifications of anomalies varied with each project depending on the project manager; however, a general scheme can be pulled from the original project findings. EM anomalies were generally classified as: Surface Metal, Possible Subsurface Metallic Debris, and Possible UST. The main distinction between metallic debris and possible UST was the presence of a characteristic hyperbolic-shaped GPR reflection pattern of the type commonly associated with USTs. The full, detailed survey methods are described below.

Field verification, by the DPW, of the data for Project 060706d commenced some time after submittal of the report in March of 2008. Discrepancies between data collected in the 400 Area during Projects 060421 and 060706d were identified and discussed between the DPW and Enviroscan in April of 2008. Several anomalies present in the 060706d data were not apparent in the 060421 data. The major difference between these two projects was the software used to process the data. It was decided that all work pre-dating Project 060706d would be re-processed with the new software package (Oasis Montaj© by Geosoft, Inc.) that was used in the processing of the data for Project 060706d. This software package has different and improved processing and contouring routines than those used in the past (Excel by Microsoft Corp. and Surfer by Golden Software, Inc.). The newly processed and contoured data were then re-examined for EM anomalies that may not have been previously delineated and which exhibited characteristics of a UST. Fieldwork was performed (under Project 100814) to re-acquire and characterize any anomalies identified in the reprocessing of the older data. The results of this project were submitted, and were verified by subsequent fieldwork.

During this period, the DPW also compiled and geo-referenced historic data concerning the location of fuel oil tanks on the base. These data were compared to the results of Enviroscan's surveys in April 2009 and subsequent field verifications, and revealed the need for further evaluation including:

1) The presence of USTs at EM anomalies classified as "possible subsurface debris", and
2) The presence of USTs at locations directly adjacent to buildings and underground utilities, in which the EM-31 anomaly created by the utility or building completely overwhelmed any UST anomaly.

Discussions between the DPW and Enviroscan following these findings resulted in solutions as follows: Regarding Issue 1, it was determined that GPR data were not reliable for determining whether an EM/metal detector anomaly should be characterized as a possible UST. It was concluded that any TW-6 metal detector anomaly with sufficient continuous plan-view dimensions should be classified as a possible UST, even without a confirming hyperbolic GPR reflection. Discussions regarding Issue 2 concluded that areas adjacent to buildings and utilities in which the EM-31 data were saturated were to be scanned with a handheld TW-6 metal detector. The actions agreed upon to accommodate these decisions were:

1) to re-evaluate the findings of all previous surveys with the intent of upgrading any metallic debris anomaly of sufficient size to a possible UST, and

2) to scan with a TW-6 the EM anomalies near buildings and utilities, with particular focus on locations where there is geo-referenced historic data indicating the possible presence of a UST.

3) The TW-6 re-investigation (#2) does not include locations of geo-referenced historic UST data at which cultural interference (i.e. fences, buildings, concrete pads) impedes the survey and locations at which the original EM survey was not affected by interference.

The work done to satisfy these issues was performed under Enviroscan Project 111019. Following the fieldwork for the 111019 survey, it was decided to compile all projects and data into this single, comprehensive report and database.

Survey Objectives

The objectives of each of the surveys performed on site were:

- Projects 030301, 080303, 0604021, and 070521 – to delineate possible USTs and areas of buried debris within client-designated portions of the 800, 700, 400, and 200 Areas respectively.

- Project 060706d – to detect and delineate possible USTs in Parcels 13, 14, 15, 28, 51, 76, and 79; and to detect and delineate possible former debris burial areas in Parcel 27; and to detect and delineate possible former septic tanks and dry wells in Parcel 28.

Each survey consisted of two phases. The first phase involved a reconnaissance-level electromagnetic (EM) digital mapping survey to detect any buried metallic material within the survey boundaries. The second phase consisted of a follow-up metal detection and ground penetrating radar (GPR) investigation to further characterize any anomalies detected by the EM survey. Additionally, two small areas within the Parcel 28 Survey Area (060706d) were to be completely scanned with GPR to delineate suspected, possibly non-metallic, septic systems. The following is a summary in chronological order (see table above) of the site descriptions at the time of the initial EM surveys.

800 Area – Project 030301

The area surveyed (Figure 800 A) consisted of 33 acres, located in and around the 800 Area of the Main Post of Fort Monmouth, NJ. The designated area of concern comprised open grass-covered areas, asphalt-covered parking lots, buildings, and a football field. The chain link fence and bleachers surrounding the football field, picnic tables and benches located at Buildings 822 and 836, automobiles in parking lots, and overhead power lines are examples of cultural interference or surficial debris which were present at the time the survey was completed and may preclude detection of buried materials in their immediate vicinity.

700 Area – Project 080303

The area surveyed (Figure 700 A) consisted of two parcels, located in the 700 Area of the Main Post of Fort Monmouth, NJ. The larger parcel encompassed primarily open, mowed fields with a few buildings (mostly along the southern boundary) and stands of trees. The smaller parcel included paved parking areas and grassy areas between buildings.

400 Area – Project 060421

The area surveyed (Figure 400 A) was located in the 400 Area of the Main Post of Fort Monmouth, NJ. The site encompassed open mowed fields extending south-southeast from Parker's Creek to Tilly Avenue. South of Allen Avenue, the fields were populated with various buildings and other structures.

200 Area – Project 070521

The survey area, as shown in Figure 200 A, consisted of a large parade ground (approximately 17 acres in size), two areas north and south of Building 286 (totaling approximately 2 acres), and Cowan Park, located east of Building 286 (totaling approximately 5 acres). Prior to data collection on or near the roadways within the survey area, a handheld metal detector was utilized to determine the presence or absence of metallic reinforcing. All the roadways within the survey area contained metallic reinforcing; therefore, no data were collected on the roadways. The parking areas and regions adjacent to Building 286 were excluded from the survey due to cultural interference (see Figure 200 A). Note that all former structures have been removed and the ground cover consists of manicured grass.

ECP Report – Project 060706d

Parcels 13, 15, 28, 51, 76, and 79 consisted of a mixture of mowed lawns, meadows, paved parking lots, and roadways (Figures 13 A, 15 A, 28 A, 51 A, 51 D, 51 G, 400 A (Parcel 76 inclusive), and 79 A). Parcels 14 and 27 consisted of wooded and overgrown areas (Figures 14 A and 27). At the time of the survey, the vegetation in Parcel 14 had been brush-hogged to a height of several inches. Many of the areas contained active parking lots that had to be cordoned off into smaller sections to perform the survey. Note that this site description has been modified from the original report to fit the format of this report.

Survey Methods

In order to provide detection of large subsurface metallic targets (e.g. USTs) while minimizing interference from surficial debris, Enviroscan performed a combined reconnaissance-level digital EM mapping and follow-up GPR survey.

Enviroscan first performed an EM terrain conductivity and metal detection survey in each area by either hand-carrying or vehicle-towing a Geonics, Ltd. EM-31 or EM-61 instrument. The 200, 400, 800, and 700 Areas were scanned only with the EM-31. For the ECP survey, the instrument utilized depended on the amount of metallic surface clutter (i.e. fences, cars, metallic debris). The survey areas included in the ECP survey contained crowded parking lots. In such cases where the entire parking lot could be scanned at one time or the survey area was clear of obstructions (Parcel 13, Parcel 14, Parcel 28, the northern two sections of Parcel 51, Parcel 76, and Parcel 79) the EM-31 was utilized because it has a larger footprint and depth of sensitivity (it was originally designed as a "drum finder"), but the towing rig requires a large area in which to turn. In cases where only portions of the parking lot could be cleared or there was metallic surface clutter (Parcel 15, the motorpool section of Parcel 51, and the entrance road section of Parcel 14) the EM-61 was used since it is less sensitive to nearby interference sources, and has a smaller turning radius (but has a reduced footprint and depth of sensitivity).

EM-31

The EM-31 employs an electromagnetic transmitter coil to induce an electric current in the earth. This current creates a secondary electromagnetic field that is measured by a receiver coil at a fixed separation of 3.7 meters from the transmitter coil. The secondary electromagnetic field has two components: the quadrature component which is proportional to the bulk electrical conductivity or terrain conductivity (in millimhos per meter or mmho/m) of the subsurface materials, and the inphase component (in parts per thousand or ppt) which is primarily a measure of the relative concentration of metallic material in the subsurface. Note that in the presence of extremely high terrain conductivity material, the dynamic range of the EM-31 can be exceeded (or "saturated"), and the instrument will register spurious negative conductivities (a physical impossibility). These negative conductivities therefore actually represent very high positive conductivities. Similar saturation in the presence of significant metal can cause a spurious negative inphase response that should also be interpreted as a very high positive value.

For this survey, Enviroscan employed an EM-31 in vertical dipole mode. The instrument is almost completely insensitive to small/scattered material at the ground surface, and has a peak sensitivity to material at a depth of approximately five feet. Below five feet, the sensitivity diminishes approximately logarithmically. Approximately 80 percent of the signal originates at depths of less than 25 feet. Therefore, the terrain conductivity or inphase response measured by the EM-31 in vertical dipole mode represents primarily subsurface electrical properties at a depth of five feet (plus or minus), with little contribution from material at the ground surface, and moderate (and diminishing) contribution from materials down to approximately 25 feet. The vertical dipole EM-31 was selected to screen out the potentially time-varying effects of surficial variations in ground cover, while maintaining a significant effective survey depth.

The EM survey was completed by collecting vertical dipole mode terrain conductivity and inphase data along profiles spaced roughly 10 feet apart. Along survey profiles, measurement stations were defined by automatically triggering matching inphase and conductivity readings at 1 to 10 readings per second as the instrument was hand-carried or towed. Areas 200, 400, 700, and 800 were collected a 1 reading per second due to instrument datalogger limitations during those time periods. This results in a data spacing of 3 to 4 feet. The ECP survey data were collected at rates from 5 to 10 readings per second resulting in a data spacing of 1 to 2 feet.

The actual location of each measurement station was digitally recorded using either a backpack-mounted Trimble ProXR (for pre-ECP data) or a Topcon GMS-110 (for ECP and post-ECP data) global positioning system (GPS) receiver in contact with six to eight position-fixing satellites. The GPS positions were differentially corrected using data from a U.S. Coast Guard radio beacon located in Sandy Hook, NJ. The resulting differential GPS (DGPS) positions have a nominal accuracy of better than 3 feet (+/-). The EM stations are depicted as small yellow dots in the data coverage for Figures 200A, 700A, 800A, 13A, 14A, 15, A, 28A, 51A, 51 D, 79A. For Figure 400 A, the data coverage appears as dots colored yellow for data collected during the ECP survey (060706d), orange for data collected during the 400 Area survey (060421), and pink for data collected during the first data re-evaluation survey (100814).

The EM-31 inphase and terrain conductivity data were contoured using minimum curvature gridding routines in Geosoft Oasis Montaj ™. The inphase response and terrain conductivity contours area are depicted in Figures 200 B and C, 400 B and C, 700 B and C, 800 B and C, 13 B and C, 14 B and C, 28 B and C, 51 B and C, 51 E and F, 79 B and C, respectively. Note that the inphase contour levels, in parts per trillion (ppt) are presented as shades of green to red to yellow for increasing positive values and green to blue for increasingly negative values (the equivalent of very high positive values — see above). The conductivity contour levels, in milliSiemens per meter (mS/m), are presented as shades of green to yellow to orange for increasing positive values and green to blue for increasingly negative values (the equivalent of very high positive values — see above).

EM-61

In some areas, Enviroscan also utilized a Geonics EM-61 MK2 instrument. The EM-61 uses a one-meter by ½-meter coil to transmit 150 electromagnetic pulses per second into the ground at each measurement station. A second coil directly above the transmitter, as well as the transmitter itself between pulses, record the decay of transient electrical currents induced by the transmitted pulses at three fixed time gates. Electrical currents in moderately conductive earth materials (e.g. electrolytic soils) dissipate rapidly, leaving the more prolonged currents due to buried metallic objects. The EM-61 measures the surficial electrical potential due to the prolonged subsurface currents, providing a digital read-out of the relative metallic content of the subsurface. Note that the differential response between the top and bottom coils can be used to minimize (but not entirely eliminate) the response from surficial metallic reinforcing or debris that would mask the presence of deeper metal from standard EM, magnetic, metal detector, or GPR instruments.

To complete the EM-61 survey, a system of 5-foot profiles (depicted as rows of tiny yellow dots in Figures 15 A, 51 G, and a small portion of 14 A) was scanned by hand- or vehicle- towing the trailer-mounted EM-61 through all accessible areas of the site. A handheld computer digitally recorded EM-61 station measurements at 5 to 8 readings per second along each profile (for an average station spacing of approximately 8 to 10 inches). The location of each measurement was digitally recorded using a trailer-mounted Topcon GMS-110 geographic positioning system (GPS) receiver in contact with six to eight position-fixing satellites. The GPS positions were differentially corrected using data from a U.S. Coast Guard radio beacon located in Sandy Hook, NJ. The resulting differential GPS (DGPS) positions have a nominal accuracy of better than 3 feet. The EM-61 scanning results are depicted as contours of the individual EM-61 station measurements in Figures 15 B, 51 H and 14 B and C. The contours represent the differential coil response and therefore depict subsurface metal with positive values (in millivolts or mV), with the effect of particularly massive surficial metal targets represented by spurious negative values. The contours were calculated using the minimum curvature algorithm in Oasis Montaj™ by Geosoft, Inc.

TW-6

The Fisher TW-6 pipe and cable locator was utilized in several ways during all of the site surveys. In particular, during the EM data collection phase of the ECP surveys the TW-6 was used to:

- scan areas in which the GPS signal needed for proper location of the EM survey data was insufficient to provide effective location control (such as areas directly adjacent to buildings and heavily wooded areas on Parcels 13, 15, 27, 51, and the motorpool).

- scan in locations not previously scanned by other EM equipment due to the presence of surface obstructions, such as unmoved cars, during the initial EM surveys.

During the follow-up GPR survey the TW-6 was utilized to:

- assist in relocation and delineation of targets identified during digital EM-31 or EM-61 mapping (all surveys).

Finally, during the data reevaluation (100814, and 111019) surveys, the TW-6 was utilized to:

- scan within a 20-foot apron around buildings and along utility corridors to identify possible USTs that could have been masked by the anomalies resulting from the proximity (nearby or below) of metal in the building structures and metallic piping/wiring in subsurface utility corridors, and

- scan in locations found in the data re-evaluation of Areas 200, 400, 700, and 800 that had not previously scanned by other EM equipment due to the presence of surface obstructions, such as cars, during the initial EM mapping surveys (i.e. to fill "data gaps"). Please note that in Parcels 700 and 800 there were several buildings present during the initial EM surveys in 2003 that were subsequently removed before the data re-evaluations surveys (2008 and 2010). The footprints of those former buildings were also scanned with the TW-6.

In pipe and cable search mode, the TW-6 is essentially a deep-sensing metal detector that detects any highly electrically conductive materials (e.g. metals) by creating an electromagnetic field with a transmitting coil. A receiving coil at a fixed separation from the transmitter measures the field strength. As the instrument is swept along the ground surface, subsurface metallic bodies distort the transmitted field. The change in field strength/orientation is sensed by the receiver, setting off an audible alarm and/or causing deflection of an analog meter. The TW-6 can nominally detect a 2-inch metal pipe to a depth of 8 feet and a 10-inch metal pipe to a depth of 14 feet.

Data Evaluation and GPR Follow-up

The EM mapping data were inspected for strong anomalies with distinct boundaries and footprint dimensions sufficient to be consistent with a buried metallic UST. For the EM-31, typically the values of the inphase and terrain conductivity reading over a large concentration of metal are both elevated; however, in some cases the inphase reading may not significantly deviate from background levels while the terrain conductivity readings deviate significantly. Therefore, both the inphase and terrain conductivity data were inspected for anomalies consistent with buried metal. For the ECP survey (060706d), these anomalies were compared to high-resolution aerial photos to identify any obvious surficial sources for the EM anomalies, such as catch basins and manhole covers. For the ECP survey, anomalies with no obvious source were designated as targets, and positions for these anomalies were uploaded into the GPS controller for later navigation/reacquisition during the GPR follow-up survey. For the pre-ECP surveys, all EM anomalies consistent with a buried metallic object were designated as targets because high-resolution aerial photos were not available at the time of the surveys.

Electronic maps of the contoured EM data were generated and utilized in concert with GPS navigation to determine the possible sources of the target anomalies in each survey area. Each anomaly location was inspected and its source was determined. Common sources included metallic surface debris not seen on the aerial photos (i.e. metal scraps and debris, metallic equipment), subsurface utilities as evidenced by associated surface objects (catchbasins, manholes), and subsurface metal of unknown source. The most common source of metallic surface debris was manhole covers, storm catch basins, and metal road signs. In the case of an unknown possible subsurficial source, a Fisher Labs TW-6 handheld metal detector was utilized to reacquire and characterize the plan-view footprint of that target. The TW-6 was utilized because it has a similar sensitivity and response to subsurface metal as the EM-61. The TW-6 has an audible alarm and visual meters that indicate the strength of the response, allowing the operator to mark the location of the EM anomaly's outer boundary.

Following navigation to EM anomalies (using DGPS) and delineation with the TW-6 handheld metal detector, the EM targets were then scanned with GPR to identify any continuous, high-amplitude hyperbolic reflections of the type commonly associated with USTs. GPR systems produce cross-sectional images of subsurface features and layers by continuously emitting pulses of radar-frequency energy from a scanning antenna as it is towed along a survey profile. The radar pulses are reflected by interfaces between materials with differing dielectric properties. The reflections return to the antenna and are displayed on a color monitor as a continuous cross section in real time. Since the electrical properties of metal are distinctly different from soil and backfill materials, metallic pipes and other structures produce dramatic and characteristic reflections. Fiberglass, plastic, concrete, and terra-cotta pipes and structures also produce recognizable, but less dramatic reflections. Scanning was performed using a GSSI SIR-2000 GPR unit with a color display and internal hard-drive, and a 400 or 500 MegaHertz (MHz) antenna nominally capable of scanning to depths of up to 10 feet, depending on soil conditions. In the southern two areas of Parcel 51, much of the paved areas were underlain by fill material containing suspected slag. GPR signal penetration was limited to less than 3 to 5 feet in these areas.

GPR scanning was performed by hand-towing the antenna along numerous and variously-oriented profiles crossing the footprints of EM anomalies defined by the TW-6. The GPR profiles were inspected in real time to identify reflections of the type commonly associated with cylindrical targets like tanks and drums.

Targets that were positively re-acquired with the TW-6 that did not result from surface metallic features, and had a recognizable GPR reflection associated with the metallic anomaly were then classified in several ways. The final classification regarding the possible UST and suspected UST classes was decided at the meeting between Enviroscan and the DPW in June of 2010, as follows:

- Surface Metal (SM) – target re-acquisition revealed a surface metal source for the EM anomaly.

- False Positive (FP) – target re-acquisition resulted in no detectable surface metal source and no TW-6 response associated with the mapped EM anomaly. These could be caused by very small buried debris, transient EM interference from passing cars, operator-induced spikes such as from inadvertently jerking or twisting the instrument, causing the GPS antenna or the operator's body to move within the field of sensitivity.

- Identified Metal (IM) – target re-acquisition resulted in subsurface metal with an indentified source such as utility pipe or line.

- Metallic Debris (MD) – a singular metallic target without the sufficient footprint dimensions to be a UST, and showing no GPR reflection characteristics indicative of a UST.

- Possible UST (PT) – a singular metallic target with sufficient size and shape for a UST, but that **does not have** GPR reflections characteristic of a UST.

- Suspected UST (ST) – A singular metallic target with the proper size, shape, and high-amplitude hyperbolic GPR reflections characteristic of a UST.

Anomalies that did not fit into the above categories, for various reasons, are described individually below. Also note the anomalies classified as Surface Metal, False Positive, and Identified Metal are depicted as a singular symbol on all maps. This was done because all three of these classifications will not result in the need to revisit any of these anomalies types and also to simplify the maps.

200 Area Results

(Formerly 070521)

The EM inphase and terrain conductivity survey results are depicted on Figures 200 B and 200 C, respectively. Enviroscan initially reported 19 anomalies in the original survey for the 200 Area (070521). The data re-evaluations delineated no additional targets (100814 and 111019) and upgraded two former targets to Possible USTs. Additionally, four large area terrain conductivity anomalies (labeled A through D, Figures 2 and 3) were delineated within the survey area. The color scheme for the terrain conductivity for this area was altered from the original to enhance these four anomalies. Anomalies A and B could be related to former structures although no known former structures were located at those locations. Anomaly C, directly adjacent to Wallington Avenue, is located very close to a known former structure. Anomaly D is coincident with a former parking lot. Multiple linear high-amplitude anomalies consistent with utilities (see green dash-dot lines, Figures 200 B and 200 C) are visible within the data set.

The TW-6 was utilized to scan the utility corridors in which the saturated EM data may have masked the presence of a UST. The scanning found no additional targets.

Results of the GPR/TW-6 follow-up scanning are given in Table 1. In summary, GPR scanning of the 19 targets revealed:

- 9 targets that were associated with surface metal (SM);
- 2 targets that could not be relocated with the TW-6 (FP);
- 1 target with the characteristics of an abandoned-in-place utility (IM);
- 4 targets that are interpreted as buried manhole covers (IM);
- 2 targets with TW-6 anomalies large enough to be a UST; however, the GPR showed only multiple high-amplitude near-surface reflections. These anomalies are classified as possible USTs (PT); and
- 1 target that had continuous, high-amplitude parabolic reflections indicative of a suspected buried intact UST (ST).

400 Area Results

(Formerly 060421 and ECP Parcel 79)

The EM-31 survey results for the 400 Area also include the results for Parcel 79 of the ECP Report (060706d). The results are depicted in Figures 400 B and 400 C, showing the inphase and terrain conductivity results, respectively. Enviroscan initially reported one GPR anomaly consistent with a UST and 215 anomalies associated with surface metal in the original survey for the 400 Area (060421). The scanning performed for the ECP - Parcel 76 survey showed 34 anomalies (060706d). Multiple linear high-amplitude anomalies consistent with utilities (see green dash-dot lines, Figures 400 B and 400 C) are visible within the data set.

The data re-evaluations added seven additional targets and upgraded eight former targets to possible USTs (100814 and 111019).

The TW-6 was utilized to scan the utility corridors and building perimeters in which the saturated EM data may have masked the presence of a UST. The scanning found three additional targets with a TW-6 footprint large enough to be a UST. GPR scanning was not performed for these anomalies.

Results of the GPR/TW-6 follow-up scanning for all targets are listed in Table 1. In summary, follow-up scanning of the 261targets revealed:

- 222 targets that were associated with surface metal (SM);
- 2 targets that could not be relocated with the TW-6 (FP);
- 6 target with the characteristics of an in place utility (IM);
- 12 targets with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD);
- 15 targets with TW-6 anomalies large enough to be a UST; however, the GPR showed only multiple high-amplitude near-surface reflections. These anomalies are classified as possible USTs (PT); and
- 4 targets with high-amplitude parabolic reflections indicating a possible UST (ST).

700 Area

(Formerly 080303)

The EM-31 survey results are depicted in Figures 700 B and 700 C, showing the inphase and terrain conductivity results, respectively. Enviroscan initially reported 60 anomalies in the original survey for the 700 Area (080303). Multiple linear high-amplitude anomalies consistent with utilities (see green dash-dot lines in Figures 700 B and 700 C) are visible within the data set.

The data re-evaluations delineated six additional targets (100814), two of which showed characteristics consistent with the Possible UST classification, and 19 former unknowns that were upgraded to Possible USTs (see explanation below).

Please note that the original field notes for this survey (080303) do not indicate TW-6 footprint size of the re-acquired EM anomalies. The original report text does indicate that GPR scanning of the anomalies did not delineate any high-amplitude parabolic features characteristic of USTs. As a result, 19 of the EM targets have to be classified as Possible USTs (PT). Also note that seven of those anomalies are in close proximity to the DPW's geo-referenced fuel tank data.

The TW-6 was utilized to scan the utility corridors and former building perimeters in which the saturated EM data may have masked the presence of a UST. Please note that in the time between the original EM-31 survey (2003) and the most recent survey, many of the buildings present in the 2003 survey area were removed (see buildings with red "X", Figures 700 B and C). Subsequently, these former building footprints were also scanned with the TW-6. The TW-6 scanning found two additional targets with a TW-6 footprint large enough to be a UST. GPR scanning was not performed for these anomalies.

The results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of the 68 targets revealed:

- 38 targets that were associated with surface metal (SM);
- 3 target with the characteristics of an in-place utility (IM);
- 4 targets with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD);
- 19 targets with unknown TW-6 anomaly footprint, and GPR anomalies not characteristic of USTs. These anomalies are classified as possible USTs (PT). and;
- 4 targets with TW-6 anomalies large enough to be USTs; however, the GPR showed only multiple high-amplitude near-surface reflections. These anomalies are classified as possible USTs (PT).

800 Area

(Formerly 030301)

The EM-31 survey results are depicted in Figures 800 B and 800 C, showing the inphase and terrain conductivity results, respectively. Enviroscan initially reported 93 anomalies in the original survey for the 800 Area (030301). Multiple linear high amplitude anomalies consistent with utilities (see green dash dot lines in Figures 700 B and 700 C) are visible within the data set.

The TW-6 was utilized to scan the utility corridors and former building perimeters in which the saturated EM data may have masked the presence of a UST. Please note that in the time between the original EM-31 survey (2003) and the most recent survey, many of the buildings present in the 2003 survey area were removed (see buildings with red "X", Figures 800 B and C). Subsequently, these former building footprints were also scanned with the TW-6.

The data re-evaluations and TW-6 scanning delineated 11 additional targets (100814 and 111019) and upgraded 3 anomalies to Possible USTs.

The results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of the 104 targets revealed:

- 75 targets that were associated with surface metal (SM);
- 1 target with the characteristics of an in place utility (IM);
- 8 targets with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD);
- 5 targets with TW-6 anomalies large enough to be a UST; however the GPR showed only multiple high-amplitude near-surface reflections. These anomalies are classified as possible USTs (PT). and;
- 15 targets with high-amplitude parabolic reflections indicating a possible UST (ST).

ECP Survey

(Formerly 060706d)

Parcel 13

The EM survey results are depicted in Figures 13B and 13C, showing the inphase and terrain conductivity results, respectively. Enviroscan identified a total of 19 target EM anomalies. Three small portions of this area had to be scanned with the TW-6 due to tree cover and surface obstructions. No metallic anomalies large enough to be a UST were delineated. Four large linear anomalies (suspected utilities) were delineated within this area (green dash-dot lines).

The TW-6 was utilized to scan the utility corridors in which the saturated EM data may have masked the presence of a UST. The scanning found no additional targets.

The results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of the 19 targets revealed:

- 8 targets that were associated with surface metal (SM);
- 6 target with the characteristics of an in place utility (IM);
- 1 target with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD)
- 2 targets that could not be relocated with the TW-6 (FP); and
- 2 targets with TW-6 anomalies large enough to be a UST; however the GPR showed only multiple high-amplitude near-surface reflections. These anomalies are classified as possible USTs (PT).

Parcel 14

The EM survey results are depicted in Figures 14B and 14C, showing the inphase and terrain conductivity results, respectively. Enviroscan identified a total of 136 target EM anomalies. The majority of the area was scanned with the EM-31. The entrance road, security checkpoint, and areas adjacent to them were scanned with the EM-61 due to the amount of surface metal and tight confines.

The TW-6 was utilized to scan the utility corridors in which the saturated EM data may have masked the presence of a UST. The scanning found no additional targets.

The results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of these 136 targets revealed:

- 91 targets that were associated with surface metal/debris (previously unaccounted for);
- 9 targets that could not be relocated with the TW-6 because the targets were too small to be re-occupied, and therefore are most likely metallic debris, not USTs;
- 6 targets with the characteristics of an abandoned-in-place utility;
- 29 targets with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD) ;
- 1 target with a low-amplitude parabolic GPR reflection that could be a possible UST.

Parcel 15

The EM-61 survey results are depicted in Figures 15B and 15 C, showing the data coverage and differential response contours respectively. Enviroscan identified a total of 41 target EM anomalies. This area was scanned with the EM-61 because the parking lots compromising most of the area could only be cordoned off in small portions and the EM-61 towing rig is better suited for the necessary tight turns. Several areas in this parcel were scanned, during the initial survey (060706d), with only the TW-6 due to interference of the GPS signal by nearby buildings and trees and the presence of parked cars during the EM survey. Multiple linear high-amplitude anomalies consistent with utilities (see green dash-dot lines in Figures 15 B and 15 C) are visible within the data set.

Scanning of the utility corridors in which the saturated EM data may have masked the presence of a UST was not needed in this area because the EM-61 instrument is not as highly effected by nearby utilities.

The results of the GPR/TW-6 follow-up scanning are listed in Table 15. In summary, GPR scanning of the 41 targets revealed:

- 9 targets that were associated with surface metal/debris (SM) ;
- 31 targets with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD) and;
- 1 target with TW-6 anomaly large enough to be a UST; however the GPR showed only multiple high-amplitude near-surface reflections. This anomaly is classified as a possible UST (PT).

Parcel 27

The Parcel 27 area (depicted in Figure 27) was small and heavily wooded, and GPS signal could not be received within the entire area. The area was cleared of brush and scanned with the TW-6 on a 5-foot line spacing. No anomalies indicative of debris or UST burials were delineated.

Parcel 28

The EM-31 survey results are depicted in Figures 28B and 28C, showing the inphase and terrain conductivity results, respectively. Enviroscan identified a total of 23 EM anomalies. Multiple linear high amplitude anomalies consistent with utilities (see green dash dot lines in Figures 28 B and 28 C) are visible within the data set.

The TW-6 was utilized to scan the utility corridors in which the saturated EM data may have masked the presence of a UST. The scanning found no additional targets.

The results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of the 23 targets revealed:

- 8 targets that were associated with surface metal/debris (SM);
- 5 targets that could not be relocated with the TW-6 because the targets were too small to be re-occupied, and therefore are most likely not a UST, nor the drywell originally sought by this survey (MD);
- 5 targets with the characteristics of a utility (IM);
- 4 targets with TW-6 footprints too small to be a UST and GPR images not characteristic of USTs (MD) and;;
- 1 target with the high-amplitude parabolic reflections indicating a possible UST (ST).

Additional GPR scanning was conducted in the small, roughly square areas labeled A and B in the Parcel 28 figures. These areas are thought to contain possible remnant septic system features. Several anomalies were delineated. In Area A, a roughly 4-foot x 6-foot non-metallic anomaly was delineated, which may represent a former septic holding tank reported to have been left in place in that area (labeled P28_23). In Area B, GPR showed a 10-foot x 10-foot high-amplitude flat anomaly characteristic of a box-shaped septic tank. Additionally, a high-amplitude non-metallic linear anomaly was partially delineated leading west from the suspected septic tank. This linear anomaly is suspected to be the former supply pipe to a septic distribution box. No other features of the suspected septic systems in Areas A and B were observed.

Parcel 51 Area 1 - Adjacent to Building 600

The EM-31 survey results are depicted in Figures 51 B and 51 C, showing the inphase and terrain conductivity results, respectively. Enviroscan identified a total of 34 EM anomalies. Several locations were scanned with the TW-6 due to the presence of parked cars during the main EM survey; however, no TW-6 anomalies were detected. Multiple linear high-amplitude anomalies consistent with utilities (see green dash-dot lines in Figures 51 B and 51 C) are visible within the data set.

The data re-evaluations upgraded four anomalies to Possible USTs (111019).

The TW-6 was utilized to scan the utility corridors in which the saturated EM data may have masked the presence of a UST. The scanning found no additional targets.

The results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of the 35 targets revealed:

- 16 targets that were associated with surface metal/debris (SM);
- 8 targets that could not be relocated with the TW-6 (FP);
- 5 targets with the characteristics of a utility (IM);
- 1 target with TW-6 footprint too small to be UST and GPR image not characteristic of a UST (MD);
- 4 targets with TW-6 anomalies large enough to be a UST; however the GPR showed only multiple high-amplitude near-surface reflections. These anomalies are classified as possible USTs (PT);
- 1 target with high-amplitude parabolic reflections indicating a possible UST (ST).

Parcel 51 Area 2 – Between Semaphore Ave. and Avenue of Memories

The EM-31 survey results are depicted in Figures 51 E and 51 F, showing the inphase and terrain conductivity results, respectively. Enviroscan identified a total of 15 EM anomalies. Several locations were scanned with the TW-6 due to the presence of parked cars during the main EM survey; however, no TW-6 anomalies were detected. Multiple linear high amplitude anomalies consistent with utilities (see green dash-dot lines in Figures 51 B and 51 C) are visible within the data set.

The TW-6 was utilized to scan the utility corridors in which the saturated EM data may have masked the presence of a UST. The scanning found no additional targets.

The results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of the 15 targets revealed:

- 6 targets that were associated with surface metal/debris (SM);
- 5 targets that could not be relocated with the TW-6 (FP);
- 2 targets with the characteristics of a utility (IM);
- 2 targets with high-amplitude parabolic reflections indicating a possible UST (ST).

Parcel 51 Area 3 - Motorpool

The EM-61 survey results are depicted in Figure 51 H, showing the differential response contours. Enviroscan identified a total of 75 EM anomalies. This area was scanned with the EM-61 because of a large amount of surface metal and the parking lots compromising most of the area could only be cordoned off in small portions and the EM-61 towing rig is better suited for the necessary tight turns. Several areas in this parcel were scanned with the TW-6 only due to interference of the GPS signal by nearby buildings and trees and the presence of parked cars during the EM survey. No anomalies indicative of USTs were located within the TW-6 scanning areas. Multiple linear high-amplitude anomalies consistent with utilities (see green dash-dot lines in Figure 51 H) are visible within the data set.

Scanning of the utility corridors in which the saturated EM data may have masked the presence of a UST was not needed in this area because the EM-61 instrument is not as highly affected by nearby utilities; however, during the data re-evaluations it was noted that several geo-referenced fuel tank locations coincided within high-amplitude anomalies caused by fencing around the motorpool facility. Scanning along the northern fence boundary resulted in one TW-6 anomaly with a size characteristic of a UST. Scanning along the southern fence boundary was not successful. The possible fuel tank locations were too close to the fence, resulting in interference with the TW-6.

The data re-evaluations upgraded six anomalies to Possible USTs (111019).

Results of the GPR/TW-6 follow-up scanning are listed in Table 1. In summary, GPR scanning of the 75 targets revealed:

- 36 targets that were associated with surface metal/debris (SM);
- 12 targets that could not be relocated with the TW-6 (FP);
- 4 targets with the characteristics of a utility (IM);
- 7 targets with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD);
- 7 targets with TW-6 anomalies large enough to be a UST; however the GPR showed only multiple high-amplitude near-surface reflections. These anomalies are classified as possible USTs (PT);
- 9 targets with high-amplitude parabolic reflections indicating a possible UST (ST).

Targets located on the asphalt-covered portions within this area could not be scanned with the TW-6 due to suspected high metal content fill material (e.g. slag); therefore, only GPR was utilized in these areas.

Parcel 76

The EM-31 survey results are depicted in Figures 76 B and 76 C, showing the inphase and terrain conductivity results, respectively. Enviroscan identified a total of 24 target EM anomalies. Multiple linear high-amplitude anomalies consistent with utilities (see green dash-dot lines in Figures 76 B and 76 C) are visible within the data set.

The TW-6 was utilized to scan the utility corridors in which the saturated EM data may have masked the presence of a UST. The scanning found no additional targets.

Results of the GPR/TW-6 follow-up scanning are listed in Table 76. In summary, GPR scanning of the 24 targets revealed:

- 14 targets that were associated with surface metal/debris (SM);
- 2 targets with TW-6 footprints too small to be USTs and GPR images not characteristic of USTs (MD);
- 1 target with TW-6 anomaly large enough to be a UST; however, GPR showed only multiple high-amplitude near-surface reflections. This anomaly is classified as a possible UST (PT). Please see **Note** Below;
- 7 targets with high-amplitude parabolic reflections indicating a possible UST (ST).

Note: During the data re-evaluation (100814), Enviroscan was tasked with confirming that an eighth UST located near Anomaly 7610 (Figure 76 B), not found during the ECP survey, was in-fact no longer present. Enviroscan employed an EM-61 to scan the area directly adjacent to the suspected location of the UST. The results of that scan are depicted in Figure 76 D. The results show only anomalies consistent with utilities. As a visual comparison, Enviroscan also scanned several known suspected USTs to compare the resulting anomalies with the area scanned for Anomaly 7610. The target 7610 classification will remain a possible UST due to the close proximity of the utilities to the possible UST location.

Survey Results Summary

The following table summarizes the total number of Metallic Debris, Possible USTs, Suspected USTs and Suspected septic tanks. A more detailed tabulation is included as Table 2.

Area	Metallic Debris	Possible USTs	Suspected USTs	Suspected Septic Tanks
200	0	2	1	0
400 and ECP Parcel 79	12	15	4	0
700	4	23	0	0
800	8	5	15	0
ECP Parcel - 13	1	2	0	0
ECP Parcel - 14	29	1	0	0
ECP Parcel - 15	31	1	0	0
ECP Parcel - 27	NA	NA	NA	NA
ECP Parcel - 28	4	0	1	2
ECP Parcel - 51	8	11	12	0
ECP Parcel - 76	2	1	7	0
Total	99	61	40	2

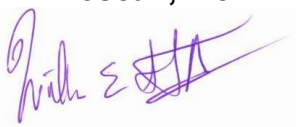
Limitations

The geophysical survey described above was completed using standard and/or routinely accepted practices of the geophysical industry and equipment representing the best available technology. Enviroscan does not accept responsibility for survey limitations due to inherent technological limitations or site-specific conditions. However, we make every effort to identify and notify the client of such limitations or conditions.

Note that by re-processing older data with current software, and revisiting identified anomalies with current instruments, Enviroscan has reached the limit of the current best available technology for detecting USTs and discriminating them from remnants of structures, utilities, debris and other clutter.

We have appreciated this opportunity to have worked with you. If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,
Enviroscan, Inc.



William E. Steinhart III, M.Sc., P.G.
Geophysics Project Manager

Technical Review By:
Enviroscan, Inc.

Felicia Kegel Bechtel, M.Sc., P.G.
President

enc.: Figure 200A: Parcel 13, EM-31 Data Coverage
Figure 200B: Parcel 13, EM-31 Inphase Response
Figure 200C: Parcel 13, EM-31 Terrain Conductivity Response

Figure 400A: Parcel 13, EM-31 Data Coverage
Figure 400B: Parcel 13, EM-31 Inphase Response
Figure 400C: Parcel 13, EM-31 Terrain Conductivity Response

Figure 700A: Parcel 13, EM-31 Data Coverage
Figure 700B: Parcel 13, EM-31 Inphase Response
Figure 700C: Parcel 13, EM-31 Terrain Conductivity Response

Figure 800A: Parcel 13, EM-31 Data Coverage
Figure 800B: Parcel 13, EM-31 Inphase Response
Figure 800C: Parcel 13, EM-31 Terrain Conductivity Response

Figure 13A: Parcel 13, EM-31 Data Coverage
Figure 13B: Parcel 13, EM-31 Inphase Response
Figure 13C: Parcel 13, EM-31 Terrain Conductivity Response

Figure 14A: Parcel 14, EM-31 Data Coverage
Figure 14B: Parcel 14, EM-31 Inphase Response
Figure 14C: Parcel 14, EM-31 Terrain Conductivity Response

Figure 15A: Parcel 15, EM-61 Data Coverage
Figure 15B: Parcel 15, EM-61 Differential Response

Figure 27: Parcel 27, TW-6 Investigation

Figure 28A: Parcel 28, EM-31 Data Coverage
Figure 28B: Parcel 28, EM-31 Inphase Response
Figure 28C: Parcel 28, EM-31 Terrain Conductivity Response

Figure 51 A: Parcel 51-Adjacent to Building 600, EM-31 Data Coverage
Figure 51 B: Parcel 51-Adjacent to Building 600, EM-31 Inphase Response
Figure 51 C: Parcel 51-Adjacent to Building 600, EM-31 Terrain Conductivity Response

Figure 51 D: Parcel 51– Between Semaphore Ave and Avenue of Memories, EM-31 Data Coverage
Figure 51 E: Parcel 51 – Between Semaphore Ave and Avenue of Memories, EM-31 Inphase Response
Figure 51 E: Parcel 51– Between Semaphore Ave and Avenue of Memories, EM-31 Terrain Conductivity Response

Figure 51 G: Parcel 51- Motorpool, EM-61 Data Coverage
Figure 51 H: Parcel 51- Motorpool, EM-61 Differential Response

Figure 76A: Parcel 76, EM-31 Data Coverage
Figure 76B: Parcel 76, EM-31 Inphase Response
Figure 76C: Parcel 76, EM-31 Terrain Conductivity Response
Figure 76D: Parcel 76, EM-61 Test Results

Table 1: GPR and Metal Detection Follow-up Survey Results
Table 2: Tabulation of Targets resulting in a classification of:
Metallic Debris, Possible UST, and Suspected UST

- EM Data Station 100814 Sept 2008
- EM Data Station 060706d Oct 2007
- EM Data Station 060421 Aug 2004
- Metallic Surface Object
- Subsurface Metallic Debris (non-UST)
- Possible UST
- Suspected UST
- No Metal Object Found Associated with this Anomaly
  Anomaly Associated with Confirmed Subsurface Utility
  Anomaly Associated with Surface Object (Metal Constituents in Structure)
- Area Scanned with TW-6, excluding utility trenches
- Linear Anomaly, Suspected Utility

Scale: 1" = 120'

50 0 50 100 150

feet

Notes:

Coordinates in New Jersey State Plane Grid, NAD83 datum.

Data collected with Geonics, Ltd. EM-31.

Aerial photo supplied by Shaw Environmental, Inc.

Prepared For:

Enviroscan, Inc.
1051 Columbia Avenue
Lancaster, PA
(717) 396-8922
www.enviroscan.com

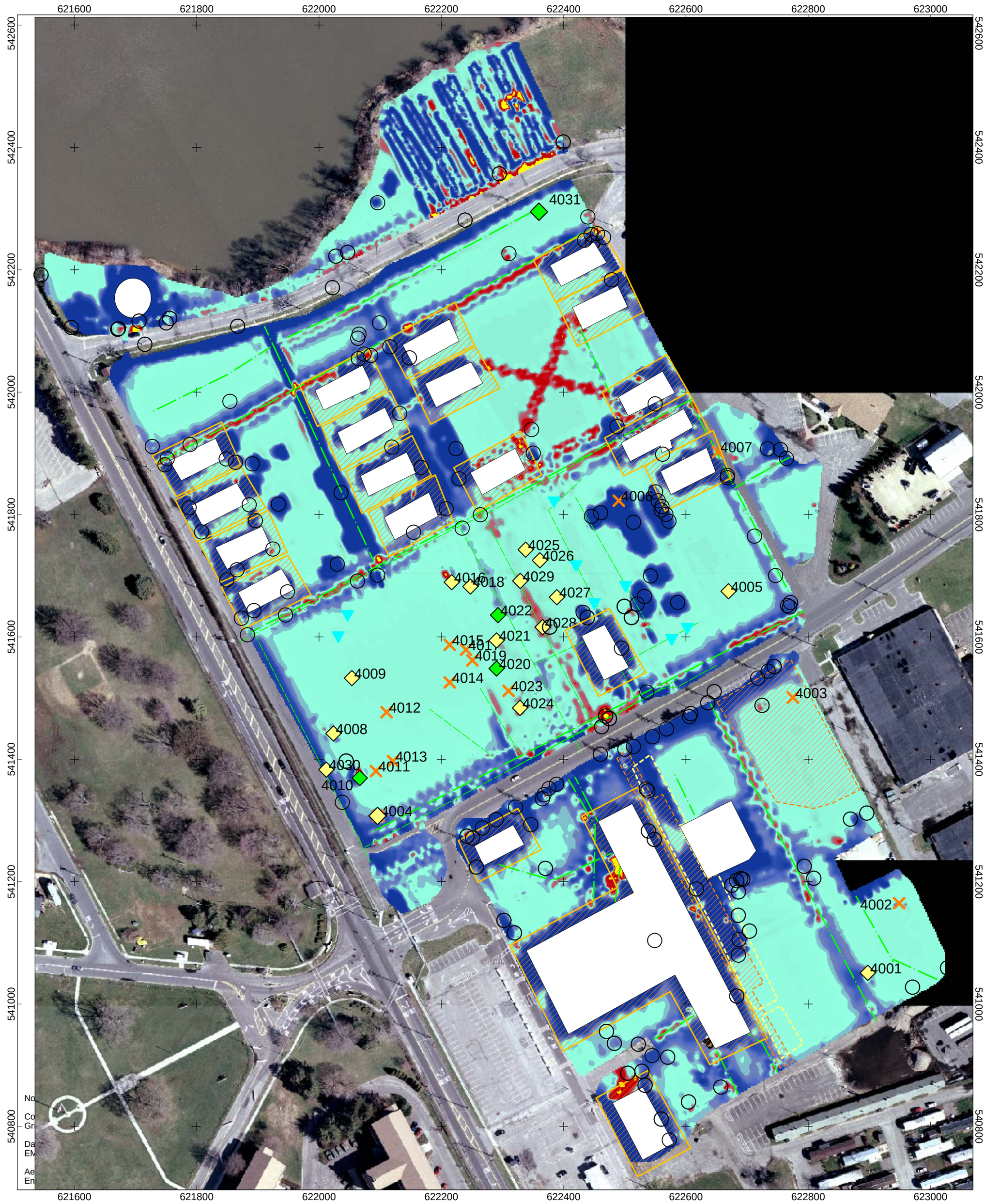
400 Area and Parcel 79

Data Coverage

400 Area
Main Base
Fort Monmouth, NJ

Figure **400 A**

Project Number 111019 Original 060421 & 060706d	Revision/Issue: 12/01/10	Drawn By: WES
Original Scale 1"=120'	Survey Ending Date: 10/28/10 Original 08/04/04 & 10/11/07	Approved By: FKB



Scale: 1" = 120'

50 0 50 100 150

feet

- Metallic Surface Object
- Subsurface Metallic Debris (non-UST)
- Possible UST
- Suspected UST
- No Metal Object Found Associated with this Anomaly
  Anomaly Associated with Confirmed Subsurface Utility
  Anomaly Associated with Surface Object (Metal Constituents in Structure)
- Area Scanned with TW-6, excluding utility trenches
- Linear Anomaly, Suspected Utility

Notes:

Coordinates in New Jersey State Plane Grid, NAD83 datum.

Data collected with Geonics, Ltd. EM-31.

Aerial photo supplied by Shaw Environmental, Inc.

EM-31 Inphase Response
(ppt)

-32.0 -24.0 -16.0 -8.0 -2.0 4.0 10.0 18.0 26.0

Increasing Metallic Response

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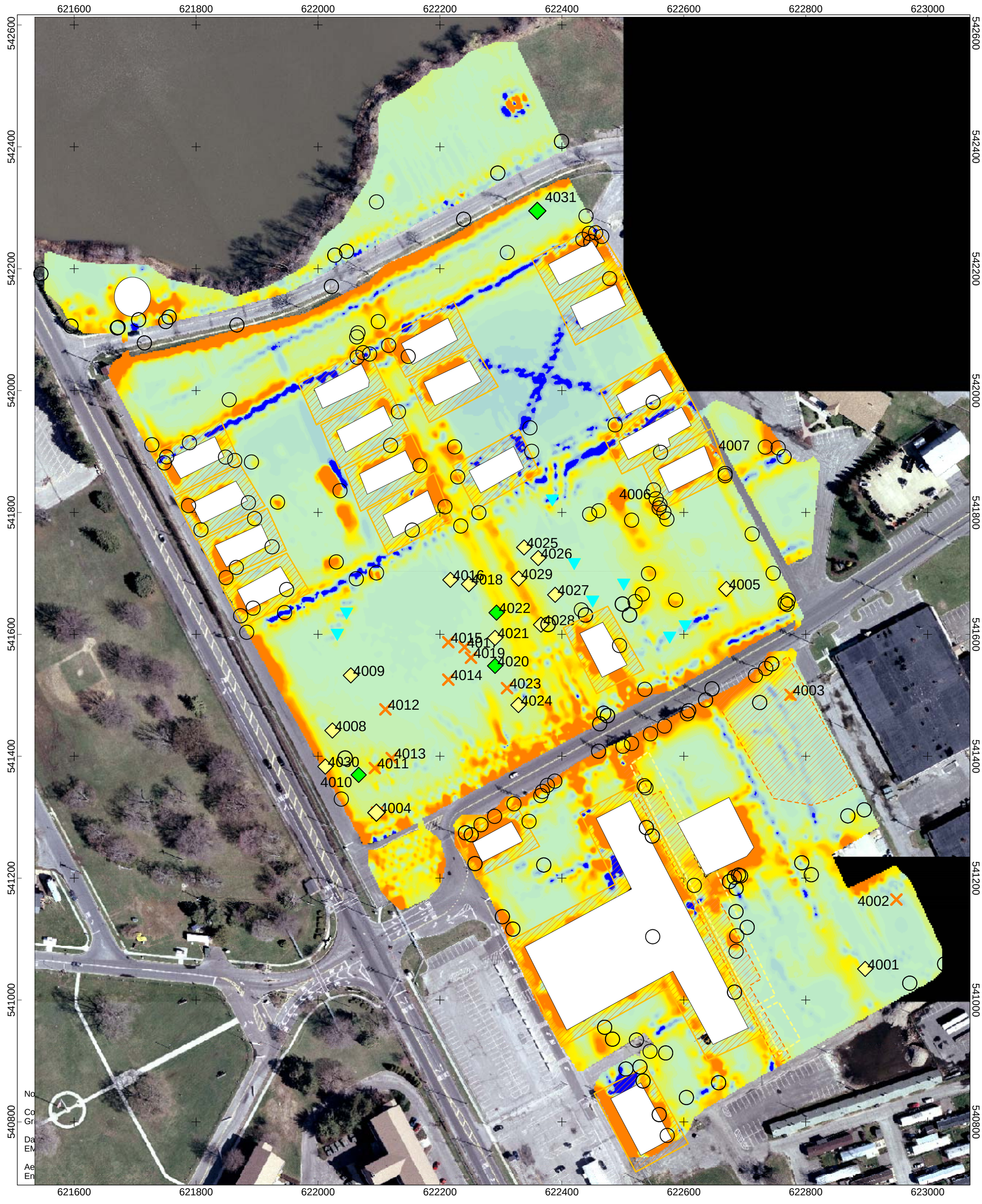
400 Area and Parcel 79

Inphase Results

400 Area
Main Base
Fort Monmouth, NJ

Figure **400 B**

Project Number: 111019 Original 060421 & 060706d	Revision/Issue: 12/01/10	Drawn By: WES
Original Scale: 1"=120'	Survey Ending Date: 10/28/10 Original 08/04/04 & 10/11/07	Approved By: FKB



Scale: 1" = 120'

50 0 50 100 150

feet

- Metallic Surface Object
- Subsurface Metallic Debris (non-UST)
- Possible UST
- Suspected UST
- No Metal Object Found Associated with this Anomaly
  Anomaly Associated with Confirmed Subsurface Utility
  Anomaly Associated with Surface Object (Metal Constituents in Structure)
- Area Scanned with TW-6, excluding utility trenches
- Linear Anomaly, Suspected Utility

Notes:

Coordinates in New Jersey State Plane Grid, NAD83 datum.

Data collected with Geonics, Ltd. EM-31.

Aerial photo supplied by Shaw Environmental, Inc.

EM-31 Terrain Conductivity
(mS/m)

-14.0 26.0 46.0 62.0 78.0 94.0 112.0 138.0

Prepared For:

Enviroscan, Inc.
1051 Columbia Avenue
Lancaster, PA
(717) 396-8922
www.enviroscan.com

400 Area and Parcel 79

Terrain Conductivity Results

400 Area
Main Base
Fort Monmouth, NJ

Figure **400 C**

Project Number: 111019 Original 060421 & 060706d	Revision/Issue: 12/01/10	Drawn By: WES
Original Scale: 1"=120'	Survey Ending Date: 10/28/10 Original 08/04/04 & 10/11/07	Approved By: FKB

Table 1
Ground Penetrating Radar and
Metal Detection
Follow-up Survey Results

Anomaly ID	Former Anomaly ID	Original Project #	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description From Original Report	Easting	Northing	New Classification	Upgraded to PT from MD	Notes
400 Area & Parcel 79											
4001	401	100814	Yes	2 x 8	N/A	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622897.5	541051.0	PT		
4002	402	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622948.8	541164.9	MD		
4003	403	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622775.1	541500.9	MD		
4004	404	100814	Yes	12 x 10	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622097.3	541307.3	PT		
4005	405	100814	Yes	5x5	N/A	Near-surface scattered metallic debris.	622669.7	541674.6	PT		
4006	406	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622490.3	541822.7	MD		
4007	407	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622652.6	541902.4	MD		
	408	100814	N/A	N/A	N/A	Surface Metal	622447.6	542244.1	SM		
4008	P79_1	060706	Yes	10 x 10	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622023.6	541442.2	PT	Upgrade	Description text changed to reflect new classification
	P79_2	060706	Yes	See Notes	See Notes	Suspected Utility	622031.7	541602.3	IM		
	P79_3	060706	N/A	N/A	N/A	Surface Metal	622044.5	541397.0	SM		
	P79_4	060706	Yes	See Notes	See Notes	Suspected Utility	622046.8	541637.1	IM		
4009	P79_5	060706	Yes	< 3 x 3	< 3 x 3	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622053.8	541532.7	PT	Upgrade	Description text changed to reflect new classification
4010	P79_6	060706	Yes	6 x 10	4 x 7	High-amplitude anomaly indicative of a UST.	622066.7	541369.4	ST		
4011	P79_7	060706	Yes	50 x 50	See Notes	Moderate-amplitude scattered anomalies, possible scattered debris.	622093.2	541380.7	MD		
4012	P79_8	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622110.6	541477.0	MD		
4013	P79_9	060706	Yes	see P79_7	see P79_7	see P79_7.	622121.0	541397.0	MD		
4014	P79_10	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622213.8	541525.7	MD		
4015	P79_11	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622213.8	541587.2	MD		
4016	P79_12	060706	Yes	7 x 11	4 x 11	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622217.1	541689.4	PT	Upgrade	Description text changed to reflect new classification
4017	P79_13	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622240.5	541579.1	MD		
4018	P79_14	060706	Yes	5 x 5	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622247.5	541682.3	PT	Upgrade	Description text changed to reflect new classification
4019	P79_15	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622251.0	541561.7	MD		
4020	P79_16	060706	Yes	5 x 8	4 x 7	Low-amplitude anomaly indicative of a possible UST.	622290.4	541548.3	ST		
4021	P79_17	060706	Yes	4 x4	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622290.4	541594.2	PT	Upgrade	Description text changed to reflect new classification
4022	P79_18	060706	Yes	8 x 12	4 x 11	High-amplitude anomaly indicative of a UST.	622292.8	541635.6	ST		
4023	P79_19	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622310.1	541511.8	MD		
4024	P79_20	060706	Yes	8 x 7	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622328.7	541484.0	PT	Upgrade	Description text changed to reflect new classification
4025	P79_21	060706	Yes	8 x10	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622338.0	541742.6	PT	Upgrade	Description text changed to reflect new classification
4026	P79_22	060706	Yes	7 x 7	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622361.2	541725.2	PT	Upgrade	Description text changed to reflect new classification
	P79_23	060706	N/A	N/A	N/A	Surface Metal	622377.4	541616.2	SM		
	P79_24	060706	Yes	See Notes	See Notes	Suspected Utility	622384.4	541822.7	IM		
4027	P79_25	060706	Yes	4 x 4	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622389.0	541664.9	PT	Upgrade	Description text changed to reflect new classification
	P79_26	060706	Yes	See Notes	See Notes	Suspected Utility	622420.3	541718.3	IM		
	P79_27	060706	N/A	N/A	N/A	Surface Metal	622438.8	541631.7	SM		
	P79_28	060706	Yes	See Notes	See Notes	Suspected Utility	622450.5	541656.8	IM		

Table 1
Ground Penetrating Radar and
Metal Detection
Follow-up Survey Results

Anomaly ID	Former Anomaly ID	Original Project #	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description From Original Report	Easting	Northing	New Classification	Upgraded to PT from MD	Notes
	P79_29	060706	N/A	N/A	N/A	Surface Metal	622474.8	541466.6	SM		
	P79_30	060706	N/A	N/A	N/A	Surface Metal	622499.3	541649.8	SM		
	P79_31	060706	Yes	See Notes	See Notes	Suspected Utility	622501.5	541684.6	IM		
	P79_32	060706	N/A	N/A	N/A	Surface Metal	622511.1	541631.9	SM		
	P79_33	060706	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	622576.9	541597.6	FP		
	P79_34	060706	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	622602.4	541616.2	FP		
4028	409	NA	Yes	5 x 10	Not Performed	Metal anomalies adjacent to utilities, coincide with large patch of dead grass.	622365.7	541615.9	PT		
4029	410	NA	Yes	5 x 10	Not Performed	Metal anomalies adjacent to utilities, coincide with large patch of dead grass.	622329.1	541691.5	PT		
4030	411	NA	yes	35 x 17	Not Performed	Large Metallic Anomaly	622012.0	541383.0	PT		
4031	1	60421	N/A	N/A	N/A	GPR shows parabolic reflection characteristic of UST.	622359.0	542296.0	ST		
	NA	060421	N/A	N/A	N/A	Surface Metal	622046.9	542228.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621594.8	542105.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621545.5	542191.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622399.5	542409.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622646.2	541510.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622607.9	541474.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622257.6	541223.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622548.4	541269.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622869.1	541302.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622895.9	541312.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622744.4	541551.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622562.0	541898.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621866.1	541709.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622119.1	541910.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622046.9	542228.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621594.8	542105.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621545.5	542191.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622399.5	542409.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622646.2	541510.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622607.9	541474.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622257.6	541223.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622548.4	541269.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622869.1	541302.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622895.9	541312.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622744.4	541551.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621867.0	542107.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622460.2	541408.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622604.3	540840.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	623027.9	541059.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622793.5	541225.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621867.0	542107.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622460.2	541408.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622604.3	540840.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	623027.9	541059.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622793.5	541225.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622444.9	542257.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622766.4	541651.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622064.3	542054.8	SM		

Table 1
Ground Penetrating Radar and
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Follow-up Survey Results

Anomaly ID	Former Anomaly ID	Original Project #	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description From Original Report	Easting	Northing	New Classification	Upgraded to PT from MD	Notes
	NA	060421	N/A	N/A	N/A	Surface Metal	621751.8	541891.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622234.2	541777.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622238.9	542281.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622238.9	542281.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621705.9	542116.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621705.9	542116.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622310.6	542226.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622746.6	541700.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622712.2	541764.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622063.5	542088.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621854.4	541985.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621727.4	541911.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622062.9	541691.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621873.1	541630.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622208.2	541809.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622263.9	541799.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622098.9	542113.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622038.2	541329.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622022.0	542170.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622241.9	541274.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622470.3	540955.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622483.0	540935.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622522.3	540934.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622505.0	540886.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622533.3	540867.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622559.7	540812.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622970.7	541027.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622675.0	541194.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622683.3	541013.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622538.6	541282.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622462.2	541453.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622724.6	541488.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622022.0	542170.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622241.9	541274.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622470.3	540955.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622483.0	540935.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622522.3	540934.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622505.0	540886.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622533.3	540867.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622559.7	540812.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622970.7	541027.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622675.0	541194.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622683.3	541013.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622538.6	541282.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622462.2	541453.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622724.6	541488.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622439.7	542286.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622027.6	542222.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621670.8	542102.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622294.9	542356.9	SM		

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Follow-up Survey Results

Anomaly ID	Former Anomaly ID	Original Project #	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description From Original Report	Easting	Northing	New Classification	Upgraded to PT from MD	Notes
	NA	060421	N/A	N/A	N/A	Surface Metal	622370.3	541221.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622685.9	541183.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622657.1	540864.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622027.6	542222.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621670.8	542102.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622294.9	542356.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622370.3	541221.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622685.9	541183.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622657.1	540864.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622455.5	542259.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622769.5	541649.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622771.2	541656.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622073.8	542062.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622065.5	542094.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621748.1	541881.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621789.1	541914.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621848.3	541890.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621885.9	541816.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621924.7	541743.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621948.5	541673.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621893.6	541643.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621672.1	542103.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621715.3	542078.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622251.4	541271.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622302.5	541136.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622319.7	541116.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622528.1	540890.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622570.3	540913.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622809.2	541205.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622468.7	541470.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621672.1	542103.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621715.3	542078.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622251.4	541271.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622302.5	541136.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622319.7	541116.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622528.1	540890.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622570.3	540913.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622809.2	541205.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622468.7	541470.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622347.7	541939.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622350.5	541900.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622431.9	541640.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622494.6	541581.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622478.4	542183.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621863.5	541885.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621896.0	541790.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622693.1	541203.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622689.8	541205.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622683.0	541201.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622693.1	541203.8	SM		

Table 1
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Follow-up Survey Results

Anomaly ID	Former Anomaly ID	Original Project #	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description From Original Report	Easting	Northing	New Classification	Upgraded to PT from MD	Notes
	NA	060421	N/A	N/A	N/A	Surface Metal	622689.8	541205.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622683.0	541201.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622685.7	541145.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622704.0	541119.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622685.7	541145.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622704.0	541119.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622465.5	542253.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622434.4	542248.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622084.7	542060.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621883.1	541603.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622132.0	541965.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621945.3	541635.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621755.9	542120.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621750.3	542113.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622635.8	541492.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621755.9	542120.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621750.3	542113.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622635.8	541492.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622667.9	541864.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622733.7	541907.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622754.8	541906.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622764.5	541891.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622586.7	541656.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622542.1	541699.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622460.6	541802.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622445.5	541797.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622148.0	542056.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622115.9	542074.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621933.6	541817.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621849.2	541693.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622096.0	541700.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622667.8	541860.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622267.4	541287.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622321.5	541321.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622346.2	541293.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622365.5	541335.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622368.1	541342.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622376.2	541352.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622388.5	541359.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622544.7	540915.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622549.0	541103.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622572.8	540777.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622717.5	541532.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622549.8	541980.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622572.3	541789.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622567.4	541800.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622289.7	541301.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622560.9	541813.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622554.8	541822.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622550.5	541837.1	SM		

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Anomaly ID	Former Anomaly ID	Original Project #	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description From Original Report	Easting	Northing	New Classification	Upgraded to PT from MD	Notes
	NA	060421	N/A	N/A	N/A	Surface Metal	622686.9	541105.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622487.4	541943.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622559.6	541807.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622224.1	541907.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622537.9	541348.3	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622535.1	541351.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622617.2	541188.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622096.0	542309.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622568.3	541449.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622520.2	541653.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622532.2	541666.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622514.3	541421.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622514.4	541787.4	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622167.1	541877.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622036.1	541835.7	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622536.2	541509.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622229.1	541858.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622030.0	541719.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621890.9	541882.9	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621787.6	541811.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	621808.0	541771.6	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622685.8	541080.0	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622500.2	541416.5	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622605.8	541469.8	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622734.4	541544.1	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622154.7	541771.2	SM		
	NA	060421	N/A	N/A	N/A	Surface Metal	622545.3	541436.8	SM		

Table 2
Tabulation of Targets resulting in a classification of: Metallic Debris, Possible UST, and Suspected UST

Anomaly ID	Former Anomaly ID	Original Project #	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description From Original Report	Easting	Northing	New Classification	Upgraded to PT from MD	Notes
200 Area											
2001	1	070521	Yes	8 x 12	See Notes	No repeatable GPR shape, possible UST	620012.3	540446.2	PT	Upgrade	
2002	2	070521	Yes	3 x 3	3 x 3	Moderate-amplitude point target/anomaly, possible UST	620096.6	540320.2	PT	Upgrade	
2005	10	070521	Yes	9 x 4	Same as MD	Strong MD anomaly. GPR imaging showed anomaly with shape and amplitude consistent with e.g. a small UST. Please note that a small area of subsurface metallic debris is located adjacent to this anomaly.	621074.8	540489.2	ST		
400 Area & Parcel 79											
4001	401	100814	Yes	2 x 8	N/A	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622897.5	541051.0	PT		
4002	402	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622948.8	541164.9	MD		
4003	403	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622775.1	541500.9	MD		
4004	404	100814	Yes	12 x 10	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622097.3	541307.3	PT		
4005	405	100814	Yes	5x5	N/A	Near-surface scattered metallic debris.	622669.7	541674.6	PT		
4006	406	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622490.3	541822.7	MD		
4007	407	100814	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, buried debris.	622652.6	541902.4	MD		
4008	P79_1	060706	Yes	10 x 10	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622023.6	541442.2	PT	Upgrade	Description text changed to reflect new classification
4009	P79_5	060706	Yes	< 3 x 3	< 3 x 3	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622053.8	541532.7	PT	Upgrade	Description text changed to reflect new classification
4010	P79_6	060706	Yes	6 x 10	4 x 7	High-amplitude anomaly indicative of a UST.	622066.7	541369.4	ST		
4011	P79_7	060706	Yes	50 x 50	See Notes	Moderate-amplitude scattered anomalies, possible scattered debris.	622093.2	541380.7	MD		
4012	P79_8	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622110.6	541477.0	MD		
4013	P79_9	060706	Yes	see P79_7	see P79_7	see P79_7.	622121.0	541397.0	MD		
4014	P79_10	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622213.8	541525.7	MD		
4015	P79_11	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622213.8	541587.2	MD		
4016	P79_12	060706	Yes	7 x 11	4 x 11	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622217.1	541689.4	PT	Upgrade	Description text changed to reflect new classification
4017	P79_13	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622240.5	541579.1	MD		
4018	P79_14	060706	Yes	5 x 5	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622247.5	541682.3	PT	Upgrade	Description text changed to reflect new classification
4019	P79_15	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622251.0	541561.7	MD		
4020	P79_16	060706	Yes	5 x 8	4 x 7	Low-amplitude anomaly indicative of a possible UST.	622290.4	541548.3	ST		
4021	P79_17	060706	Yes	4 x4	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622290.4	541594.2	PT	Upgrade	Description text changed to reflect new classification
4022	P79_18	060706	Yes	8 x 12	4 x 11	High-amplitude anomaly indicative of a UST.	622292.8	541635.6	ST		
4023	P79_19	060706	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	622310.1	541511.8	MD		
4024	P79_20	060706	Yes	8 x 7	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622328.7	541484.0	PT	Upgrade	Description text changed to reflect new classification
4025	P79_21	060706	Yes	8 x10	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622338.0	541742.6	PT	Upgrade	Description text changed to reflect new classification
4026	P79_22	060706	Yes	7 x 7	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622361.2	541725.2	PT	Upgrade	Description text changed to reflect new classification
4027	P79_25	060706	Yes	4 x 4	See Notes	GPR shows near-surface scattered metallic anomalies; TW-6 anomaly size indicates possible UST.	622389.0	541664.9	PT	Upgrade	Description text changed to reflect new classification
4028	409	NA	Yes	5 x 10	Not Performed	Metal anomalies adjacent to utilities, coincide with large patch of dead grass.	622365.7	541615.9	PT		
4029	410	NA	Yes	5 x 10	Not Performed	Metal anomalies adjacent to utilities, coincide with large patch of dead grass.	622329.1	541691.5	PT		
4030	411	NA	yes	35 x 17	Not Performed	Large Metallic Anomaly	622012.0	541383.0	PT		
4031	1	60421	N/A	N/A	N/A	GPR shows parabolic reflection characteristic of UST.	622359.0	542296.0	ST		