

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

October 28, 2016

Ms. Linda Range New Jersey Department of Environmental Protection Bureau of Case Management 401 East State Street PO Box 420/Mail Code 401-05F Trenton, NJ 08625-0028

Subject:No Further Action RequestSite Investigation Report Addendum for the Building 750 Motor Pool AreaIncluding Underground Storage Tanks, Fort Monmouth, NJ

Attachments:

- A. Correspondence
- B. Drawings of Building 750 Motor Pool Area
- C. ECP and SI Report Excerpts and Supporting Documents
- D. Summary Table of Parcel 51/Building 750 Motor Pool Area Underground Storage Tanks
- E. UST 750A and UST 750B File Review and Analyses
- F. UST 750C Report
- G. UST 750D File Review and Analyses
- H. UST 750E File Review and Analyses
- I. UST 750F File Review and Analyses
- J. UST 750G File Review and Analyses
- K. UST 750H File Review and Analyses
- L. UST 750I File Review and Analyses
- M. UST 750J File Review and Analyses
- N. Anomaly P51_1 File Review and Analyses
- O. Building 750 Area Groundwater Monitoring Supporting Documents

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. NJDEP letter to the Army dated June 16, 2015, re: *Final Environmental Condition* of Property Supplemental Phase II Site Investigation Work Plan Addendum for Parcels 34, 50, 51, 52, 66, 80 and 83 dated February 2015, Fort Monmouth, Oceanport, Monmouth County.

Dear Ms. Range:

The U.S. Army Fort Monmouth (FTMM) has reviewed existing file information for the Building 750 Motor Pool Area and associated underground storage tank (UST) sites, which are located within a portion of Environmental Condition of Property (ECP) Parcel 51. The purpose of this submittal is to provide documentation and request a No Further Action (NFA) determination for all USTs and other areas of potential environmental concern identified at the Building 750 Motor Pool Area. This submittal provides the information for the Building 750 Motor Pool Area USTs as requested by NJDEP in Correspondence 1 (Attachment A). Other Motor Pool Area features identified by NJDEP in their comments on Parcel 51 within Correspondence 2 (Attachment A) are also addressed within this submittal.

The portion of Parcel 51 designated as the Building 750 Motor Pool Area is located near the southcentral edge of the Main Post, and is generally bounded by Echo Avenue to the north, the installation boundary to the west, Vanguard Road to the south, and Wilson Avenue to the east. The layout of this area is presented in Figure 1 of **Attachment B**. The Building 750 Motor Pool Area is currently occupied by the Monmouth County Department of Public Works and Engineering.

1.0 Building 750 Motor Pool Features

An evaluation of the environmental condition of the Building 750 Motor Pool Area was initially provided in the 2007 *Environmental Condition of Property Report, Fort Monmouth, Monmouth County, New Jersey* (the ECP Report). Using the results of the ECP Report, recommendations for additional investigations were developed, including geophysical surveys, and sampling and analysis of soil and groundwater. The results of these investigations for Parcel 51 (including the Building 750 Motor Pool Area) were reported in the 2008 *U.S. Army BRAC Site Investigation Report, Fort Monmouth* (the SI Report). Excerpts of both of these documents pertaining to the Building 750 Motor Pool Area are provided in **Attachment C**, along with several 1990's engineering drawings that better describe the features identified in the ECP and SI Reports.

Correspondence 2 (Attachment A) included specific concerns identified by NJDEP for the Building 750 Motor Pool Area. The locations of these features are presented in Figure 1 of Attachment B. These features are described below in the same order as the Correspondence 2 comments (Attachment A).

- A former diesel and gasoline dispensing system associated with UST 750A (also known as UST 191) and UST 750B (a.k.a UST 192) has been evaluated and is described in Section 2.0 and **Attachment E** of this submittal. The 1990 engineering drawing provided in **Attachment C** shows the layout of these two USTs, piping and dispensers. This fuel dispensing system is no longer in use and the USTs, piping and dispensers have been removed.
- Features described as "two outdoor service pits for draining vehicle oil, the pipes from which discharged to a former oil water separator (OWS)..." in Correspondence 2 (Attachment A) refers to two concrete-lined trenches used in the former service bay area located adjacent to the Covered Wash Rack (Figure 1 of Attachment B). Drawings presented in Attachment C indicate that waste oil lines from the service bays drained to the UST 750C waste oil tank (see Section 2.0 and Attachment F of this submittal), and wastewater lines from the service bays drained to the OWS (referred to as the "former OWS" in the ECP Report). Therefore, contrary to Correspondence 2 and the ECP Report, waste oil was not discharged to the OWS but rather to the UST 750C waste oil tank. The area with the former service bays is currently

used for covered parking by Monmouth County, and the service bay trenches have been backfilled to grade with compacted sand and gravel.

- The features described as the "current wash rack previously connected to former OWS, then to new OWS" in Correspondence 2 (Attachment A) is the covered wash rack (Figure 1 of Attachment B). A trench drain was present within the vehicle wash rack that originally drained to an OWS (referred to as the "former OWS" in Correspondence 2 and the ECP Report) prior to discharge to the sanitary sewer. As shown in the Recycle Wash System drawing provided in Attachment C, an updated OWS and wastewater treatment/recycling system was installed prior to 2006 that included drainage of wash rack wastewater to a new sump pit prior to treatment. This newer collection and treatment system was referred to as the "new OWS system" in Correspondence 2 and the ECP Report. The Attachment C drawing indicates that the pre-existing OWS (e.g., the "former OWS") was utilized as the initial plumbing connection for the newer wastewater collection system. Under the newer configuration, wastewater drained through the previous OWS prior to collection in the new sump pit.¹ Therefore the "new OWS system" described in the ECP Report and Correspondence 2 generally refers to the new sump pit and the downstream wastewater treatment system. The "former OWS," which was originally installed when Building 750 was constructed in 1987, remains in place and was integrated into the updated wastewater collection and treatment system. Currently the wash rack trench drain is not actively used by Monmouth County, although rain water periodically accumulates in this trench, and is typically removed by pumping water from the sump pit into a vacuum truck prior to offsite disposal. The wastewater treatment equipment in Building 750 is still present, but Monmouth County is not using this equipment.
- The three hydraulic lifts within Building 753 described in Correspondence 2 and the ECP Report were electrically-operated floor jacks with hydraulic oil reservoirs located above ground level. Therefore subsurface releases from the Building 753 hydraulic lifts are not of concern. Currently Building 753 is used for general storage by Monmouth County. The hydraulic lifts have been de-energized and are no longer in use, and there is no evidence of oil staining from the lifts.
- Floor drains located within both Buildings 753 and 754 consist of rest room floor drains and safety shower drains that were connected to the sanitary sewer, as previously indicated in the ECP Report, and as verified on a 1995 Plumbing Plan (**Attachment C**). Therefore subsurface releases from the Building 753 and 754 floor drains are not of concern. Building 754 is currently used for general storage by Monmouth County.

A secondary containment pad for parking a diesel fuel tanker truck is an additional feature that was also identified in the ECP Report. Fuel dispensing was discontinued from USTs 750A and 750B prior to 2005, and then a secondary containment pad was constructed for parking a tanker truck when not in use; this truck was used for replenishing diesel fuel to various emergency generators around the Main Post. The secondary containment area shows up on recent drawings and aerial photographs including Figure 3.12-2 of the SI Report (**Attachment C**), and was located in close proximity to the former fuel dispensers. There were no indications or reports of a release from the secondary

¹ The use and current existence of both the previous OWS and the newer sump pit was confirmed by Mr. Kevin Courtney, who supervised the Building 750 Motor Pool Area prior to FTMM closure in 2011, and is currently employed with the State maintenance contractor at Fort Monmouth.

containment area; therefore, an environmental assessment of this area is not warranted. Currently the secondary containment pad is used by Monmouth County for parking heavy equipment.

Additional information has been provided herein to support the assessment of various Building 750 Motor Pool features previously identified in the ECP Report and subsequently discussed by NJDEP (Correspondence 2). Analytical soil and groundwater data provided in the SI Report did not identify contaminant releases attributed to these features, and there were no historical reports or records of contaminant releases from the Building 750 Motor Pool features. Therefore, the Army requests NJDEP concurrence that further action is not warranted for the Building 750 Motor Pool features.

2.0 Building 750 Motor Pool Area Underground Storage Tanks

The locations of the USTs within the Building 750 Motor Pool Area are presented in Figure 1 of **Attachment B**, and a summary table of these USTs is provided in **Attachment D**. All 10 of the USTs identified within the Building 750 Motor Pool Area have been removed. USTs 750A and 750B contained diesel and gasoline for the fuel dispensing system, and UST 750C was used for waste oil collection from motor vehicle servicing and wash rack areas, as described in Section 1.0 above. USTs 750D, 750E, 750F, 750G, 750H, 750I, and 750J were each less than 2,000 gallons in size and used to store heating oil for nonresidential buildings, and were therefore considered unregulated heating oil tanks (UHOTs). None of the Building 750 Motor Pool Area USTs or UHOTs have been previously approved for NFA by NJDEP.

We are submitting the following documentation for the USTs and UHOTs that were previously removed from the Building 750 Motor Pool Area, and we request NFA determinations for each site as explained below:

- UST 750A, UST 750B, and fuel dispensers file review summary and analyses are presented in **Attachment E**, and Figure 2 of **Attachment B** shows soil sample locations and a summary of analytical results.
- UST 750C investigation report is presented in Attachment F.
- UST 750D file review summary and analyses are presented in **Attachment G**, and soil sample locations and analyses are presented on Figure 3 of **Attachment B**.
- UST 750E file review summary and analyses are presented in **Attachment H**, and soil sample locations and analyses are presented on Figure 3 of **Attachment B**.
- UST 750F file review summary and analyses are presented in **Attachment I**, and soil sample locations and analyses are presented on Figure 4 of **Attachment B**.
- UST 750G file review summary and analyses are presented in **Attachment J**, and soil sample locations and analyses are presented on Figure 3 of **Attachment B**.
- UST 750H file review summary and analyses are presented in **Attachment K**, and soil sample locations and analyses are presented on Figure 4 of **Attachment B**.
- UST 750I file review summary and analyses are presented in Attachment L, and soil sample locations and analyses are presented on Figure 4 of Attachment B.
- UST 750J file review summary and analyses are presented in **Attachment M**, and soil sample locations and analyses are presented on Figure 4 of **Attachment B**.

A file review summary and analyses for geophysical anomaly P51_1, where test trenching was performed but an UST was not found, are presented in **Attachment N**. Test trenching was also

performed at geophysical anomaly P51_15, but no UST was found, and no analytical data were collected. The locations of both of these anomalies are shown on Figure 1 of **Attachment B.**

3.0 GROUNDWATER WITHIN THE BUILDING 750 MOTOR POOL AREA

The potential for impacts to groundwater from the Building 750 Motor Pool Area was assessed to support this request for NFA, as presented below. Specific groundwater monitoring analytical results for USTs 750A, 750B, 750D, 750E, 750G, and 750H were presented in the respective attachments as previously described in Section 2.0 of this submittal.

- Figure 3.12-1 of the SI Report is provided in **Attachment C** and shows the lateral coverage of extensive Geoprobe soil and groundwater sampling that was previously performed within the Building 750 Motor Pool Area. There were no exceedances of Ground Water Quality Criteria (GWQC) within this area.
- Groundwater at specific USTs and UHOTs where releases were identified was further monitored by the installation of eight monitor wells designated as 750MW01 through 750MW08, as shown on Enclosure 1 of Attachment O. Well construction information for these wells is tabulated in Enclosure 2 of Attachment O. The latest (2009) groundwater analyses and the monitoring results for specific individual USTs are presented in Attachment E (Enclosure 4) for wells 750MW01 through 750MW04; Attachment G for well 750MW05; Attachment H for well 750MW06; Attachment J for well 750MW08; and Attachment K for well 750MW07. These results indicate that there is currently no release of site-related contaminants to groundwater.
- Groundwater typically flows towards the north or northwest in the central and northern portion of the Building 750 Motor Pool Area, and towards the east or southeast in the southern portion of this area (see Enclosures 3 and 4 of **Attachment O**).
- As demonstrated in Attachments E through M, soil left in place at individual UST sites was below the 1,000 mg/kg TPH threshold for additional contingency analysis. This threshold was developed by NJDEP with consideration of potential impacts to groundwater from 2-methylnaphthalene, as well as other contaminants (as described in NJDEP's 2010 *Protocol for Addressing Extractable Petroleum Hydrocarbons*). Therefore, there is minimal risk of impact to groundwater from the soils remaining at former UHOT sites within the Building 750 Motor Pool Area.
- Monitor well records including boring logs for wells 750MW01 through 750MW08 are provided in Enclosure 5 of **Attachment O**.

As indicated above, the Building 750 Motor Pool Area (including USTs) has been adequately addressed and the Army requests that NJDEP approve No Further Action.

The technical Point of Contact (POC) for this submittal is Kent Friesen at (732) 383-7201 or by email at <u>kent.friesen@parsons.com</u>. Should you have any questions or require additional information, please contact me by phone at (732) 380-7064 or by email at <u>william.r.colvin18.civ@mail.mil</u>.

Sincerely,

William R. Colvin, PMP, CHMM, PG BRAC Environmental Coordinator

cc: Linda Range, NJDEP (3 hard copies) Delight Balducci, HQDA ACSIM (CD) Joseph Pearson, Calibre (CD) James Moore, USACE (CD) Jim Kelly, USACE (CD) Cris Grill, Parsons (CD)



New Jersey Department of Environmental Protection Site Remediation Program

Report Certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites

These certifications are to be used for reports submitted for RCRA GPRA 2020, CERCLA, and Federal Facility Sites. The Department has developed guidance for report certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites under traditional oversight. The "Person Responsible for Conducting the Remediation Information and Certification" is required to be submitted with each report. For those sites that are required or opt to use a Licensed Site Remediation Professional (LSRP) the report must also be certified by the LSRP using the "Licensed Site Remediation Professional Information and Statement". For additional guidance regarding the requirement for LSRPs at RCRA GPRA 2020, CERCLA and Federal Facility Sites see http://www.nj.gov/dep/srp/srra/training/matrix/guick ref/rcra cercla fed facility sites.pdf.

Documents:

Name/Title:

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William R. Colvin, PMP, CHMM, PG

BRAC Environmental Coordinator

• "No Further Action Request, Site Investigation Report Addendum for the Building 750 Motor Pool Area Including Underground Storage Tanks, Fort Monmouth, New Jersey" (October 2016)

TION INFORMATION AND OFFICIATION

PERSON RESPONSIBLE FOR CONDUCTING THE	REIMEDIAI	ION INFO	RIMATION AND CERTI	FICATION
Full Legal Name of the Person Responsible for Condu	icting the R	emediation	: William R. Colvin	
Representative First Name: William	Re	presentativ	e Last Name: Colvin	
Title: Fort Monmouth BRAC Environmental Coordin	nator (BEC)			
Phone Number: (732) 380-7064	Ext:		Fax:	
Mailing Address: P.O. Box 148				
City/Town: Oceanport	State:	NJ	Zip Code:	07757
Email Address: william.r.colvin18.civ@mail.mil				
This certification shall be signed by the person respon	sible for con	nducting th	e remediation who is su	bmitting this notification
in accordance with Administrative Requirements for th	e Remedia	tion of Con	taminated Sites rule at I	N.J.A.C. 7:26C-1.5(a).
I certify under penalty of law that I have personally exa	amined and	am familia	ar with the information su	ıbmitted herein,
including all attached documents, and that based on n	ny inquiry o	f those indi	ividuals immediately res	ponsible for obtaining
the information, to the best of my knowledge, I believe	that the su	bmitted inf	formation is true, accurat	te and complete. I am
aware that there are significant civil penalties for know	ingly submi	itting false,	inaccurate or incomplet	te information and that I
am committing a crime of the fourth degree if I make a	written fals	se stateme	nt which I do not believe	to be true. I am also
aware that if I knowingly direct or authorize the violatio	on of any sta	atute, I am	personally liable for the	penalties.
Signature:		Date:		

ATTACHMENT A

Correspondence

Contents:

- 1. NJDEP letter to the Army dated July 10, 2012, re: *March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008.*
- 2. NJDEP letter to the Army dated June 16, 2015, re: *Final Environmental Condition of Property Supplemental Phase II Site Investigation Work Plan Addendum for Parcels 34, 50, 51, 52, 66, 80 and 83 dated February 2015, Fort Monmouth.*

Excerpts for Parcel 51 only for brevity

State of New Jersey 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

Commissioner

BOB MARTIN

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.

CHRIS CHRISTIE Governor

KIM GUADAGNO Lt. Governor

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, <mark>5</mark>00 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.



Parcel 51/750 Motor Pool issues outlined in red

State of New Jersey

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

June 16, 2015

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

Re: Final Environmental Condition of Property Supplemental Phase II Site Investigation Work Plan Addendum for Parcels 34, 50, 51, 52, 66, 80 and 83 dated February 2015 Fort Monmouth Oceanport, Monmouth County PI G000000032

Dear Mr. Occhipinti:

The New Jersey Department of Environmental Protection (Department) has completed review of the referenced report, received March 2, 2015, prepared by Parsons Government Services Inc. (Parsons), on behalf of the U.S. Army Engineering and Support Center, Huntsville (USAESCH). As indicated in the report, activities are to be performed with the goal of Decision Document acceptance in compliance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Contingency Plan (NCP), 40 CFR Part 300, and "to the extent possible to meet the requirements of New Jersey Administrative Code (NJAC) 7:26E Technical Requirements for Site Remediation", as well as support closure of environmental sites to facilitate transfer of real property.

The workplan describes Site Investigation activities to be performed at the ECP Parcels referenced above. Comments and questions are as follows:

Tables 3.1 and 3.2 also will require revision based upon the following comments.

Parcel 34/Building 2567/FTMM-58

Section 2.4.1, Page B4-line 2 – Although this office agrees with the statement "post excavation soil samples were collected...and analyzed for TPHCs, VOCs, and lead", review of historic

CHRIS CHRISTIE Governor

KIM GUADAGNO Lt. Governor information appears to indicate elevated levels of benzene remain in the soil in the area of the dispenser island south of Building 2567. See additional detail under Section 3.2, below.

Section 2.5, Page B-7, line 21 – This statement regarding the removal of piping was amended via email to Wanda Green (copy to Rob Youhas and Joe Pearson) on June 18, 2013 1519 hrs. The report documenting the investigation of the piping, however, as you likely are aware, has not been received by this office.

Section 3.2 Sampling Plan – Although it is agreed the proposal is appropriate for the TBA in ground water, the referenced submittal considers only the issue of TBA in ground water (the proposal for two annual sampling events of monitor wells 2567MW01 and 2567MW03 was approved on July 3, 2014). However, as briefly discussed in a conference call on June 12, 2015, a review of historic information appears to indicate levels of benzene above both the residential and non-residential criteria/standard remain in numerous locations in the vicinity of the dispenser area south of Building 2567. The information was obtained from the October 28, 2005 RIR/RAW, including Figure 2-1 dated 6/9/94, which indicates levels of benzene remain up to 85 ppm. The June 2010 RAPR appears to omit reference to analytical results from the post excavation soil sampling performed in 1993 during removal of USTs 42 through 45, stating only the samples were analyzed for TPHC, VOCs, and lead, however, a copy of the September 2, 2010 PBR Request contained within the submittal's Appendix B referenced benzene remaining to 45 ppm. Pages i, 3-5 and 6-1 of the June 2010 RAPR also indicate the "remaining original" UST dispenser island areas" would undergo assessment upon BRAC closure. It is understood available information is currently being evaluated to determine the status of the soils in this area. At this time, however, this office considers the soil in the area an unaddressed area of concern in need of additional delineation.

Parcel 50

Section 2.2.1 - FTMM-54 - Page C-2 lines 39 & 42 reference the year of the eleven tank removals as 2003, while page C-3, line 17 indicates removal of the eleven tanks was 1993, which appears correct.

Section 2.2.2 – FTMM-55 - Page C-5, line 11 – Waste oil UST No. 91533-193 is indicated as being NFAed in a January 10, 2003 letter. Although the tanks referenced on line 15 were found on the January 10, 2003 NJDEP NFA letter, that letter does not appear to reference UST No. 91533-193; no record of a letter of no further action for that tank could be located.

Section 3.2 Sampling Plan – As noted on page C-6, line 37, levels of TPHC remained in soil at the former location of UST No. 81533-64 at 16,200 and 11,900 ppm, at samples A and B, both at a depth of 5.5-6'. The proposal indicates horizontal delineation sampling is to be performed at locations A (16,200 ppm) and F (9,670 ppm), which is acceptable. Vertical delineation is also required. It is unclear, however, why sampling is not proposed at sample location B, as it does not appear to be vertically delineated.

The Department's EPH Protocol, <u>http://www.nj.gov/dep/srp/guidance/srra/eph_protocol.pdf</u>, is to be followed, with contingency samples collected/analyzed as required. As per EPH Methodology Version 3.0, the non-fractionation option is appropriate only if the EPH level is anticipated to be below 1,700 ppm. As this cannot be presumed, the "unfractionated EPH" does not appear to be the appropriate option.

Parcel 51

Section 2.5, Page D-5, line 40 and Page D-6, line 4 - The submittal indicates the UST questions contained in this office's July 10, 2012 letter are to be addressed under the UHOT program. This office looks forward to submittal of same.

Section 3.0 – With receipt of the additional clarification provided on page D-4, as well as the figure received on June 15, 2015, the questions noted in the Department's July 2012 letter relative to USTs 1123B and 1123C have been answered. It is agreed no additional action is necessary for UST 1123B. However, it is not agreed there are no COCs at Parcel 51. As indicated on line 11, 2-methylnaphthalene was found in the ground water at P51-G12 above the Ground Water Quality Standards (GWQS), as reported in the July 2008 SI. TPHC (collected due to elevated field screening readings) was also found in soil at that location at 6-6.5' at 7,487 ppm. Additional sampling is necessary.

Motor Pool Area – Although information regarding the 750 Motor Pool is not contained within this submittal, concerns regarding the area include, but are not limited to, adequate investigation of;

- Building 750 UST 191 (15,000 gallon diesel) & UST192 (8000 gallon unleaded gasoline)
- two outdoor service pits for draining vehicle oil, the pipes from which discharged to a former oil water separator (OWS), north of garage bays
- current wash rack previously connected to former OWS, then to new OWS
- Building 753 three hydraulic lifts and floor drain
- Building 754 floor drain

Is FTMM 68/Building 700 not considered within Parcel 51?

Parcel 52/FTMM-53/Building 699 Gas Station

Section 1.0, Page E-1, line 8 – As many of the parcel narratives include, a listing of NJDEP correspondence by year is provided, which refers the reader back to Section 5 References to ascertain which document is being referenced. It does not include, however, this office's January 8, 2014 response to the September 2013 RI/FS Workplan, nor the May 6, 2014 response to the Army's April 22, 2014 response to same, in which delineation sampling was discussed and

the revised proposal accepted. Results of the investigation have not yet been received by this office.

Section 2.4, Previous Investigation and Historical Data – No mention is made of the 2000 gallon #2 fuel UST, 0081533-112, given an NFA designation in January of 2003, nor more particularly, of waste oil UST 0081533-197, a 1000 gallon waste oil UST removed in January of 1992 from east of UST-112, at which analytical results indicate TPHC to 11,600 ppm remains in soil. As acceptably indicated in the Army's April 22, 2014 response letter, Response C4, additional sampling was to be performed.

Section 2.4, Page E-5, lines 21-27 – It appears "IASL" (indoor air screening levels) may have been inadvertently used in the narrative, on lines 22, 26 and 27. These lines reference sub-slab results, the measure of which is against the SGSLs (Soil Gas Screening Levels), accurately referenced on lines 18, 20, 23, 25 and 25.

Section 2.5 Synthesis of Results, Correspondence and Data Gaps – As indicated above, the submittal does not appear to include the activities proposed in the September 2013 RI/FS Workplan, nor the followup communications.

Section 3.2 Sampling Plan – As indicated, above and through previous correspondence, additional delineation sampling is necessary.

Parcel 66

Section 1.0 & Section 2.5, Page F-3, line 15 – No mention appears to be made among the listed correspondence between NJDEP and FTMM of the August 1, 2012 Proposed Soil Sampling and Delineation Plan for Electrical Substations at Building 2700 (Charles Wood Area) and Building 978 (Main Post), nor the September 10, 2012 NJDEP approval letter for delineation of the PCBs.

Section 2.2, Page F-1, line 20 – typo - It is believed FTMM-56 should read FTMM-66.

Section 2.2, Page F-2, lines 2-4 & Section 2.5 – The submittal references the ECP Report's Appendix A, stating, "no release or disposal of hazardous substances or petroleum products has occurred at Parcel 66…", and that Parcel 66 was assigned an ECP Category of 1. This office does not agree with same, as PCBs are noted present up to 0.84 ppm.

Section 3.2 Sampling Plan – The sampling as proposed on pages F-3 and F-4 is acceptable.

Parcel 80

Section 1.0, line 14 – For clarification, per the 2008 ECP Main Post map (Figure 19), FTMM-56 is also known as Parcel 84 (Building 80), a small ¼+ acre area designated within the larger Parcel 83.

Section 2.4 Previous Investigations and Historical Data – As previously indicated, the Weston report was not accepted by the Department as representative of background conditions at Fort Monmouth.

The section also references the July 10, 2012 letter, in which the NJDEP requested additional information regarding the basis for determination of the sample locations, i.e., were as-builts or other plans for the demolished buildings used to assist in locating former floor drains, septic systems, discharge points, etc, and therefore the boring locations. No rationale for sample location selection has been received; therefore a determination remains unavailable regarding the adequacy of the soil sampling performed.

Section 3.2 Sampling Plan – The proposal to further evaluate beryllium in ground water reported in the 2008 SI as indicated is acceptable.

Parcel 83

In October of 2008, the NJDEP requested depiction of all areas of concern (AOCs) on a site figure. Although a structures figure was submitted, no figure designating AOCs has been received.

Section 2.4, Page H-4 - As previously indicated, the Weston "background" report was not accepted by the Department. As regarding the elevated levels of arsenic (SB10A, SB9A), as acknowledged in Section 3.1, this office at this time does not agree these levels of arsenic are representative of naturally occurring conditions. Arsenic is currently considered a contaminant of concern, based on analytical findings at P83-SB9&10. As the NJDEP July 10, 2012 correspondence stated, although Fort Monmouth 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 investigated and included in a remedy.

Section 2.5, line 35 – The submittal indicates further information on the various USTs referenced in the July 10, 2012 letter are to be referred to the "UHOT Program". Although not familiar with same, this office looks forward to receipt of additional information regarding the USTs.

Section 3.2 Sampling Plan – Sampling at the former Building 72 area to better define PAH exceedances, as proposed, is acceptable.

Section 3.2, lines 15, 16–PCBs - Please ensure these delineation samples, include PCBs analyses, for delineation of the 0.8 ppm PCBs noted at P83-B5, 1-1.5'.

Section 3.2 – Building 279 – Although the proposed sampling locations are acceptable, they are inadequate to complete delineation. Arsenic remains undelineated at P83SB10. It is anticipated elevated levels of lead may be present west of P83SB9; what efforts for delineation

are planned? If location FTMM-83-SS-13 is considered a resample of P83SB9, it should be located within 10' feet of the original sample location.

Please contact this office if you have any questions.

Sincerely,

S. Kinge Linda S. Range

C: Joe Pearson, Calibre James Moore, USACE Rick Harrison, FMERA Joe Fallon, FMERA Frank Barricelli, RAB

ATTACHMENT B

Drawings of Building 750 Motor Pool Area

Contents:

- 1. Building 750 Motor Pool Area Layout
- 2. Building 750 Area Soil Sample Results for USTs 750A, 750B, Piping & Dispensers
- 3. Building 750 Area Soil Sample Results for USTs 750D, 750E, and 750G
- 4. Building 750 Area Soil Sample Results for USTs 750F, 750H, 750I and 750J





LEGEND:

- Soil Sample Analyzed for TPH (Removed)
- Soil Sample Analyzed for TPH (Remains In Place)
- Soil Sample Not Analyzed for TPH (Remains In Place)
- Soil Sample Analyzed for
- O Exceeds NJDEP Soil Cleanup Critieria for TPH (5,100 mg/kg)
- Shallow Monitoring Well
- Installation Boundary
- Approximate Limits Of Excavation

EXPLANATION:

750-P6 ——Boring ID (2.0-2.5) ——Depth (ft.) (bgs) ND——TPH Concentration (mg/kg)

TPH - Total Petroleum Hydrocarbons VOC - Volatile Organic Compounds BTEX - Benzene, Toluene, Ethyl Benzene, and Xylenes



1 inch = 15 feet 15

7.5

30

Feet

Source: FTMM Supplied CAD, 2013.

0

PARSONS 401 Diamond Drive NW, Huntsville AL	Fort Monmouth New Jersey				
BUILDING 750 AREA S	OIL SAMPLE RESULTS				
FOR USTS 750A, 750B,	PIPING & DISPENSERS				
CREATED BY:	REVIEWED BY:				
RR	KF				
DATE:	FIGURE NUMBER:				
SEP. 2016	FIGURE 2				
PROJECT NUMBER:	FILE:				
748810-06031	FIGURE 2.mxd				





ATTACHMENT C

ECP and SI Report Excerpts and Supporting Documents

Contents:

- 1. Excerpts from 2007 ECP Report
- 2. Excerpts from 2008 SI Report
- 3. 1995 Drawing: Vehicle & Equipment Repair Shops, Building 753 & 754
- 4. 1990 Drawing: 513th Stage II Vapor Recovery and Leak Detection
- 5. Undated Drawing: Recycle Wash System, Building 750
- 6. 1995 Drawing: Plumbing Plans Building #753 & #754

Contains excerpts about Building 750 Motor Pool Area



U.S. Army BRAC 2005 Environmental Condition of Property Report Fort Monmouth Monmouth County, New Jersey

Final 29-January-2007

Used tires are stored outside to the south of the building in a dumpster for recycling. A 745-gallon used oil AST is located to the south exterior of the building, along with a public collection box for used oil. Along the southeast corner of the parking lot are Poly Paks for the collection of used batteries. A storm drain is located in the western area of the parking lot. A grassy stormwater swale is located to the east of the building. Car detailing washwater from the east bay was observed draining across the parking lot into the grassy stormwater swale. The swale discharges to the ditch between Husky Brook Lake and Oceanport Creek (2006 VSI observations). This site is considered a REC based on historical operations. No RECs associated with current operations were identified.

Building 750 – Main Post Motor Pool. This facility is used by the Directorate of Logistics as a storage area for the installation fleet vehicles. The facility was formerly the 513th Military Motor Pool from 1987 until the mid-1990s. The Motor Pool collectively includes Buildings 750, 753, 754, and 756. Building 751 was previously associated with fuel dispensing operations in this area, but has since been demolished. Two USTs and four product dispensing pumps were also located at the site. The 15,000-gallon diesel fuel UST and the 8,000-gallon unleaded gasoline UST were removed in February 2005. In addition, a fuel tanker truck with a 1,200-gallon capacity is parked at this facility when not engaged in making fuel deliveries. The vehicle is used to store diesel fuel that is used at various on-site emergency generators. A permanent secondary containment system for the fuel tanker truck has been constructed (8).

In addition to being a storage area, complete automotive repairs are made to the vehicles at this site. Refrigerant R134 is used and chlorinated solvents were formerly utilized for automotive parts cleaning prior to converting to aqueous parts cleaning units. Two out of service outdoor service pits are present to the east of Building 750 from which oil was drained directly into pipes leading to the former OWS that was present in the grassed area north of the service bays. The current wash rack facility was formerly connected to the OWS. The wash rack facility was upgraded several years ago and a new OWS system was added to the wash rack equipment (2006 VSI observations and discussions with site personnel).

A small firearm repair shop is also located within Building 750 in which small amounts of solvents are utilized in firearms service and repair (2006 VSI observations and discussions with site personnel). This site is considered a REC based on the potential for environmental releases from historical operations. No RECs associated with current operations were identified.

Building 753 – Automotive/Vehicle Repair Shop. This facility was formerly a storage building and was converted for routine maintenance of vehicles. Three hydraulic lifts are utilized and a Cuda aqueous parts washer is present. Minor stains, typically present in auto repair facilities, were noticeable on the concrete floor and a floor drain is located in the corner of the building near the emergency eye wash center. Plans from 1987 show that the floor and shower drains are connected to the sanitary sewer system (146). Satellite accumulation areas are also present. No RECs were identified based on these operations.

Building 754 – Forklift/Lawnmower Repair Shop. Small engine repairs are currently conducted in this facility. One caged area inside the building is a former machine shop. Floor and shower drains were observed in this facility while conducting the VSI. Plans from 1987 show that the floor and shower drains are connected to the sanitary sewer system (146). No RECs were identified based on these operations.

Building 756. Building 756 is an open side building previously used by the military for generator storage. It is currently used for storage of material associated with the motor pool, including lead acid batteries, empty fuel cans, and gas cylinders. No RECs were identified based on these operations.

Building 1122 – Auto Craft Shop. The Auto Craft Shop houses a modern "do-ityourself" vehicle repair shop. All vehicle repairs are done by FTMM personnel and are performed inside the building. Degreasing solvents are used and generate hazardous waste from these operations (61).

Pneumatic lifts are present. Floor drains in the bays and satellite accumulation room were noted during the 2006 VSI. A 1993 renovation plan, which details the replacement of the floor drains, shows that the drains are connected to the sanitary sewer system (147). The 2006 SPPP states "Floor drains, located near the pneumatic lifts, have been closed off." A former oil water separator was associated with this building. Used oil is collected in a 55-gallon drum stored inside the shop. When filled, the contents are pumped into a 995-gallon double-walled AST located between the repair shop and the car wash (Building 1124). The enclosed car wash facility is located to the east of the repair shop. All washwater is recycled and reused and an active OWS is in place (50).

Groundwater contamination at this location continues to be addressed in the IRP as part of FTMM-59. See **Section 5.2.1** for more information. This site is considered a REC.

Building 450 – Marina. The Directorate of Morale, Welfare, and Recreation (MWR) operates and maintains a marina at this site. The marina contains several storage bays for recreational boats and the main building is bordered by Riverside Avenue to the north and Oceanport Creek to the South. A 1,000-gallon double-walled AST with an attached fuel dispensing pump is maintained and operated within the facility grounds. The AST is located on the west side of the entrance to the Marina from Riverside Avenue. The tank is situated on a curbed concrete pad which serves as secondary containment (50,8). This site is not considered a REC.

Former Building 44. Building 44 was a motor vehicle maintenance and repair facility per the 1980 Installation Assessment (48). The building was located directly east of the southeast corner of Building 116. No other information was obtained for this former building during record searches. This site is considered a REC.

Former Building 64. Former Building 64 was identified as a motor vehicle and heavy equipment repair facility in 1954 (34). In 1958, engineer vehicle maintenance and 1st and 2nd echelon operating engines were identified at this location (36). Former Building 64 was located directly north of Building 167. This site is considered a REC.

Parcel 51/750 Motor Pool Area excerpts



U.S. Army BRAC 2005 Site Investigation Report Fort Monmouth

Final 21-July-2008

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

3.12.1 Site Description

Parcel 51 is located in the central portion of the MP and encompasses the 500 Area, 600 Area, 750 Area, and 1100 Area former buildings. Plan No. 506, "Gas and Fuel Storage Tanks Distribution System" dated January 22, 1956 (**Appendix G**), was reviewed for the MP as part of the Phase I ECP. The plan depicts numerous fuel oil USTs that existed within Parcel 51 in 1956 in association with the former buildings. Additional information pertaining to this parcel can be found in Section 4.4.3.2, Section 4.4.4.3, Section 5.1.1.2.1, Section 5.2.1.1, Section 5.4, Section 5.4.2, and Appendix G of the Phase I ECP (1).

3.12.2 Previous Investigations

Numerous USTs associated with former and current buildings within the 500, 600, and 1100 Area have been removed under the FTMM UST program and are summarized within the FTMM Phase I ECP Report (1). A review of documented UST removal locations versus the location of former buildings within Parcel 51 was conducted. Based on this review, it was determined that no UST removals have been documented at the locations of numerous former buildings within Parcel 51 throughout the 750 Area (current motor pool), within the northern portion of the 1100 Area, and around the east and south perimeter of the 600 Area.

A soil investigation and remedial action was recently conducted in portions of the 400, 700, and 800 Bldg areas. The only portion of Parcel 51 that was included within this investigation was the southwestern corner of the parcel associated with Bldgs 787, 788, and 789 (34).

3.12.3 Site Investigation Sampling

In order to determine the absence/presence of formerly utilized USTs and the potential release from the USTs, geophysical surveys, soil sampling, and groundwater sampling were conducted throughout the 750 Area (current motor pool), within the northern portion of the 1100 Area, and around the east and south perimeter of the 600 Area.

Geophysical Investigation

An EM survey was conducted throughout the three identified former buildings areas to determine if USTs are present. Follow-up GPR surveys were conducted at anomalies identified from the EM surveys. **Section 2.1** summarizes the methodologies utilized during the geophysical surveys.

Geoprobe® Investigation

Geoprobe® soil samples were collected in October and November 2007, and groundwater samples were collected in November 2007 in Parcel 51 in order to investigate potential releases from historic USTs associated with the former 600, 750, and 1100 Area buildings. A total of 122 surface soil and 136 subsurface soil (including 12 duplicate samples) were collected from 122 distinct Geoprobe® borings (Figure **3.12-1**). Soil boring locations were conducted on 100-ft centers. Surface soil samples for non-VO analysis were collected from the 0- to 6-inch interval bqs. For borings located in paved areas, non-VO surface soil samples were collected from the 0- to 6inch interval directly below the pavement sub-base. Surface soil samples collected for VO analysis were collected from the 18- to 24-inch bgs interval. Subsurface soil samples were collected from the 6-inch interval directly above the water table from each boring. Due to high water table conditions encountered at three boring locations (grid locations G11, I6, and K7), subsurface soil samples were collected from the 18- to 24inch bgs interval. No additional VO sample was collected as the sample interval coincided with the 18- to 24-inch surface soil VO sampling interval. Field screening of the soil boring cores was conducted using a PID and FID meter. Olfactory evidence of impacted soil was noted 6 ft bgs at boring location P51-G12. Two additional soil samples were collected based on elevated results from field screening tests at boring location 51-G12.

A total of 26 groundwater samples (including four duplicate samples) were collected from 22 distinct temporary wells (**Figure 3.12-1**). Temporary wells were installed along the downgradient boundaries of the soil boring grids and constructed of PVC and 5 ft of factory-slotted screen.

Table 3.12-1 presents a summary of field activities, and sample locations are provided on **Figure 3.12-1**. A summary of the analytical and sampling program, including sample IDs, collection dates, and analytical parameters, is provided in **Table 3.12-2**.

Sample	Sample	Sample Location Rationale	Analytical
Location	Media		Suite
Former Buildings Areas (11 Acres)	A geophysical determine the geophysical in surveys of and the east and s addressed und the footprint of the footprint of part of the 700	survey was conducted in three areas throughout the parcel the presence/absence of USTs associated with former buildings vestigations consisted of an EM survey followed by targeted bonalies identified by the EM survey. One survey was conducted outh perimeter of the 600 Area to investigate potential USTs der previous removals and investigations; one survey was conducted former buildings in the 1100 Area; and one survey was conducted former buildings in the 750 Area (current motor pool) not ad 0 Residential Communities Initiative project.	to . The GPR cted around not nducted in ducted in dressed as

Table 3.12-1Parcel 51 Sampling Location, Rationale and Analytical

Sample Location	Sample Media	Sample Location Rationale	Analytical Suite
51SS-A10 through 51SS-I12 (51 samples)	Surface soil	Soil samples were collected from the 0- to 6-inch bgs interval from Geoprobe® soil borings in a grid configuration (conducted on 100-ft center) to investigate the potential release from former heating oil USTs associated with the former buildings around the eastern and southern perimeter of the 600 Area. If the sample location was paved, the sample was collected from the 0- to 6-inch interval below the pavement sub-base.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
51SB-A10 through 51SB-I12 (57 samples – includes 4 duplicate samples)	Subsurface soil	Soil samples were collected from the 6-inch interval directly above the water table (ranging from 2.5 to 8 ft bgs) from each Geoprobe® soil boring in the grid (conducted on 100-ft centers) to investigate the potential release from former heating oil USTs associated with the former buildings around the eastern and southern perimeter of the 600 Area. Field screening of the entire Geoprobe® soil core was conducted using PID/FID meters.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
51SS-J1 through 51SS-K9 (18 samples)	Surface soil	Soil samples were collected from the 0- to 6-inch bgs interval from Geoprobe® soil borings in a grid configuration (conducted on 100-ft center) to investigate the potential release from former heating oil USTs associated with the former buildings in the 1100 Area (former Bldgs 1111 through 1118). If the sample location was paved, the sample was collected from the 0- to 6- inch interval below the pavement sub-base.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
51SB-J1 through 51SB-K9 (20 samples – includes 2 duplicate samples)	Subsurface soil	Soil samples were collected from the 6-inch interval directly above the water table (ranging from 2.5 to 9 ft bgs) from each Geoprobe® soil boring in the grid (conducted on 100-ft centers) to investigate the potential release from former heating oil USTs associated with the former buildings in the 1100 Area (former Bldgs 1111 through 1118). Field screening of the entire Geoprobe® soil core was conducted using PID/FID meters.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
51SS-L1 through 51SS-R9 (53 samples)	Surface soil	Soil samples were collected from the 0- to 6-inch bgs interval from Geoprobe® soil borings in a grid configuration (conducted on 100-ft center) to investigate the potential release from former heating oil USTs associated with the former buildings in the 750 Area. If the sample location was paved, the sample was collected from the 0- to 6-inch interval below the pavement sub- base.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
51SB-L1 through 51SB-R9 (59 samples – includes 6 duplicate samples)	Subsurface soil	Soil samples were collected from the 6-inch interval directly above the water table (ranging from 1 to 14.5 ft bgs) from each Geoprobe® soil boring in the grid (conducted on 100-ft centers) to investigate the potential release from former heating oil USTs associated with the former buildings southwest of Bldg 2700. Field screening of the entire Geoprobe® soil core was conducted using PID/FID meters.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)

Sample	Sample	Sample Location Rationale	Analytical
Location	Media		Suite
51GW-A10, A12, C12, E12, G12, I1, I3, I5, I10, I12, K1, K3, K5, K7, K9, L9, N9, P9, R3, R5, R7, R9 (26 samples – includes 4 duplicate samples)	Groundwater	Groundwater samples were collected from the specified Geoprobe® soil borings in the grid to investigate the potential release from former heating oil USTs associated with the former buildings.	VO+10, B/N+15

3.12.4 Site Investigation Results

Geophysical Survey Results

The EM survey identified a total of 74 target EM anomalies in the 750 Area. The survey areas are presented on **Figure 3.12-2**. This area was scanned with the EM-61 because of a large amount of surface metal, and the parking lots which comprise most of the area could only be cordoned off in small portions. The EM-61 towing rig was 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. The results of the GPR/TW-6 follow-up scanning are listed in **Table 3.12-3**, and full results of the geophysical surveys are included in **Appendix A**. Targets located on the asphalt-covered portions within the 750 Area could not be scanned with the TW-6 due to suspected high metal content fill material; therefore, only GPR was utilized in these areas. In summary, GPR scanning of the 74 targets in the 750 Area revealed:

- Thirty-four targets that were associated with surface metal/debris (previously unaccounted for).
- Seven targets with moderate-amplitude near-surface point target reflections indicative of small buried debris; not indicative of USTs.
- Six targets with the moderate-amplitude parabolic scattered reflections indicative of scattered small debris.
- Three targets that are suspected to be associated with nearby utility features.
- Three targets with the characteristics of a utility.

- Eleven 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 scrap metallic debris, not USTs.
- One target scanned with GPR only, no GPR anomaly associated with EM anomaly.
- Nine targets with the high-amplitude parabolic reflections indicating a possible UST. The suspected USTs match up with former Bldgs 758, 759, 763, 764, 767, 768, 769, 771, and 790. Said buildings served as schools/general instrument buildings, non-housing structures, until the end of their life cycles. Supporting real property records are included in **Appendix I**.

The geophysical surveys identified a total of 49 target EM anomalies in the 600 and 1100 Areas. The survey areas are presented on **Figure 3.12-2**. 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. The results of the GPR/TW-6 follow-up scanning are listed in **Table 3.12-4**, and full results of the geophysical surveys are included in **Appendix A**. In summary, GPR scanning of the 49 targets revealed:

- Twenty-two targets that were associated with surface metal/debris (previously unaccounted for).
- Thirteen targets that could not be relocated with the TW-6 because the targets were terrain conductivity anomalies not associated with metallic objects, and therefore are not USTs.
- Six targets with the characteristics of a utility.
- Five targets with moderate-amplitude near-surface reflections indicative of small buried debris; not indicative of a UST.
- Two targets in the 1100 Area with the high-amplitude parabolic reflections indicating a possible UST. The suspected USTs match up with former Bldgs 1111 and 1112. Said buildings served as schools/general instrument buildings, non-housing structures, until the end of their life cycles. Supporting real property records are included in **Appendix I**.
- One target resulted from a parked car that was later scanned with TW-6 and with no resulting anomalies.

This parcel of FTMM has been previously developed and the land surface reworked multiple times throughout its history. The findings of the geophysical survey (the density and small size of anomalies) are consistent with the site history. A total of 11 suspected USTs were identified within Parcel 51 (nine in the 750 Area and two in the 1100 Area); the location of the suspected USTs is presented on **Figure 3.12-2**.

Geoprobe® Investigation Results

Surface and subsurface soil samples were analyzed for TPHC. Corresponding surface and subsurface soil samples were collected for contingent VO+10 analysis. Groundwater samples were analyzed for VO+10 and B/N+15.

<u>Soil</u>

In addition to the subsurface soil samples collected from the interval directly above the water table, two supplementary subsurface soil samples, P51-G12-D and P51-G12-D-DUP, were collected for TPHC and contingent VO analysis based on elevated field screening measurements. As shown in **Table 3.12-5**, TPHC was detected in 41 of the 122 surface soil samples and in 18 of the 137 subsurface soil samples. A total of six subsurface soil samples, P51-G12-D;DUP, P51-H12-C, P51-N3-C, and P51-O7-C;DUP, contained TPHC at concentrations greater than 1,000 mg/kg, and VO analysis was conducted (**Table 3.12-6**). No VOs or TPHC were detected in soil above the NJDEP NRDCSCC.

Groundwater

As presented in **Table 3.12-7**, a total of 11 VOs were detected at concentrations below NJDEP GWQC in groundwater samples collected from temporary wells at Parcel 51.

A total of eight B/Ns were detected in Parcel 51 groundwater samples. Of the eight B/Ns detected, two (2-methylnaphthalene and bis[2-ethylhexyl]phthalate) were detected at concentrations that exceeded NJDEP GWQC. 2-Methylnaphthalene was detected at a concentration exceeding the NJDEP GWQC of 30 μ g/L in one groundwater sample (P51-G12) at a concentration of 40.51 μ g/L and is considered a COC in groundwater. Bis(2-ethylhexyl)phthalate was detected at a concentration exceeding the NJDEP GWQC of 3 μ g/L in three groundwater samples at concentrations ranging from 3.49 μ g/L in P51-P9 to 4.47 μ g/L in P51-K7. Bis(2-ethylhexyl)phthalate is present in a wide variety of plastic products, is commonly detected in field and laboratory QC samples, and was detected in the field blank associated with the Parcel 51 groundwater samples. Therefore, it is not considered a COC in groundwater at Parcel 51.

3.12.5 Summary and Conclusions

Eleven suspected USTs were identified during the geophysical survey. No constituents were identified above applicable NJDEP criteria in surface or subsurface soil. Soil and analytical results suggest that a release has not occurred. In light of the absence of evidence of a release to the environment, NFA for soil and the suspected USTs in Parcel 51 is recommended.

One COC, 2-methylnaphthalene, was detected in groundwater above the NJDEP GWQC. Further evaluation of 2-methylnaphthalene in groundwater is recommended.

						NJDEP	NJDEP
			Depth			NRDCSCC ²	IGWSCC ³
Sample ID	Lab ID	Sample Date	(ft. bgs)	Result	MDL	(mg/kg)	(mg/kg)
P51-B11-A	7044131	11/05/07	1.0-1.5	648	74	10000	10000
P51-C10-A	7044124	11/05/07	0.0-0.5	741	73	10000	10000
P51-C10-C	7044126	11/05/07	6.0-6.5	103	82	10000	10000
P51-C11-A	7044121	11/05/07	0.0-0.5	433	74	10000	10000
P51-D10-A	7044118	11/05/07	0.5-1.0	243	73	10000	10000
P51-D11-A	7043831	11/02/07	0.5-1.0	857	71	10000	10000
P51-D11-C	7043833	11/02/07	5.5-6.0	115	80	10000	10000
P51-D12-A	7043828	11/02/07	0.0-0.5	149	71	10000	10000
P51-E10-C	7043827	11/02/07	3.0-3.5	568	75	10000	10000
P51-E11-A	7043821	11/02/07	0.5-1.0	213	73	10000	10000
P51-F7-A	7043818	11/02/07	1.0-1.5	496	71	10000	10000
P51-G12-C	7044405	11/06/07	4.5-5.0	273	75	10000	10000
P51-G12-D	7044406	11/06/07	6.0-6.5	7487	83	10000	10000
P51-G12-D DUP	7044402	11/06/07	6.0-6.5	7524	82	10000	10000
P51-H10-A	7043029	10/31/07	0.0-0.5	150	73	10000	10000
P51-H11-A	7043026	10/31/07	1.0-1.5	200	75	10000	10000
P51-H11-C	7043028	10/31/07	4.5-5.0	98	71	10000	10000
P51-H12-A	7043023	10/31/07	0.0-0.5	99	77	10000	10000
P51-H12-C	7043025	10/31/07	4.0-8.0	3973	74	10000	10000
P51-H7-A	7043039	10/31/07	0.0-0.5	82	73	10000	10000
P51-H9-C	7043035	10/31/07	5.0-5.5	201	78	10000	10000
P51-I2-A	7043020	10/31/07	0.0-0.5	115	74	10000	10000
P51-I2-C	7043022	10/31/07	5.5-6.0	123	75	10000	10000
P51-I4-A	7043017	10/31/07	0.0-0.5	86	71	10000	10000
P51-I4-C	7043019	10/31/07	2.0-2.5	105	73	10000	10000
P51-I5-C	7044111	11/05/07	3.5-4.0	94	71	10000	10000
P51-I6-A	7043015	10/31/07	0.0-0.5	110	73	10000	10000
P51-I6-B	7043016	10/31/07	1.5-2.0	106	71	10000	10000
P51-I7-A	7043012	10/31/07	0.0-0.5	100	73	10000	10000
P51-I7-C	7043014	10/31/07	2.0-2.5	149	71	10000	10000
P51-I8-A	7043009	10/31/07	0.0-0.5	298	76	10000	10000
P51-I8-C	7043011	10/31/07	3.5-4.0	126	71	10000	10000
P51-I9-C	7043008	10/31/07	3.5-4.0	148	75	10000	10000
P51-J1-A	7045403	11/09/07	0.0-0.5	83	73	10000	10000
P51-J4-A	7045412	11/09/07	0.0-0.5	106	74	10000	10000
P51-J5-A	7045415	11/09/07	0.0-0.5	280	73	10000	10000
P51-K1-A	7044603	11/08/07	0.0-0.5	144	71	10000	10000
P51-K2-A	7044606	11/08/07	0.0-0.5	338	70	10000	10000
P51-K3-A	7044609	11/08/07	0.0-0.5	487	72	10000	10000
P51-K4-A	7044612	11/08/07	0.0-0.5	497	73	10000	10000
P51-K5-A	7044615	11/08/07	0.0-0.5	400	71	10000	10000
P51-K6-A	7044618	11/08/07	0.0-0.5	338	72	10000	10000
P51-K7-A	7044622	11/08/07	0.0-0.5	701	71	10000	10000

Table 3.12-5Fort Monmouth Phase II Site Investigation, Parcel 51Summary of TPHC Detected in Soil (mg/kg)

						NJDEP	NJDEP
			Depth			NRDCSCC ²	IGWSCC ³
Sample ID	Lab ID	Sample Date	(ft. bgs)	Result	MDL	(mg/kg)	(mg/kg)
P51-K7-B	7044623	11/08/07	1.5-2.0	90	72	10000	10000
P51-K8-A	7044624	11/08/07	0.0-0.5	465	71	10000	10000
P51-K9-A	7044627	11/08/07	0.0-0.5	540	71	10000	10000
P51-L4-A	7045912	11/13/07	1.0-1.5	166	72	10000	10000
P51-L5-A	7045915	11/13/07	1.0-1.5	82	72	10000	10000
P51-L6-A	7045918	11/13/07	1.0-1.5	97	75	10000	10000
P51-L7-A	7045921	11/13/07	1.0-1.5	98	74	10000	10000
P51-L8-A	7045925	11/13/07	1.0-1.5	147	71	10000	10000
P51-M3-A	7046309	11/14/07	1.0-1.5	119	74	10000	10000
P51-M6-A	7046318	11/14/07	1.0-1.5	98	74	10000	10000
P51-M7-A	7046703	11/15/07	1.0-1.5	118	70	10000	10000
P51-M8-A	7046706	11/15/07	1.0-1.5	320	70	10000	10000
P51-N3-C	7046720	11/15/07	5.5-6.0	1498	74	10000	10000
P51-07-C DUP	7047411	11/19/07	4.0-4.5	1188	71	10000	10000
P51-07-C	7047402	11/19/07	4.0-4.5	1367	71	10000	10000
P51-R4-A	7047203	11/17/07	0.0-0.5	156	70	10000	10000

Table 3.12-5 Fort Monmouth Phase II Site Investigation, Parcel 51 Summary of TPHC Detected in Soil (mg/kg)

¹ NJDEP Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) per NJAC 7:26D, 1999.

² NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) per NJAC 7:26D, 1999.

³ NJDEP Impact to Groundwater Soil Cleanup Criteria (IGWSCC) per NJAC 7:26D, 1999.

DUP = Duplicate sample.

ft. bgs = Feet below ground surface.

MDL = Method detection limit

mg/kg = milligram per kilogram.

Table 3.12-6 Fort Monmouth Phase II Site Investigation, Parcel 51 Summary of Analytical Parameters Detected in Soil (mg/kg)

			Analytical Results				
		Sample ID:	P51-G12-D	P51-G12-D DUP	P51-N3-C	P51-07-C	P51-07-C DUP
		Lab ID:	7044406	7044402	7046720	7047411	7047402
		Date Sampled:	11/6/2007	11/6/2007	11/15/2007	11/19/2007	11/19/2007
		Depth (ft. bgs):	6.0-6.5'	6.0-6.5'	5.5-6.0'	4.0-4.5'	4.0-4.5'
Chemical	NRDCSCC ²	IGWSCC ³	Result	Result	Result	Result	Result
Volatiles							
Acetone	1,000	100	0.360 U	0.320 U	0.110 J	0.480 B	0.520 B
Ethylbenzene	1,000	100	0.730	0.560	0.300 U	0.250 U	0.270 U
Xylenes (Total)	1,000	67	1.900	1.400	0.980 U	0.096 J	0.095 J

¹ NJDEP Residential Direct Contact Soil Cleanup Criteria per NJAC 7:26D, 1999. Beryllium, Copper and Lead criteria per NJAC 7:26D, 2008.

² NJDEP Non-Residential Direct Contact Soil Cleanup Criteria per NJAC 7:26D, 1999. Beryllium, Copper and Lead criteria per NJAC 7:26D, 2008.

³ NJDEP Impact to Groundwater Soil Cleanup Criteria per NJAC 7:26D, 1999.

DUP = Duplicate Sample.

ft. bgs = Feet below ground surface.

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not tested.

NLE = No limit established.

mg/kg = milligram per kilogram.

Bold = Analyte was detected.

Shaded = Concentration exceeds level of concern.

(Surface soil compared to NRDCSCC. Subsurface soil compared to IGWSCC when available, otherwise compared to NRDCSCC).
Table 3.12-7 Fort Monmouth Phase II Site Investigation, Parcel 51 Summary of Analytical Parameters Detected in Groundwater (µg/L)

							Analytical Results					
	Sample ID:	P51-A10	P51-A12	P51-C12	P51-C12 DUP	P51-E12	P51-G12	P51-I3	P51-I3 DUP	P51-I5	P51-I10	P51-K1
	Lab ID:	7044704	7044705	7044706	7044703	7044707	7044708	7044305	7044303	7044306	7044307	7045504
	Date Sampled:	11/8/2007	11/8/2007	11/8/2007	11/8/2007	11/8/2007	11/8/2007	11/6/2007	11/6/2007	11/6/2007	11/6/2007	11/10/2007
	Screened Interval (ft. bgs):	5-10'	5-10'	5-10'	5-10'	5-10'	5-10'	3-8'	3-8'	3-8'	3-8'	10-15'
Chemical	Quality Criteria ¹	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatiles												
Acetone	6000	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	6.78	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Benzene	1	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.10 J	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U
Carbon disulfide	700	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
Chloroform	70	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
Chloromethane (Methyl chloride)	NLE	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U
Ethylbenzene	700	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	1.74	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
Methyl ethyl ketone (2-Butanone)	300	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
Methyl tertiary butyl ether (MTBE)	70	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Tertiary butyl alcohol	100	1.82 U	1.82 U	1.82 U	1.82 U	1.82 U	1.82 U	1.82 U	1.82 U	1.82 U	1.82 U	1.82 U
Toluene	600	0.27 U	1.03	0.65	0.54	1.07	2.00	0.37	0.82	0.29	0.38	0.53
Xylenes (Total)	1000	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	2.15	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
Semi-Volatiles												
2-Methylnaphthalene	30*	3.28	1.01 U	1.01 U	1.01 U	1.01 U	40.51	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U
bis(2-Ethylhexyl)phthalate	3	1.28 U	1.28 U	1.28 U	1.28 U	0.95 J	1.28 U	1.28 U	1.28 U	1.28 U	2.55	1.42
Dibenzofuran	NLE	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Di-n-butylphthalate	700	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Fluorene	300	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	1.97	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Naphthalene	300	1.00	0.76 U	0.76 U	0.76 U	0.76 U	23.40	0.76 U	0.76 U	4.01	0.76 U	0.76 U
n-Nitrosodiphenylamine	10	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	2.89	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
Phenanthrene	NLE	1.94	0.81 U	0.81 U	0.81 U	0.81 U	3.75	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U

¹ Higher of Practical Quantitation Limits (PQLs) & Groundwater Quality Criterion (GWQC) per NJAC 7:9-6, 2005 (* Interim GWQC).

DUP = Duplicate Sample.

ft. bgs = Feet below ground surface.

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not tested.

NLE = No limit established.

Bold = Analyte was detected.

Shaded = Concentration exceeds Quality Criteria.

µg/L = micrograms per liter.

Table 3.12-7 Fort Monmouth Phase II Site Investigation, Parcel 51 Summary of Analytical Parameters Detected in Groundwater (µg/L)

							Analytical Results					
	Sample ID:	P51-K3	P51-K5	P51-K7	P51-K7 DUP	P51-K9	P51-L9	P51-N9	P51-P9	P51-R3	P51-R3 DUP	P51-R9
	Lab ID:	7045505	7045506	7045507	7045503	7045508	7047110	7047109	7047108	7047104	7047103	7047107
	Date Sampled:	11/10/2007	11/10/2007	11/10/2007	11/10/2007	11/10/2007	11/17/2007	11/17/2007	11/17/2007	11/17/2007	11/17/2007	11/17/2007
	Depth (ft. bgs):	10-15'	10-15'	10-15'	10-15'	10-15'	3-8'	7-12'	5-10'	15-20'	15-20'	11-16'
Chemical	Quality Criteria ¹	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatiles												
Acetone	6000	0.85 U	9.31 B	0.85 U	1.99 B	1.12 B	0.85 U	3.56 B				
Benzene	1	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U					
Carbon disulfide	700	0.44 U	0.17 J	0.44 U	0.50	0.44 U	0.44 U	0.23 J				
Chloroform	70	0.74	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U				
Chloromethane (Methyl chloride)	NLE	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.34 J					
Ethylbenzene	700	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U					
Methyl ethyl ketone (2-Butanone)	300	0.14 U	1.58	0.14 U	0.14 U	0.14 U	0.14 U	0.76				
Methyl tertiary butyl ether (MTBE)	70	0.23 U	4.31	33.79	0.23 U	0.23 U	15.92					
Tertiary butyl alcohol	100	1.82 U	4.03	1.82 U								
Toluene	600	0.35	0.77	0.27 U	0.27 U	0.22 J	0.45	0.25 J	0.69	0.27 U	0.27 U	0.27 U
Xylenes (Total)	1000	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U					
Semi-Volatiles												
2-Methylnaphthalene	30*	1.01 U	2.61	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U	1.01 U
bis(2-Ethylhexyl)phthalate	3	1.28 U	1.28 U	4.47	3.53	1.28 U	1.28 U	1.28 U	3.49	1.28 U	1.28 U	1.28 U
Dibenzofuran	NLE	0.69 U	0.30 J	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Di-n-butylphthalate	700	0.92 U	0.41 J	0.25 J	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U	0.92 U
Fluorene	300	0.71 U	0.71 U	0.42 J	0.51 J	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
Naphthalene	300	0.76 U	18.24	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
n-Nitrosodiphenylamine	10	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U					
Phenanthrene	200	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U					

¹ Higher of Practical Quantitation Limits (PQLs) & Groundwater Quality Criterion (GWQC) per NJAC 7:9-6, 2005.

DUP = Duplicate Sample.

ft. bgs = Feet below ground surface.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

JB = The concentration should be considered estimated due to blank contamination.

UB = The presence of the analyte in the sample is negated due to blank contamination.

NT = Not tested.

NLE = No limit established.

Bold = Analyte was detected.

Shaded = Concentration exceeds Quality Criteria.

µg/L = micrograms per liter.



3-21



ArcGIS File: MP_Fig3_12-1_SI_P51_Exceeds_SampLoc.mxd (7/14/2008 12:49:34 PM)



Geophysical Investigation Area -Electromagnetic (EM) and Ground Penetrating Radar (GPR)

Building

3-212

Installation Boundary

ArcGIS File: MP_Fig3_12-2_SI_P51_Geophysics.mxd (7/14/2008 12:52:32 PM)



SITE INVESTIGATION

PARCEL 51

SUSPECTED UST LOCATIONS

MAIN POST

FORT MONMOUTH

NEW JERSEY





GLASS SURROUNDED WITH
@ 1" PER 50 FEET MIN. BACK TO
WING ARE APPROXIMATE. IT IS SURVEY AND SCOPE AREA TO
ES RESULTING FROM SPECIFIED REPAIRED OR REPLACED AT NO
RCED CONCRETE HOLD DOWN SLAB TO AND OVERFILL SYSTEM, UPON COMPLETION FALL SYSTEMS, THE CONTRACTOR SHALL DOWN SLAB TO MATCH EXISTING CONCRETE FERIALS AND REINFORCEMENT
A ADAPTER. ENTIRE ASSEMBLY SHALL MANHOLE WITH A 26 GAL CAPACITY
L BE EXPLOSION-PROOF IN CONFORMANCE F UL 674, UL 698, AND UL 886 FOR CLASS I, S LOCATIONS AND THE CONTRACTOR MANCE. ELECTRICAL INSTALLATIONS SHALL NFPA 30, NFPA 30A, AND NFPA 70
DE, SEASONAL HIGH WATER TABLE IS AT 5' BELOW
0:0" O.C. EDGE OF WELLS SHALL BE 10-0 5
NDICATED SIN DRAWING.
AND CONDUNT
N REMOTE DISPENSERS, SUBMERSIBLE PUMP
SHALL BE AS REQUIRED BY MANUFACTURER
L HOLD UP UNDER HEAVY TRAFFIC
P, AND DOUBLE WALL PIPE SHALL BE SET
DY 9152 XTW-1 DISPENSER, DIESEL SHALL DONE GASBOY 9152 XTW-1.
RED JACKIET BIG FLOW P300H3-2HB
P
ELLINE
OLINE LINE
WITH SENSOR E NOTED
ERFILL ALARM SEMENT SXITCH
79-002 VENT VALVE
& REPLACE WINEW SUBMERSIBLE PUMPS 5/9/4/
Intrenet winew sverior rongins appropriate Internet
ESCRIPTION DATE APPROVED REVISIONS
F FNGINFFRING & HOUSING
MMUNITY OF EXCELLENCE"
31H STAGE I APOR RECOVERY ND LEAK DETECTION
FORT MONMOUTH. N
SCALE: AS NOTED DRAWING NUMPER:
DATE INF 22 '90

PR. NO: 90-0771

SHEET ____ OF



NOTES:

- 1. ALL RGF ENVIRONMENTAL SYSTEMS, INC. BE INSTALLED BY THE CONTRACTOR IN AC DRAWING AND THE MANUFACTURER'S OPERAT 2. MANUFACTURER'S EQUIPMENT IS PRESENTL ON SITE UTILITY PLAN. 3. ALL FLOOR AND WALL PENETRATIONS SHAL 4. PRIOR TO ALL UNDERGROUND DIGGING, THE VINNELL SERVICES AT 542-1122 FOR A MELECTRICAL UTILITIES. THE CONTRACTOR FOR A MARK OUT OF GAS, PHONE AND CABL 5. THE CONTRACTOR SHALL VISIT THE SITE PREMISES SO AS TO FULLY UNDERSTAND AL RELATIVE TO THE WORK, HE SHALL NOTIFY REPRESENTATIVE OF ANY CONDITION REQU MODIFICATION PRIOR TO PROCEEDING WIT 6. THE CONTRACTOR SHALL REPAIR ALL DAMAG A RESULT OF CONSTRUCTION TO MATCH EXI 7. THE CONTRACTOR SHALL FIELD VERIFY ALL AND LOCATIONS PRIOR TO PERFORMING WOR BE BROUGHT TO THE ATTENTION OF THE CO 8. ALL WORK SHALL CONFORM TO THE REQUIR CODES AND GOVERNING AUTHORITIES AND HIGHEST STANDARDS OF PRACTICE FOR EAC 9. PROVIDE ALL TEMPORARY SHORING OF SOI 10. THE CONTRACTOR SHALL PROVIDE AND INS ME40, CAPACITY 28 GPM AT 25 FEET TOT 5.8 AMPS, 1 PHASE, 60 HZ OR AN APPROV 11. THE CONTRACTOR SHALL PROVIDE AND INS MODEL NO. 9K863A, RPM 3450, 1.0 HP, APPROVED EQUAL. THE BOOSTER PUMP SHA 12. THE CONTRACTOR SHALL PROVIDE AND INS INDICATED ON THE PLANS. 13. THE CONTRACTOR SHALL PROVIDE UNIONS THE CONNECTTED PIPING AND THE PUMPS. 14. THE CONTRACTOR SHALL PROVIDE SCHEDUL
- CONNECTIONS BETWEEN DIFFERENT UNITS 15. THE CONTRACTOR SHALL TAP FROM THE EX TO PROVIDE CONNECTIONS TO THE SKID AN CONNECTIONS SHALL HAVE A BACK FLOW P SYSTEM ENTERING DOMESTIC WATER LINES.
- 16. ALL WORK IS NEW AND SHALL BE PROVIDE CONTRACTOR UNLESS OTHERWISE INDICATE

	LEGEN	
- 		BENCH MARK ELEVATION CLEAN OUT
	GF E.F.D N.F.D	GOVERNMENT FURNISHED EXISTING FLOOR DRAIN NEW FLOOR DRAIN
	S - ST - V - W -	NEW PIPING SANITARY UNDERGROUND PIP STORM UNDERGROUND PIPING VENT UNDERGROUND PIPING WATER UNDERGROUND PIPING
•	₩0 - XIBV - BFP - 	WASTE OIL ISOLATION BALL VALVE BACK FLOW PREVENTOR PVC PIPE DRAIN RETURN
	C.F.C G.P.M	CONTINUOUS FLOW CONTROL GALLONS PER MINUTE EXISTING POWER LOAD CENT
	J J	240V, 2 POLE FUSED DISCO
	-	125V DUPLEX RECEPTACLE,
	PP1	100A MLO 120/208V LOAD C CIRCUIT BREAKERS.
ŞYMBOL	.7	
	DIR	ECIURAIE OF F Fort Monmouth
	• •	" An Army Community
DWN: K.V DPW PR. KEN	DSGN: v.K.W./M.U./S.L. MGR. WALLING	RECYCLE
CHIEF ES A. SM SAFETY	PREV. MED.	BUIL
FP&P DR J. ERICASE	ENVIRON N D. DESAI	PART
M. CALLER CUSTOME	C. KONIG R: N COURTNEY	AND

SAF

CORDANCE WITH THIS TION MANUAL. Y STORED IN THE ROOM SHOWN
L BE PROPERLY SEALED.
MARK OUT OF WATER, SEWER AND R SHALL ALSO CALL 1-800-272-1000 LE UTILITIES. OF THE WORK AND EXAMINE THE
LL THE EXISTING CONDITIONS Y THE CONTRACTING OFFICER'S IRING CORRECTION OR H THE WORK
GES DONE TO THE BUILDING AS ISTING SURROUNDING MATERIALS.
_ DIMENSIONS, CONNECTIONS, GRADES RK. ALL DESCREPANCIES SHALL ONTRACTING OFFICER IN WRITING. EMENTS OF ALL APPLICABLE
SHALL BE PERFORMED TO THE CH TRADE. L OR EXISTING PIPES AS REQUIRED.
TALL SUMP PUMPS, MYER'S MODEL AL HEAD, 0.4 HP, 230 VOLTS, VED EQUAL.
TALL A BOOSTER PUMP, TEEL/DAYTON 230 VOLTS, 1 PHASE, 60 HZ OR AN ALL HAVE A PRESSURE CONTROL SWITCH.
ALL GATE/ BALL VALVES AS
E 40 PVC PIPING TO MAKE WHEREVER NECESSARY.
ISTING DOMESTIC WATER PIPING ND THE STORAGE TANK. THE NEW REVENTOR TO PREVENT WASH WATER
D AND INSTALLED BY THE D.
PING
ER AND CABINET DNNECT SWITCH
IMUM Mounted 1'-6" A.F.F.
ENTER W/8 20A 1P
New Jersey Of Excellence "
WASH SYSTEM
DING 750
IAL PLAN
DETAILS



ATTACHMENT D

Summary Table of Parcel 51/Building 750 Motor Pool Area

Underground Storage Tanks

Summary Table of Parcel 51/Building 750 Motor Pool Area USTs

Site	Residential	Registration	DICAR	Tank Size and Type	Product	Army Case	Date Tank	Comments on Current or Requested
Name	?	ID	DIOAN		Troduct	Status	Removed	NJDEP Status
750A	NO	81533-191	92-05-07-1600	15,000 gallon fiberglass	DIESEL	Case Open	2/9/2005	1994 Weston report for both -191 and -192 documents removal of soil due to release from fuel dispenser and piping area, and initiated groundwater monitoring (wells 750MW01 through MW04). 2005 closure sample results support NFA for the two tanks; however, 2005 sampling along the distribution piping indicated soil contamination with BTEX above RDCSRSs in one area. Quarterly groundwater monitoring results indicate attenuation of benzene to below GWQS by 2009. So, additional corrective action needed ; need a sample location figure to assess the next step. Historical groundwater results should be submitted to NJDEP.
750B	NO	81533-192	92-05-07-1600	15,000 gallon fiberglass	GASOLINE	Case Open	2/11/2005	See comments for -191; additional corrective action needed.
750C	NO	81533-198		1000 gallon fiberglass	WASTE OIL	Case Closed	3/11/1998	Need to submit 1993 Weston report, and request NFA. This is a good candidate for NFA approval.
750D	YES	-	090611130909	1000 gallon steel	#2 FUEL OIL	Case Open	6/11/2009	Initial excavation samples up to 26,511 mg/kg TPHC, and sheen noted on groundwater in excavation. Additional 60 cy soil removed, and follow-on post-ex samples from ND to 227 mg/kg. Well installed 750MW05; 2 rounds of gw data in 2009 were clean.
750E	YES	-	09-06221402-58	1000 gallon steel	#2 FUEL OIL	Case Open	6/19/2009	Initial excavation samples up to 14,133 mg/kg TPHC, and sheen noted on groundwater in excavation. Additional soil removed, and follow-on post-ex samples were ND for TPHC. Well installed 750MW06; 2 rounds of gw data in 2009 were clean.
750F	YES	-		1000 gallon steel	#2 FUEL OIL	Case Open	7/13/2009	Initial excavation samples ND for TPHC. Good candidate for NFA approval.
750G	YES	-	09-07-16-1341-23	1000 gallon steel	#2 FUEL OIL	Case Open	7/16/2009	Initial excavation samples up to 1,166 mg/kg TPHC, and sheen noted on groundwater in excavation. Additional soil removed, and follow-on post-ex samples were ND for TPHC. Downgradient well installed 750MW08; 2 rounds of gw data in 2009 were clean.
750H	YES	-	09-07-28-1554-16	1000 gallon steel	#2 FUEL OIL	Case Open	7/28/2009	Initial excavation samples ND to 79 mg/kg for TPHC. Good candidate for NFA approval. No clear indication of why the DICAR release was reported. Well installed 750MW07; 2 rounds of gw data in 2009 were clean.
7501	YES	-		1000 gallon steel	#2 FUEL OIL	Case Open	8/13/2009	Initial excavation samples ND for TPHC. Good candidate for NFA approval.
750J	YES	-	09-08-200915-22	1000 gallon steel	#2 FUEL OIL	Case Open	8/25/2009	Initial excavation samples not collected; sheen noted on groundwater in excavation. Additional 24 cy soil removed, and follow-on post-ex samples were ND for TPHC. Probably needs groundwater assessment.

ATTACHMENT E

UST 750A and UST 750B File Review and Analyses

Contents:

- Underground Storage Tank File Review
- Enclosure 1 31 May 1994 Weston Report: Underground Storage Tank System Piping and Site Investigation Report, Building 750, NJDEPE UST Facility No. 008153, UST Nos. 191 and 192, TMS No. S-91-2811, Spill Case No. 92-05-07-1600.
- Enclosure 2 Tank and Piping Soil Analytical Reports
- Enclosure 3 Benzene in Well 750MW01 Graph, and Tabulated Groundwater Monitoring Data from 1997 to 2009
- Enclosure 4 11/03/09 Analytical Data Package for Groundwater



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

Date: September 2, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: 750A and 750B	Registration ID: 81533-191 and 81533-192
Recommended Status of Site: Change to	Case Closed
Based on the file review, were there indicat	ions of a contaminant release? [X] Yes [] No
NJDEP Release No. or DICAR (If applicable):	<u>92-05-07-1600</u>
Did NJDEP approve No Further Action (NFA)	for this site? [] Yes [X] No [] Not Applicable
Tank Description: [] Steel [X] Fiberglass	Size: <u>15,000 gals.; 8,000 gals.</u>
Contents: <u>Diesel, gasoline</u>	
[] Residential [X] Commercial/Ind	ustrial
Tank Removed?[X]Yes [] No If "yes,	," removal date: <u>2/9/2005, 2/11/2005</u>
Were closure soil samples taken? [X] Yes	[] No Analyses: <u>VOCs, TPH, lead</u>
Comparison criteria: <u>RDCSRC; 5,100 mg</u>	/kg TPH
Were closure soil sample results less than c	omparison criteria? [X] Yes []No

Brief Narrative

Environmental assessment including soil and groundwater sampling for these two tanks and the associated fuel lines and fuel dispenser systems has been performed from approximately 1992 through 2009. Following is a summary of major activities and environmental sampling events:

- Building 750 was constructed in 1987, and was used as a Motor Pool support structure until Fort closure in 2011. Barracks were present in the area from the 1940's through the 1970's.
- Fuel dispensers were initially provided in 1986 at the Building 750 Motor Pool for gasoline and diesel. Diesel was stored in UST 750A (Registration ID 81533-191), a 15,000 gallon fiberglass tank. Gasoline was stored in UST 750B (Registration ID 81533-192), an 8,000 gallon fiberglass tank.
- Substantial modifications were approved by NJDEPE in 1991 for upgrading below-grade single wall steel piping to fiberglass with leak containment. The piping and dispensers were subsequently excavated and removed in 1992, and replaced with new components.
- During the 1992 upgrades, petroleum contaminated soil was noted in the vicinity of the dispensers, and the NJDEP was notified of the release (case No. 92-05-07-1600). A total of 1,140 cubic yards of petroleum-contaminated soil were excavated and removed from the site. Site assessment soil samples were collected from below the pipeline and dispensers, and four monitor wells were installed, as reported in the Weston 1994 closure report (Enclosure 1).
- UST 750A and UST 750B were subsequently removed in 2005, along with the associated upgraded piping and fuel dispensers. Site assessment soil samples were collected from below the tanks, piping and dispensers (**Enclosure 2**).
 - None of the sample results exceeded the RDCSRS (for the gasoline UST) or the 5,100 mg/kg TPH criteria (for the diesel UST).

- One sample (P5) from below the pipeline exceeded the Impact to Groundwater standards for benzene, ethyl benzene, toluene and xylenes (BTEX). However, groundwater monitor well 750MW02 was located near sample P5, and has not had indications of BTEX contamination in groundwater. This indicates that the soil represented by Sample P5 had not previously impacted groundwater and (due to the previous soil removal in 1992) will not impact groundwater in the future.
- Groundwater monitoring at the four wells was performed initially in 1993, twice in 1994, and then quarterly from 1997 through November 2009, primarily due to benzene concentrations in well 750MW01 in excess of the Ground Water Quality Criteria (GWQC). A tabulated summary of analytical results is presented in Enclosure 3. Benzene was initially detected in excess of GWQC in monitor well 750MW01. Select metals also periodically exceed GWQC but are attributable to either sample turbidity and/or naturally elevated metals concentrations due to glauconitic soils in the area. As shown on the graph of time versus benzene concentration in Enclosure 3, benzene has attenuated significantly over time, and the latest benzene results from 2008 to 2009 were at or below the GWQC of 1 ug/L in 2008 and 2009.
- The analytical data package for the last round of groundwater monitoring in 2009 is provided in **Enclosure 4**. All VOCs were non-detect in wells 750MW01 through 750MW04. It is concluded that natural attenuation has successfully maintained benzene concentrations below the GWQC, and therefore further monitoring is not warranted.
- Since 2014 the Building 750 Motor Pool area has been used for maintenance activities by Monmouth County.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed" for both UST 750A and UST 750B.

Recommendations (if any): <u>Change to "Case Closed", request NFA from NJDEP</u>

Signed:

Kent A. Friesen, Parsons

ENCLOSURE 1 of Attachment E

31 May 1994 Weston Report: Underground Storage Tank System Piping and Site Investigation Report, Building 750, NJDEPE UST Facility No. 008153, UST Nos. 191 and 192, TMS No. S-91-2811, Spill Case No. 92-05-07-1600.



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UNDERGROUND STORAGE TANK SYSTEM PIPING CLOSURE AND SITE INVESTIGATION REPORT BUILDING 750 NJDEPE UST FACILITY NO. 008153 UST NOS. 191 AND 192 TMS NO. S-91-2811 SPILL CASE NO. 92-05-07-1600

31 May 1994

W.O. No.: 03886-088-001

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Prepared For:

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

Prepared by:

ROY F. WESTON, INC. Raritan Plaza I - 4th Floor Edison, New Jersey 08837



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EXECUTIVE SUMMARY

On 25 July 1991, the U.S. Army Fort Monmouth Directorate of Public Works (DPW) submitted a permit application to the New Jersey Department of Environmental Protection and Energy (NJDEPE) to substantially modify the piping system associated with two (2) Underground Storage Tanks (USTs) at Building 750 on the Main Post. The modification included removal of the existing single wall fiberglass piping, approximately 150 feet in length and replacing it with double wall fiberglass piping and a piping leak detection system. The permit also indicated that the piping system would be precision tested in lieu of soil sampling and analysis.

On 18 November 1991 Substantial Modification permit, TMS #S-91-2811, was issued by the NJDEPE for UST Nos. 191 and 192, Facility UST Registration No. 0081533. UST No. 191, a single wall fiberglass, 15,000-gallon capacity, gasoline tank, and UST No. 192, a single wall fiberglass, 15,000-gallon capacity, diesel tank were modified with leak detection systems, new dispensers and double walled piping. The permit was for a period of one year and would expire on 18 November 1992.

On 26 December 1991, precision tightness testing of the piping system was attempted. Due to the piping configuration, the test could not be performed. Eleven (11) soil samples were collected from along the piping for visual inspection. Based on this evaluation the soil was believed to be contaminated and a program was established to remediate the stained soils.

On 7 May 1992, excavation commenced along the piping and around the dispenser islands. Contamination was confirmed using organic vapor analyzer (OVA) readings. A discharge was reported immediately to the NJDEPE by the Directorate of Public Works (DPW) (Case No. 92-05-07-1600).

On 11 May 1992, excavation of the contaminated soils continued. Approximately 1,140 cubic yards of contaminated soil was removed. No groundwater was present in the excavation.

On 2 June 1992, twenty soil samples were collected from the piping excavation and analyzed by Analytical Associates Laboratory for volatile organic compounds plus 15 tentatively identified compounds (VO+15), base neutral extractable compounds plus 15 tentatively identified compounds (BN+15) and lead. All samples contained either non-detectable concentrations of contaminants or concentrations of contaminants below proposed NJDEPE subsurface cleanup criteria (revision dated 3 February 1994).

Between 30 October and 3 November 1992, four monitoring wells were installed in the area surrounding UST Nos. 191 and 192. Monitoring Well No. 1 (MW-1) was placed southwest of the tank farm; Monitoring Well No. 2 (MW-2) was placed northeast of the tank farm; Monitoring Well No. 3 (MW-3) was installed near the piping runs and Monitoring Well No. 4 (MW-4) between the two fuel distribution areas.

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On 21 April 1993, one groundwater samples was collected from each monitoring well and analyzed by 21st Century Environmental Laboratories for VO+15, BN+15 and lead. Benzene and total xylenes were detected in groundwater samples collected from MW-4 (12 ug/L and 64 ug/L, respectively). These concentrations of contaminants exceed the NJDEPE Class II-A Ground Water Quality Criteria. In addition, methylene chloride was detected in all samples, including the laboratory method blank. Methylene chloride present in the method blank indicates its presence in samples is due to laboratory induced contamination.

On 7 June 1993, UST Nos. 191 and 192 were substantially modified in accordance with NJDEPE requirements. Charles J. Hoffman, Inc. performed the substantial modification of the UST system and piping closure.

Due to the concentrations of contaminants detected in MW-4 collected 21 April 1993 which exceeded the NJDEPE Class II-A Ground Water Quality Criteria, it is proposed that each monitoring well be analyzed quarterly for a one year period. Each sample will be analyzed for VO+15. The analytical results will be compared to Class II-A Ground Water Quality Criteria. Analytical results and recommendations for further action will be presented in an addendum to this report.

Based on remedial measures performed and the absence of contamination in the post excavation samples, it is recommended that no further action be required for soil surrounding the piping and dispenser areas.



SECTION 1.0

UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

On 7 June 1993, two underground storage tank (UST) systems were substantially modified in accordance with New Jersey Department of Environmental Protection and Energy (NJDEPE) requirements at U.S. Army Fort Monmouth, New Jersey. UST Nos. 191 and 192, were located adjacent to Building 750 in the Main Post area of Fort Monmouth. UST No. 191, a single walled 15,000-gallon capacity fiberglass tank which stored gasoline and UST No. 192, a single walled 15,000-gallon capacity fiberglass tank which stored diesel were modified by installation of leak detection, new dispensers and double walled piping. This report presents the results of the DPW's implementation of the UST Substantial Modification and Piping Closure Plan submitted to the NJDEPE-DHWM on 12 July 1991, and approved 18 November 1991. UST permit (TMS No. S-91-2811) was assigned to the U.S. Army for this modification.

All activities associated with the UST substantial modification and piping closure 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. 7:26E-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 29 CFR 1910.146 & 29 CFR 1910.120. All permits including but not limited to the NJDEPE-approved UST Substantial Modification and Piping Closure Plan were posted onsite for inspection. At the time the work was performed, Charles J. Hoffman, Inc., the contractors that conducted the UST modification activities, were registered and certified by the NJDEPE for performing UST substantial modification activities. The UST substantial modification permit and the UST Site Assessment Summary Form have been included in Appendices A and B, respectively. The UST Site Assessment Summary Form has been signed and sealed by Mr. James Ott, P.E., Director of DPW.

This UST Piping System Closure and Site Investigation Report was prepared by Roy F. Weston Inc. (WESTON®), to assist the United States Army Directorate of Public Works (DPW) in complying with the NJDEPE Bureau of Underground Storage Tanks (NJDEPE-BUST) regulations. The applicable NJDEPE-BUST regulations at the date of closure were the "Technical Requirements for Site Remediation - Proposed New Rules" (N.J.A.C. 7:26E-1 et seq. May 1992). Section 1.0 of this UST System Piping Closure and Site Investigation Report provides a summary of the UST piping system decommissioning activities. Section 2.0 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil and groundwater sampling investigation, are presented in the Section 3.0 of this report.

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1.2 SITE DESCRIPTION AND UST HISTORY

Building 750 is located on Alexander Avenue within the northeastern portion of the Main Post of Fort Monmouth. A site location map is provided in Figure 1-1. A site map detailing the tank farm and former piping locations is provided in Figure 1-2. Building 750 is an active military vehicle repair and maintenance facility which was constructed in 1986. Two (2) USTs, identified as UST Nos. 191 and 192, are located approximately 150 feet east of Building 750. A piping chase, approximately 150 feet long, runs northwest and connects the diesel and gasoline dispenser area.

1.3 GEOLOGICAL/HYDROGEOLOGICAL SETTING

The following is a description of the geological/hydrogeological setting of the area surrounding Building 750. 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.

1.3.1 Geological Setting

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).

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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-course-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark grey 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).

Over the last 80 years, the natural topography of Fort Monmouth has been altered by excavation and filling activities by the military. Topographic elevations for the Main Post area range from five feet above mean sea level (MSL) to 31 feet above MSL.

1.3.2 Hydrogeological Setting

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

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

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, and
- local groundwater recharge areas (i.e. stream, 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



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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 silt and/or clay.

Building 750 is less than 1/4 mile north of Husky Brook, the nearest water body. In addition, Mill Brook is located approximately 1/4 mile north of Building 750. Four groundwater monitoring wells were installed as part of the substantial modification of UST Nos. 191 and 192. The monitoring well permit, monitoring well records and Form B for each well is provided in Appendix C. Figure 1-3 indicates the location of the groundwater monitoring wells and groundwater flow direction based on water level elevations obtained on 10 January 1994. Table 1-1 provides a summary of groundwater level informations. The groundwater flow direction in the area of Building 750 was determined to be to the northeast. The Atlantic Ocean is located approximately five miles east of the site.

1.3.3 Offsite Ground Water Usage

In compliance with the NJDEPE regulations, WESTON conducted a well search to identify all irrigation, monitoring, domestic, industrial and public supply wells within one half mile of Fort Monmouth. The file search produced records for 104 wells within one half mile of Building 750. The well search summary table includes the following information on surrounding wells: well identification number; well owner; well address; total depth (feet BGS); casing length (feet); static water level elevation (feet BGS); use code; and NJDEPE permit number. In addition, a summary table of all U.S. Army wells located at Fort Monmouth, which includes the following information: well number, NJDEPE permit number; New Jersey State Plane Coordinates; casing elevation and, elevation of ground well records for the nearest identified offsite well have also been included, if available. This information is included in Appendix D.

A review of the well records indicated that the majority of the wells within the area of concern are used for monitoring purposes. There were 90 monitoring wells. An irrigation well (Permit Number 29-22571), owned by Mr. A. Khristiansen is the closest to the site in the downgradient flow direction. The well is located at 54 Trafalcer Place, approximately 4,500 feet northeast of the site.

1.4 HEALTH AND SAFETY

Before, during, and after all activities, hazards at the work site which may have posed a threat to the health and safety of all personnel who were involved 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 approved equipment. The trained individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.



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TABLE 1-1

WATER LEVEL ELEVATIONS FOR MONITORING WELLS MW-1, MW-2, MW-3 AND MW-4 COLLECTED ON 10 JANUARY 1994

Monitoring Well Permit Number	Time of Collection	Top of Well Casing Elevation (feet)	Depth to Water (feet)	Groundwater Surface Elevation (feet)
29-28992 (MW-1)	1:40 pm	18.79	5.39	13.40
29-28993 (MW-2)	1:42 pm	18.61	5.08	13.53
29-28994 (MW-3)	1:46 pm	19.04	5.23	13.81
29-28995 (MW-4)	1:50 pm	18.98	5.54	13.44

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1.5_REMOVAL OF UNDERGROUND STORAGE TANK PIPING

1.5.1 General Procedures

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Between 26 December 1991 and 7 June 1993 soil around the piping system for UST Nos. 191 and 192 were investigation for contamination.

Ground Water was evaluated by the installation and sampling of four (4) monitoring wells in the area of the tank farm, piping and dispenser areas between 30 October 1992 and 21 April 1993.

On 7 June 1993 the two UST systems were substantially modified by the installation of double wall fiberglass piping, leak detection systems and new dispensers.

- 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 screened visually and with air monitoring instruments for evidence of contamination. Approximately 1140 cubic yards of contaminated soil was identified and removed during remediation activities.
- Surface materials (i.e, asphalt, concrete, etc...) were excavated and staged separate from all soils. These materials were later recycled in accordance with all applicable laws and regulations.
- A Sub-Surface Evaluator from the DPW was present during all closure activities.

1.5.2 <u>Underground Storage Tank Piping Excavation</u>

On 26 December 1991, after failure of precision tightness testing, soil samples were collected for visual inspection along the suction lines extending from UST Nos. 191 and 192 to the dispenser area. Soil screening revealed the presence of potential contamination and a program was established to excavate tainted soils.

On 7 May 1992, excavation commenced along the piping run and around the dispenser islands. Contamination was confirmed using an OVA. A discharge was immediately reported to the NJDEPE by the DPW (Case No. 92-05-07-1600). Soil was excavated to expose the piping. The piping was drained of all free product, removed and disposed. The dispenser islands were removed and soil beneath and surrounding them excavated.

On 11 May 1992 excavation of the dispenser areas continued and the area was excavated to nondetectable (OVA) levels. Approximately 1140 cubic yards of contaminated soil was removed and

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transported to a designated staging area within Fort Monmouth (T-80 yard). The soil was then transported to Soil Remediation of Philadelphia, Inc. by Allied Environmental, Inc. for recycling. A certificate of soil remediation is provided in Appendix E. Groundwater was not present in the excavation.

1.6 UNDERGROUND STORAGE TANK PIPING TRANSPORTATION AND DISPOSAL:

The UST system piping was transported and disposed of by Charles J. Hoffman, Inc.

1.7 MANAGEMENT OF EXCAVATED SOILS:

Approximately 1140 cubic yards of contaminated soil was removed from the area surrounding the dispenser islands and placed on and covered with polyethylene sheets. All excavated soils suspected to be contaminated were excavated by Serv-Air, Inc., a base operations contractor, and transported, by Charles J. Hoffman, Inc. to a designated staging area within Fort Monmouth (T-80 yard). The soils were then transported to Soil Remediation of Philadelphia, Inc. for recycling. A certificate of soil remediation is provided in Appendix E.



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SECTION 2.0

SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S Army DPW personnel. Post excavation soil analyses were performed and reported by A.A. Laboratories, Inc. Ground Water sample analysis was performed by 21st Century Environmental. Both laboratories were NJDEPE certified at the time testing was performed. All sampling was performed under the direct supervision of a NJDEPE Certified Sub-Surface Evaluator according to the methods described in the NJDEPE Field Sampling Procedures Manual (May 1992). Sampling frequency and parameters analyzed complied with the NJDEPE-BUST document "Technical Requirements for Site Remediation - Proposed New Rules" (May 1992) which was the applicable regulation at the date of closure. All records of the site investigation activities are maintained by Fort Monmouth DPW: Environmental Office.

The following Parties participated in closure and site investigation activities:

- Closure Contractor: Charles J. Hoffman, Inc. Contact Person: Charles Hoffman Phone Number: (908) 775-7979
 NJDEPE Company Certification No.: 1300221
- Subsurface Evaluator: Charles Appleby Employer: U.S. Army, Fort Monmouth Phone Number: (908) 532-6224
 NJDEPE Certification No.: 2056
- Analytical Laboratory: A.A. Laboratories, Inc. Contact Person: Raymond Feldt Phone Number: (609) 799-8787 NJDEPE Laboratory Certification No.: 12660
- Analytical Laboratory: 21st Century Environmental, Inc. Contact Person: Richard W. Lynch Phone Number: (609) 467-9521 NJDEPE Laboratory Certification No.: 08031

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2.2 <u>FIELD SCREENING/MONITORING</u>

All soils that were excavated as part of the substantial modification of UST Nos. 191 and 192 were screened using a OVA, for evidence of contamination. Soils were also inspected visually for evidence of contamination (staining, free product, etc..). Soils on the sidewalls and base of the excavation were screened with a OVA by an individual under the direct supervision of the NJDEPE Certified Sub-Surface Evaluator. Evidence of contamination was noted during excavation of soils surrounding the UST system and associated piping and subsequently 1140 cubic yards of contaminated soil was removed and recycled. Excavation was continued until OVA readings on the sidewalls were below 10 units.

2.3 SOIL AND Ground Water SAMPLING

2.3.1 <u>Soil</u>

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13 . . On 2 June 1992, following the exposure of the piping system, removal of the dispenser pads and excavation of potentially contaminated soils, twenty (20) soil samples were collected for laboratory analysis. Each sample was analyzed by A. A. Laboratories, Inc. (NJDEPE Certification No. 12660) for VO+15 and lead. Soil samples were obtained from the bottoms of the piping excavations, and the sidewalls and the bottoms of other excavated areas. Figure 2-1 depicts the locations of the post-excavation soil samples and Table 2-1 provides a summary of sampling activities including sample location and depths.

Samples were collected using decontaminated stainless steel scoops and placed in laboratory supplied sample bottles. After sampling, the soils were placed in coolers with ice for transportation to the laboratory. One field blank was collected during post-excavation sampling activities.

2.3.2 Ground Water

On 21 April 1993, one groundwater sample was collected from each of the four (4) monitoring well and analyzed by 21st Century Environmental Laboratories for VO+15 and BN+15. A summary of sampling activities including parameters analyzed is provided in Table 2-2.

The groundwater samples were collected using decontaminated teflon bailers. Prior to sampling, the wells were purged. Samples were placed into laboratory prepared sample bottles and placed in coolers with ice for transportation to the laboratory. In addition to the well samples, one duplicate sample was obtained from MW-4 and one trip blank and one field blank were collected and analyzed.

As noted in the analytical report narrative, volatile organic analysis surrogates for sample Nos. MW-4-2928995 and MW-4-2928995-Dup were outside of the acceptable range. Because the

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surrogate did not pass quality control requirements they were re-analyzed. Surrogates for the second run were within acceptable limits.

The frequency of sampling and parameters analyzed were consistent with the applicable NJDEPE regulations at the date of closure, which were the "Technical Requirements for Site Remediation - Proposed New Rules" (N.J.A.C. 7:26E-1 et seq., dated May 1992).

TABLE 2-1

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SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES BUILDING NO. 750 UST NO. 191 & 192 FORT MONMOUTH, NEW JERSEY

Sample Location	Sample No.	Sample Location	Semple Depth (f)	Date of Collection	Matrix	Sample Type	Analytical Parameters	Sampling Method
Site A	841A	Bottom of Piping Chase	2	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site B	842B	Bottom of Piping Chase	2	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site C	843C	Bottom of Piping Chase	2	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site D	844D	Bottom of Piping Chase	2	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site E	845E	Bottom of Piping Chase	2	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site F	846F	Excavation Sidewall	3-4	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site G	847G	Excavation Sidewall	3-4	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site H	848H	Excavation Sidewall	3-4	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site I	849I	Bottom of Excavation	3-4	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site J	850J	Excavation Sidewall	3-4	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site K	851K	Bottom of Piping Chase	3	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site L	852L	Bottom of Piping Chase	3	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site M	853M	Bottom of Piping Chase	3	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site N	854N	Excavation Sidewall	5	26/2/9	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site O	8550	Excavation Sidewall	5	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop
Site P	856P	Bottom of Excavation	8	6/2/92	Soil	Post-Excavation	Lead, VO+15	Stainless Steel Scoop

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TABLE 2-1 (CONTINUED)

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SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES BUILDING NO. 750 UST NOS. 191 & 192 FORT MONMOUTH, NEW JERSEY

	_	<u> </u>	_	
Sampling Method	Stainless Steel Scoop	Stainless Steel Scoop	Stainless Steel Scoop	Stainless Steel Scoop
Analytical Parameters	Lead, VO+15	Lead, VO+15	Lead, VO+15	Lead, VO+15
Sample Type	Post-Excavation	Post-Excavation	Post-Excavation	Post-Excavation
Matrix	Soil	Soil	Soil	Soil
Date of Collection	6/2/92	6/2/92	6/2/92	6/2/92
Sample Depth (ft)	80	8	80	8
Sample Location	Excavation Sidewall	Excavation Sidewall	Excavation Sidewall	Bottom of Excavation
Sample No.	857Q	858R	859S	860T
Sample Location	Site Q	Site R	Site S	Site T

Abbreviations:

V0+15 - Volatile Organic Compounds plus 15 tentatively identified compounds.

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TABLE 2-2

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SUMMARY OF GROUNDWATER SAMPLING ACTIVITIES FORT MONMOUTH, NEW JERSEY UST NO. 191 & 192 **BUILDING NO. 750**

Decontaminated Teflon Bailer Decontaminated Teflon Bailer	VO+15, BN+15 VO+15, BN+15	Monitoring Well Monitoring Well	Aqueous Aqueous	4/21/93 4/21/93	MW-3 MW-4
Decontaminated Teflon Bailer	VO+15, BN+15	Monitoring Well	Aqueous	4/21/93	MW-3
Decontaminated Teflon Bailer	VO+15, BN+15	Monitoring Well	Aqueous	4/21/93	MW-2
Decontaminated Teflon Bailer	VO+15, BN+15	Monitoring Well	Aqueous	4/21/93	MW-1
Samping Method	Analytical Parameters	Sample Type	Matrix	Date of Collection	nple Location

Abbreviations:

BN+15 - Base neutral compounds plus 15 tentatively identified compounds. VO+15 - Volatile Organic analysis plus 15 tentatively identified compounds.



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SECTION 3.0

CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL AND GROUND WATER SAMPLING RESULTS

To evaluate soil conditions following the substantial modification of the UST piping system for UST Nos. 191 and 192, twenty post-excavation soil samples were collected and analyzed by Analytical Associates Laboratories for VO+15 and lead. The post-excavation soil sample results were compared to NJDEPE Impact to Ground Water Soil Cleanup Criteria (revision dated 3 February 1994). All samples contained either non-detectable concentrations of contaminants or concentrations of contaminants below NJDEPE impact to groundwater soil cleanup criteria.

To evaluate groundwater conditions following the substantial modification of the UST piping system, one round of groundwater sampling was collected and analyzed for VO+15 and BN+15 by 21st Century Environmental, Inc. Analytical results from the groundwater samples were compared to NJDEPE Class II-A Ground Water Quality Criteria (N.J.A.C. 7:9-6.4, 6.8 and Table 1).

Benzene and total xylenes were detected in groundwater samples collected from MW-4 (12 ug/L and 64 ug/L, respectively). These concentrations of contaminants exceed the NJDEPE Class II-A Ground Water Quality Criteria. Methylene chloride was detected in all groundwater samples. Reported concentrations of methylene chloride were in excess of the NJDEPE's Class II-A Ground Water Quality Criteria. All analytical results for methylene chloride were marked with the data qualifier "B" to indicate methylene chloride was present in laboratory's quality control method blank sample. Therefore, the detected concentrations of methylene chloride in groundwater samples are attributable to laboratory induced contamination and not related to the operation of the piping. Figure 3-1 depicts the location of monitoring wells and contaminant concentrations for detected volatile and semivolatile compounds.

A summary of the analytical results and comparison to NJDEPE Impact to Ground Water Soil Cleanup Criteria is provided in Table 3-1. A summary of the analytical results for groundwater and comparison to NJDEPE Class II-A Ground Water Quality Criteria is provided in Table 3-2. A summary of the analytical methods used and quality assurance information is provided in Table 3-2. The analytical data package summary is provided in Appendix F. The full data package, including associated quality control and chromatograph data is on file at U.S. Army, DPW.

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3.2 CONCLUSIONS AND RECOMMENDATIONS:

On 7 June 1993, DPW modified the piping system for UST Nos. 191 and 192 and closed the associated piping at Building 750 in the Main Post Fort Monmouth.

Ground Water flow direction at Building 750 is to the northeast based on water level readings obtained 10 January 1994. Due to the concentrations of contaminants detected in the downgradient well (MW-4) which exceed NJDEPE Class II-A Ground Water Quality Criteria, it is proposed that each monitoring well be analyzed quarterly for a period of one year. Each sample will be analyzed for VO+15. The analytical results will be compared to NJDEPE Class II-A Ground Water Quality Criteria. After completion of the quarterly sampling, an addendum to this report will be submitted to NJDEPE outlining sampling results and recommending further action if necessary.

Based on the remedial measures performed and the absence of contamination in the post excavation samples, it is recommended that no further action be required for soil surrounding the piping chases and dispenser areas.

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SUMMARY OF ANALYTICAL RESULTS FOR SOILS FORT MONMOUTH, NEW JERSEY BUILDING NO. 750 UST NOS. 191 & 192

Sample ID No		841A	842B	843C	844D	845E	846F	847G	
Lab ID No.		13608	13609	13610	13611	13612	13613	13614	NJDEPE Impact to
Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Ground Water Soil Cleanun
Sample Type		PE	PE	E	PE	34	ΒE	BE	Critena
Date of Collection		6/2/92	6/2/92	6/2/92	6/2/92	26/2/9	6/2/92	6/2/92	
Analytical Parameters	Units								
Inorganics									
Lead	mg/kg	QN	5.46	5.75	2.81	2.51	4.38	5.54	NC
Volatile Organic Compounds									
Methylene Chloride	mg/kg	0.002 JB	0.0037 JB	0.0066 B	0.0063 B	0.0083 B	ND B	0.0075 B	1
Methyl Tert-Butyl Ether (MTBE)	mg/kg	0.0064	0.0086	0.0034 J	Q	Q	Q	QN	NC
Benzene	mg/kg	ND	0.0027 J	QN	Q	QN	QN	QN	1
Xylene (Total)	mg/kg	ND	0.0147 J	DN	QN	Ð	QN	Ð	10
1,2-Dichlorobenzene	mg/kg	ND	0.061	0.0037 J	QN	QN	QN	QN	50
Acetone (Tentatively Identified Compound)	mg/kg	ND	ND	0.006	QN	0.023	0.007	0.012	50

Abbreviations:

No subsurface cleanup criterion has been proposed for this analyte by NJDEPE.
Indicates compound not detected.
Post-Excavation.
Milligrams per kilograms. NC NC NC NC NC

mg/kg:

Data Qualifiers:

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Indicates also present in blank.
Indicates detected below method detection limit.

TABLE 3-1 (CONTINUED)

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SUMMARY OF ANALYTICAL RESULTS FOR SOILS FORT MONMOUTH, NEW JERSEY UST NOS. 191 & 192 **BUILDING NO. 750**

Sample ID No.		848H	8491	8501	8451K	852L	ME28	865N	
Leb ID No.		13615	13616	13617	13618	13619	13620	13621	NIDEPE Impact to
Marix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Ground Water Soil Cleanur
Sample Type		PE	PE	PE	PE	Ed	PE	FE	Criteria
Date of Collection		6/2/92	<i>6121</i> 92	<i>6121</i> 92	6/2/92	6/2/92	6/2/92	6/2/92	
Analytical Parameters	Units								
Inorganics									
Lead	mg/kg	QN	9.58	2.88	3.50	2.74	2.40	2.87	NC
Volatile Organic Compounds	-								
Methylene Chloride	mg/kg	0.0042 JB	0.0052 JB	0.0043 JB	0.0043 JB	0.0052 JB	0.0067 B	0.0039 JB	1
Methyl Tert-Butyl Ether (MTBE)	mg/kg	0.0093	0.160	0.0057	0.0020 J	0.0022 J	0.0088	Ð	NC
Benzene	mg/kg	0.0036 J	QN	QN	QN	QN	QN	Ð	1
Xylene (Total)	mg/kg	Q	0.0069	Q	QN	QN	QN	QN	10
1,2-Dichlorobenzene	mg/kg	QN	QN	QN	ND	ND	QN	QN	50
Acetone (Tentatively Identified Compounds)	mg/kg	0.004	0.005	QN	QN	DN	DN	DN	50

Abbreviations:

- No subsurface cleanup criterion has been proposed for this analyte by NJDEPE.
 Indicates compound not detected.
 Post-Excavation.
 Milligrams per kilograms. Ü Ä Ä
- mg/kg:

Data Oualifiers:

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- Indicates also present in blank.
 Indicates detected below method detection limit.

TABLE 3-1 (CONTINUED)

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SUMMARY OF ANALYTICAL RESULTS FOR SOILS FORT MONMOUTH, NEW JERSEY UST NOS. 191 & 192 **BUILDING NO. 750**

Sample ID No		8550	856P	857Q	858R	8595	860T	Method Blank	
Lab ID No		13622	13623	13624	13625	13626	13627	VBLK	NJDEPE Impact to
Matrix		Soil	Soil	Soil	Soil	Soil	Scil	Soil	Ground Water Soil Cleannp
Sample Type		PE	PE	PE	Æ	PE	PE	vð	Criteria
Date of Collection		6/2/92	6/2/92	6/2/92	6/2/92	6/2/92	612/92	VN	
Analytical Parameters	Units								
Inorganics									
Lead	mg/kg	DN	QN	QN	QN	6.88	8.33	MR	NC
Volatile Organic Compounds									
Methylene Chloride	mg/kg	0.0055 JB	0.0071 B	AD B	0.0046 JB	RD B	0.0015 B	0.0024 J	1
Tert-butyl Methyl Ether (MTBE)	mg/kg	ND	0.0042 J	QN	QN	QN	0.002 J	QN	NC
Benzene	mg/kg	ND	0.0015 J	QN	Ð	UN	QN	QN	1
Xylene (Total)	mg/kg	ND	ND	Q	DN	ND	Q	QN	10
1,2-Dichlorobenzene	mg/kg	ND	ND	QN	QN	ND	QN	ND	50
Acetone (Tentatively Identified Compound)	mg/kg	0.006	QN	QN	QN	0.018	DN	DN	50

Abbreviations:

- Not applicable.
 No subsurface cleanup criterion has been proposed for this analyte by NJDEPE.
 Indicates compound not detected.
 Analysis not requested.
 Post-Excavation.
 Quality Assurance sample.
 Milligrams per Kilograms.

- NA: NC: ND: NR: QA: mg/kg:

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SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER FORT MONMOUTH, NEW JERSEY UST NOS. 191 & 192 **BUILDING NO. 750**

Sample ID No		MW-1	DW-2	E-WM	MW4	MW-4 (Dup)	Method Blank	
Lab D No		A1629	A1628	A1627	A1630	A1631	NA	NJDEPE Class II-A
Matrix		Aqueous	Aqueous	encenby	Aqueous	Aqueous	aucoup	Ground Water Ouality
Sample Type		MW	WW	WW	MW	WW	ð	Criteria
Dute of Collection		4/21/93	4/21/93	4/21/93	4/21/93	4/21/93	NA	
Analytical Parameters	Units					-		
Volatile Organic Compounds	:							
Xylene (Total)	ug/L	QN	QN	Q	64	53	QN	64
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Kylene (Total)	ng/L	QN	DN	DN	64	53	QX	40
Benzene	ng/L	ND	QN	QN	12	6	ND	1
Toluene	ug/L	DN	ND	ND	16	12	ND	1,000
Ethylbenzene	ug/L	DN	QN	ND	6.8	5.4	ND	700
Methyl Tert-Butyl Ether (MTBE)	ng/L	ND	QN	30	500	500	DN	NC
Acetone	ng/L	140B	140B	2.7 JB	4.2.1	Ð	3.6JB	700
Methylene Chloride	ng/L	2.0 JB	1.9 JB	3.9.1B	2.2.18	2.9.18	3.1.18	2
Tertiary Butyl Alcohol	ng/L	DN	QN	DN	6.6 J	7.2 J	UD	NC
Base Neutral Compounds								

Butybenzylphthalate	ug/L	4.1.1	Ð	QX	2.5 J	Ð	Ð	100
Bis(2-ethylhexyl)phthalate	ug/L	1.0.1	QN	QN	QN	QN	QN	100
Abbaariintinationaa								

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 No Class II-A groundwater cleanup standard has been proposed for this analyte by NJDEPE.
 Indicates compound not detected.
 Analysis not requested. Abbreviations: NA: - Not Available. NC: - No Class II-A gro ND: - Indicates compou NR: - Analysis not requ MW: - Monitor well.

- Quality Assurance sample. - Micrograms per Kilograms. QA:

ug/L:

Data Qualifiers:

 Indicates compound detected in blank.
 Indicates compound detected below method detection limit (MDL). ä ::

TABLE 3-3

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ANALYTICAL METHODS/QUALITY ASSURANCE SUMMARY TABLES FORT MONMOUTH, NEW JERSEY **UST NO. 191 AND 192 BUILDING NO. 750**

		_		
USEPA SW-846 Analytical Method	8240	6010	USEPA-CLP-IFB	8270
Preservation Method	Cool to 4°C	Cool to 4°C	Cool to 4°C	Cool to 4°C
Date Analysis Completed	6/8/92	6/11/92	4/28/93	5/13/93
Date Collected	6/2/92	6/2/92	4/21/93	4/21/93
Matric	Soil	Soil	Aqueous	Aqueous
No. of Sumples Collected	19	19	4	4
Analytical Parameter	V0+15	Lead	V0+15	BN+15

Abbreviations:

USEPA-CLP-IFB - Volatile samples were analyzed using the method cited in the USEPA-CLP-IFB version 2/88. The CLP volatile method is based on USEPA Method 624 and SW-846. VO+15: - Volatile Organic Compounds plus 15 tentatively identified compounds. V0+15:

C: BN+15:

Celsius.
 Base Neutral Compounds plus 15 tentatively identified compounds.



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APPENDIX A

NJDEPE-BUST SUBSTANTIAL MODIFICATION PERMIT

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UNDERGRC IND STORAGE TANK E STEM
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 # 5-91-2811 UST # 0081533 NOV 221991, April NOV 221991, April
Fort Monmouth Main Post West Building 750 Fort Monmouth
(Monmouth County) THE ABOVE LISTED FACILITY IS HEREBY GRANTED A PERMIT TO PERFORM THE FOLLOWING ACTIVITY IN ACCORDANCE WITH N.J.A.C. 7:14B-1 <u>et. sed</u> .:
Substantial modification to one (1) underground gasoline storage tank and one (1) diesel tank, to consist of installation of a discharge monitoring system, and spill and overfill prevention.
ON-SITE MANAGER: Joseph M. Fallon TELEPHONE: 908 532-1475
OWNER: United States Army TELEPHONE:

November 18, 1991 **EFFECTIVE DATE:**

.

November 18, 1992 **EXPIRATION DATE:**

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

Toldeto Kermit

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

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APPENDIX B

NJDEPE UST SITE ASSESSMENT SUMMARY FORM

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2/91	



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Date Resid	
TMS #	
Staff_	

State of New-Jersey Department of Environmental Protection and Energy

Division of Responsible Party Site Remediation

CN 028 Tremon. NI 08625-0028 Tel. # 609-984-3156 Fax. # 609-292-5604-

Scott A. Weiner Commissioner

1

Kari I. Delane Directo.

UNDERGROUND STORAGE TANK SITE ASSESSMENT SUMMARY

Under the provisions of the Underground Storage of Hazaroous 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. 7:148-8.2 or who have closed USTS pursuant to N.J.A.C. 7:148-9.1 et sec. and are subject to the site assessment requirements of N.J.A.C. 7:148-9.2 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 Uncerground 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.

6-7-94 Date of Submission

81533-191 & 192

FACILITY REGISTRATION #

FACILITY NAME AND ADDRESS 1.

Army Fort Monmouth

U.D. ALMY FOIL HOMMOUTH	
Directorate of Public Works, Building	, 167
Fort Monmouth, NJ 07703	County_Monmouth
(908) 532 - 1475	

OWNER'S NAME AND ADDRESS. If different from above

Telephone No.

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DISCHARGE REPORTING REQUIREMENTS 11

		92-05-07-1600
	A Was contamination found? X Yes	No TYPE, Case NO the Environmental Action Hotline (609) 292-7172)
	B . The substance(s) discharged was(were) _	Gasoline, Diesel
	C. Have any vapor hazards been mitigated?	X Yes No N/A
111.	DECOMMISSIONING OF TANK SYSTEMS	Closure Approval NoS-91-2811

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, temporaniy 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 Hazaroous Waste or Non-Hazardous Waste. Please include all required documentation of compliance with the requirements for handling contaminated excevated 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. Nonth arrow and scale
 - b. The locations of the ground water monitoring wells
 - c. Location and depth of each soil sample and bonng
 - 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 excevation as prescribed? X Yes No

NA No

N/A

2. Were soil borings taken at the tank system closure site as prescribed? X Yes

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. QAVQC Information as required

- UST-014 -291
 - D.... Ground Water Monsonng-
 - 1. Number of ground water monsoring weils instatled _____4
 - 2. Attach the analytical results of the ground water samples in tabular form- include the tollowinginformation for each sample from each weil:
 - a... Site diagram number for each well installed -
 - b. Depth of ground water surface -
 - c. Depth of screened interval
 - d... Method detection itms of the method used
 - e. Well loos
 - f. Well permit numbers
 - a. QAVQC Information as required

V. SOIL CONTAMINATION

A. Was soil contamination found? ____Yes X_No it "Yes", please answer Question 8-E If "No", please answer Question B

B. The highest sou contamination still remaining in the ground has been determined to be:

- _____ppo total non-targeted VOC 28 opp total BTEX. 17.4
- ppo total non-targeted B/N 1. NA opo total B/N. NA 2.
- opm TPHC NA 3.
- (for non-petroleum substance) Lead 9.58 _____ 4

C. Remediation of free product contaminated solis

- 1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface X Yes ____No
- 2. Free product contaminated soils are suspected to exist below the water table _____Yes ____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? X Yes ____No ____N/A
- E. Does soil contamination intersect ground water? X Yes No N/A
- VI. GROUND WATER CONTAMINATION
 - A. Was ground water contamination found? X Yes No If "Yes", please answer Questions B-G. if "No", please answer only Question B.
 - B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been datermined to be:

	98.8	onb total BTEX.	160.4	ppb total non-targeted VOC.
1. 2.	5.1	ppb total B/N	9.17	
3.	0	pob total MTBE	<u> </u>	(for non-petroleum substance)
4.	NA	000	NA NA	

5. greatest thickness of separate phase product found X N/A

6. separate phase product has been delineated ____Yes No

C. Result(s) of well search

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

2. The number of these wells identified is $_13$

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- D_Proximity of weils 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 20 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 1500 feet from the source and its screening begins at a depth of <u>5</u> 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 _20_____feet below grade. This well is located _1500_____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 <u>4500</u> feet from the source. This well is <u>50</u> feet deep and screening begins at a depth of <u>NA</u> feet. (no screen)
- E. A plan for separate phase product recovery has been included. ____Yes ___No _X_N/A
- F. A ground water contour map has been submitted which includes the ground water elevations for each well. X Yes ____No ____NA

G. Delineation of contamination

- 1. The ground water contaminants have been delineated to MCLs or lower values at the property boundanes. Yes X No
- 2. The plume is suspected to continue off the property at concentrations greater than MCLs. Yes X No
- 3. Off propeny access (circle one): is being sought has been approved has been denied NA

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:148-8.3(b) &9.5(a)3]

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C.7:148-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:148-8.3(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 NJA.C. 7:14B-8 and 9.1 am aware that there are significant penalties for submitting false. inaccurate. or incomplete information, including fines and/or imprisonment."

			ly
NAME (Print or Type)Charles Appleby	- SKINATONE	7-94
	U.S. Fort Monmouth (Preparer of Site Assessment Plan)		
CERTIFYING	NTREPE	CERTIFICATION	2056
ORGANIZATION	NJDEPE		

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VIII. <u>TANK_DECOMMISSIONING_CERTIFICATION_[person_performing_tank_decommissioning_perion_of</u> closure plan + N.J.A.C..7:148-9.5(a)4)

"I certify under-penalty of law that tank-decommissioning activities were performed incompliance with NJA.C. 7:14B-92(b)3. I am aware that there are significant penalties forsubmitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type	Charles Appleby	SIGNATURE	1 Scl	$\overline{\times}$
COUPANY NAME-	U.S. Army Fort Monmouth	DATE	6-7-94	0
	(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. 7:148-2.3(c)11].

"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 COMUS OUT
COMPANY NAME U.S. Army Fort Monmouth	DATE

B. The following certification shall be signed as follows (according to the requirements of N.J.A.C. 7:148-2.3(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 8, only the certification in A need to be made. In all other cases, the certifications of A and 8 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
	DATE



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ATTACHMENT I

NO/NA RESPONSE EXPLANATION

SAS QUESTION #	<u>RESPONSE</u>	EXPLANATION
V.A	No	No contaminants were identified in soil samples at concentrations exceeding proposed NJDEPE cleanup criteria.
V.B.2.3	N/A	Soil samples were not analyzed for these parameters.
VI.B.5,6	N/A	No free product was identified with respect to the substantial modification of UST Nos. 191 and 192.
VI.E	N/A	Same as above.
VI.G.1-3	No	Additional groundwater samples shall be collected in order to confirm the existence of groundwater contamination in the area surrounding the substantial modification of UST Nos. 191 and 192.

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APPENDIX C

MONITORING WELL INFORMATION

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SERIAL # 17288 Mail to Water Allocation CN 029 Trenton, N.J. 08625	STATE OF M RTMENT OF ENVIR DIVISION OF WA TRENT MONITORING	NEW JERSEY ONMENTAL PROTECTION TER RESOURCES ON, N.J. WELL PERMIT PPROVAL BY THE D.E.P. COM	Permit No. <u>99195</u> 99195 ORD #: 99195
Twner I.S. AEMY Address Fort Monmouth, NJ	07703	Driller <u>Garden St</u> Address <u>1565 Suite</u> <u>TOMS Pille</u>	ate Environmental Drillin 13, Rte 37 West 2r, NJ
Jame of Facility <u>513th Motor Por</u> Address <u>Fact Manmouth</u> , NJ	01, Bld 75c	Diameter of Well(s) Incl # of Wells 4 Applied for (max. 10) Type of Well	Proposed Q 0 I Depth of Well(s) Q 0 Feet Will pumping equipment be installed? YES NOX If Yes, give pump capacity GPM
Lot # Block# Municipality Tort Municipality	LOCATION County Monmouth	OF WELL(S) , Draw sketch of well(s) nea marked distances in feet. E a name and/or no	rest roads, buildings, etc. with Each well MUST be labeled with umber on the sketch.
Cate Atias map No	÷	200 100 100 100 100 100 100 100 100 100	N↑
1 40° 18'	ALDO	750	
FOR MONITORING WELLS, RECOVERY WELLS, OR PIE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE E Spill Fund Case ECRA Case CERCLA (Superfund) Site RCRA Site Underground Storage Tank NJPDES Municipal Discharge Permit NJPDES Industrial Discharge Permit Div. Hazardous Waste Mgmt. Enforcement Case Div. Water Resources Enforcement Case Water Supply Aquifer Test Observation Well Other (explain)	ZOMETERS, THE FOLLOWING BEING INSTALLED:	MUST BE COMPLETED BY THE	This Space for Approval Stamp This Space for Approval Stamp APPROVED Depart Fervironmental Protection Depart Fervironmental Protection Matter Resolutions Allocation Matter Resolutions (1992) NCT 27 1992
FOR Issuance of this permit is subject to the D.E.P. Er monitoring purposes only USE	conditions attached. (see next p	age) The well(s) may not be comple uncased borehole.	ted with more than 25 feet of total screen or
SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGU In compliance with N.J.S.A. 58:4A-14, application te	LATIONS PERTAINING TO THIS PERI n is made for a permit to d Signature o Signature o	f Driller	License # 1098 Blue Driller - White

	_					
	MONITO	DRING WE	ELL RECO	RD		
		We	Il Permit No.	29 2	8992	
		Atla	as Sheet Coo	rdinates	<u></u>	
Address	U.S. ARMY	1818				
City	KRT INTERUTI		, N	F		
			State		Zip Code	
WELL LOCATION - if not the same :	as owner please give addr	ess. Ov	ner's Well No			
County	MunicipalityRAN	FURT FOR		"		
Address					DIOCK NO	
TYPE OF WELL (as per Well Permit			Dete			
Regulatory Program Requiring Well_	UST		Case	weii compiete	0/0/10/92	
CONSULTING FIRM/FIELD SUPER	/ISOR (if applicable)	S. Arm	0000		TI Que Car	× 1
WELL CONSTRUCTION	· · · · · · · · · · · · · · · · · · ·	r	<u>*</u>		_ 1 ele. # <u>708 - 5.72</u>	64
Total depth drilled		Depth to	Depth to	Diameter		
Well finished to		[From lar	nd surface]	(inches)	Type and Material	
Borehole diameter:	Inner Casing			<u>†−−−</u> +		
Top <u>1.2</u> in.	Outer Casing	, h	p=1	┟╼╼╼ <u>╺</u> ┥		
Bottomin.	(Not Protective Casing)	6	4	41	PUL F.J.	
Well was finished: 🔲 above grade	(Note slot size)		15	41	PHIET	
Ilush mounted	Tail Piece					_
If finished above grade, casing	Gravel Pack	74'	1-1	, .		
height (stick up) above land		56	15	16	SAND	
surfaceft.	Annular Seal/Grout	6	7.6	12"	BENSEAL	
Was steel protective casing installed?	Method of Grouting					
Static water level after drilling -7 '	, H			(Canica)		
Water level was measured using 4 to	ft. 5. 1. Tantor	GEO		geophysi	cal logs should be attached	r d.)
Well was developed for 3 C m m hon	rsat	0	(¢)	CIN		Ź
Method of development	ົປ ຫ ຼ			- GW		
Vas permanent pumping equipment in:		- 18 -	- 13' -	5ω		
^o ump capacitygpm		1.01	و سر ر	~ 1		
² ump type:	<u> </u>	13-	- 15' -	CL	GREEN	
Drilling Method		,		_		
Type	of Rig FGI AUGUL	= w	A 76K 1	a7 7	6	
Jame of Driller (<u>KAUBU</u> (<u>AR</u>	Ten		•			
evel of Protection used on site (Yes No					
J. License No 1078	ie) None>D C B A					
ame of Drilling Company						
	LEIN GRATE DEILLIN	i contentit				
tate rules and regulations	reterenced well in accord	dance with a	II well permi	t requiremer	nts and all applicable	
. <u>- geranieno</u> ,	1. 1. 1		,			
		12 11				
Driller's Signati	ure aller	BUTTO	5	Data	10-21-97	

MONITORING WELL RECORD Well Permit No. Address Hais Sheet Coordinates	12/91	Ne rsey Departm Bi	ent of Environr ureau of Water	nental Protectio Allocation	n and E	131.Cg 1	50
Weil Perrit No. 29993 Address 33 14 441 OWNER IDENTIFICATION - Owner 13.5. ARM 513 PDTOFI TOXA, BARG - 160. 33 20993 OWNER IDENTIFICATION - Owner 14461 CON 513 PDTOFI TOXA, BARG - 160. 141 200 OWNER IDENTIFICATION - Owner 14461 CON 513 PDTOFI TOXA, BARG - 160. 141 200 141 OWNER IDENTIFICATION - If not the same as owner please give address. Owner's Well No. 160 No. 3 160 No. 3 Address Municipatity (020MITATING) Lot No. 1 Block No. 3 160 No. 3 Address Municipatity (020MITATING) Lot No. 1 Block No. 3 160 No. 3 TYPE OF WELL (as per Well Pormit Categorie0011111111111 Date well completed (0.1.201-92. Case ID. # Tol No. 1 Block No. 3 Mell construction 15 Mar. Tol No. 1 Block No. 3 160 No. 3 Mell construction 15 Mar. Tol No. 1 Block No. 3 160 No. 1 170 No. 1 Block No. 3 Mell construction 15 16 17 170 No. 1		MONITO		LL RECO	RD		
With a mark No. 313 Mark Andrews 314 314 314			Ma		29 2	8993	
OWNER IDENTIFICATION - Owner 1.5 ANY Address			Atia	as Sheet Coor	dinates		441
Address 313 RMTRF HXAF, BAR, 1500 City PART HXAF, BAR, 1500 City State Zip Code WELL LOCATION - If not the same as owner please give address. Owner's Well No. Edited address Municipality (12XAMYAT HXAR) Lot No. Block No. 3 Address Municipality (12XAMYAT HXAR) Lot No. Block No. 3 TYPE OF WELL (as per Well Permit Categories/MITTR/INF) Date well completed [D 30)P92 Regulatory Program Requiring Well IST Case ID. # Tele. # 902-532.622 WELL CONSTRUCTION Inner Casing Inner Casing Inner Casing Total depth drilled 1 Inner Casing Inner Casing Inner Casing Not Protective Casing 1 1 P16 F.J. Mell was finished: above grade, casing Grave Pace 3'.C. 1.5'. 1.6.4.7.9.10.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	OWNER IDENTIFICATION - Owner	U.S. ARMY		·.	· · · · ·	··-	
City FORT EXERCISE State Zip Code WELL LOCATION - If not the same as owner please give address. Owner's Well No.	Address	513 MANOR POLA,	BLDG. 75C		· · · · · · · · · · · · · · · · · · ·		·
WELL LOCATION - If not the same as owner please give address. Owner's Well No.	City	PORT IRACKOTH		State		7-0-1	
Municipality Owner's Well No.			· · ·			Zip Code	
Address	County	s owner please give addr	ess. Ow	ner's Well No	•	·	с. С
TYPE OF WELL (as per Weil Permit Categori@MITIMINE Date well completed [0_130]?92 Regulatory Program Requiring Weil (KST Case ID. #	Address	wunicipality 11 26AN	MAT HORO	·	Lot No1	L Block I	No3
If the Well Lab per Well Partit Categorie00IITCH/INF Date well completed 10 130 192 Degulatory Program Requiring Well UST Case I.D. #							
Annular Seal/Court Case LD. #	Regulatory Program Degulatory Will	ategories) <u>NTIONING</u>		Date v	well complete	ed 10 130 18	92
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WELL CONSTRUCTION Depth to Depth to Doptin to Top (ft.) Bottom (ft.) Diameter Top (ft.) Bottom (ft.) Diameter Top (ft.) Bottom (ft.) Diameter Top (ft.) Bottom (ft.) Well finished to ft. Inner Casing (ft.)	JONSULTING FIRM/FIELD SUPERV	ISOR (if applicable)	Am			Tele. # <u></u>	-537-62
Total depth drilledft. Top (ft.) Bottom (ft.) (inches) Type and Material Well finished toft. Inner Casingft. Top (ft.) Bottom (ft.) (inches) Type and Material Borehole diameter; Topin. Bottomin. Bottomin. From land surface) (inches) Type and Material Bottomin. Bottomin. Bottomin. Duter Casingin. Guter Casingin. File /in. File /in. File /in. File /in. Note stock stock Inner Casingin. Outer Casingin. Guter Casingin. File /in. File /in. Note stock stock Innular Seal/Grout 6 'in. File /in. File /in. File /in. Vas steel protective casing installed? Method of Grouting Method of Grouting GEOLOGIC LOG Copies of other geologic logs and/or geophysical logs should be attached. Yas been protective casing installed? Method of Grouting GEOLOGIC LOG Copies of other geologic logs and/or geophysical logs should be attached. Imp capacity	WELL CONSTRUCTION		Depth to	Depth to	<u> </u>		
Well finished to 15' ft. Sorehole diameter; Top 10, 12' in. Botom 12' in. Well was finished: above grade If finished above grade Inner Casing If inshed above grade, casing eight (tick up) above land Inner Casing If all Piece Innular Seal/Grout Annular Seal/Grout 6' 3' 6' 15' 12' SAND Annular Seal/Grout 6' 3' 6' 12' ISENSEAL Ves Stop protective casing installed? Method of Grouting Yes No tatic water level after drilling 1/ C' ft. GEOLOGIC LOG [Copies of other geologic logs and/or geophysical logs should be attached.] Imp capacity	Total depth drilled 15 ft.		Top (ft.)	Bottom (ft.)	Diameter (inches)	Type and M	latarial
Borehole diameter: Top 12 in. Bottom in. Duter Casing Bottom in. Bottom in. Well was finished: above grade	Well finished to <u>15</u> ft.	J	[From lar	nd surface]	(menes)		aleriai
Top $\frac{12^{\circ}}{12^{\circ}}$ in. Bottom $\frac{12^{\circ}}{12^{\circ}}$ in. Well was finished: Babve grade tinished above grade tinished of Grouting the taic water level after drilling $\frac{12^{\circ}}{12^{\circ}}$ ft. tatic water level aft. tat	Borehole diameter:	Inner Casing					
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Well was finished: above grade Image: State of the state of t	Bottom <u>12</u> in.	(Not Protective Casing) Screen	0		9	PUC F.	J
Image: Signature Tail Piece Tail Piece Image: Signature	Vell was finished: 🔲 above grade	(Note slot size)	43	15.	.4 "	P.16 F.	J.
If inished above grade, casing eight (stick up) above land urfacet. Gravel Pack $3'6''$ $15''$ $12''$ $SAND$ Annular Seal/Grout $6'''$ $3'6'''$ $12'''$ $SAND$ Vas steel protective casing installed Method of Grouting	flush mounted	Tail Piece	· .				
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unade ft. Autifular SearCorout E 3.6 12 13EUSEAL Vas steel protective casing installed? Method of Grouting Method of Grouting GeoLogic Log (Copies of other geologic logs and/or geophysical logs should be attached.) Atter level was measured using $\Delta A Tcx TADE$ GeoLogic Log (Copies of other geologic logs and/or geophysical logs should be attached.) Atter level was measured using $\Delta A Tcx TADE$ geophysical logs should be attached.) Atter level was measured using $\Delta A Tcx TADE$ GeoLogic Log (Copies of other geologic logs and/or geophysical logs should be attached.) Atter level was measured using $\Delta A Tcx TADE$ geophysical logs should be attached.) $O'-S$ $GeoLogic Log$ (Copies of other geologic logs and/or geophysical logs should be attached.) Imp capacity gpm mp capacity gpm $Sign A Tcx TADE$ $O'-S$ Guo Imp capacity gpm gpm $Sign A Tcx TADE$ $Sign A Tcx TADE$ $Sign A Tcx TADE$ Illing Method gpm	eight (stick up) above land	Appular Seel/Orent	$\frac{>6}{7}$	71,+	12	SFIND	
Vas steel protective casing installed Method of Grouting $\exists Yes \ Mo \\ tatic water level after drilling \boxed{\frac{7'}{R}} ft.Atter level was measured using \underbrace{MATCKTADE}_{MATCHTADE}(Copies of other geologic logs and/orgeophysical logs should be attached.)\exists Painu \ hours at _gpm\exists Painu \ hours at _geologic logs and/or \exists Painu \ hours at _gpm\exists Painu \ hours at _gpm}\exists Painu \ hours at _gpm}$	urfaceft.	Annular Seal/Grout	E	36	121	ISENSEA	2
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$\begin{array}{c} \text{define was the addred using } \underline{MA \ 16K \ 1ADE} \\ \text{fell was developed for } \underline{D \ m_{inv}} \text{ hours at } \underline{F} \ gpm \\ \text{ethod of development } \underline{CAR} \ DMP \\ \text{as permanent pumpling equipment installed? } Yes \\ \text{as permanent pumpling equipment installed? } Yes \\ \text{mp capacity } \underline{gpm} \\ \text{mp capacity } \underline{gpm} \\ \text{mp type: } \underline{gpm} \\ \text{mp type: } \underline{gpm} \\ \text{mp type: } \underline{gpm} \\ \text{mm of Driller } \underline{CANDr \ Big \ EGL \ A \ Verk} \\ \text{me of Driller } \underline{CANDr \ BKITTor \\ \text{asthethod} \\ \text{Ming of Driller } \underline{CANDr \ BKITTor \\ \text{me of Driller } \underline{CANDr \ BKITTor \\ \text{me of Driller Company } \underline{MATX \ MATX \ MATX \ MATX \ MATX \ Matter \\ \text{Ming of Driller Company } \underline{MATX \ MATX \ MATX \ MATX \ Matter \\ \text{Ming of Driller Company } \underline{MATX \ MATX \ MATX \ MATX \ Matter \\ \text{Ming of Driller S Signature } Math \ Mather \\ Math \ Math $	and water level after drilling	ft.	GEO	LOGIC LOG	geophys	ical logs should b	ogs and/or e attached.)
ethod of development	ell was developed for 70 minutes	ICK TADE	\square	101			
Tas permanent pumping equipment installed? Yes $[No$ $S - 13'$ SW ump capacitygpm ump type: illing Method illing Fluid Type of Rig <u><i>F</i>(<i>f</i>)</u> <u>A UGER</u> are of Driller <u>CADDC PRITTOL</u> watht and Safety Plan submitted? Yes $[No$ vel of Protection used on site (circle one) <u>MOTED</u> C B A J. License No. <u>IOTE</u> me of Drilling Company (RHENSI STATE INTERTIFICIENT CONTENT ertify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable atter rules and regulations. Driller's Signature <i>Duble Rett</i> Date Date Date Date Date TO = 31 - 72 COPIES: White & Green - DEPE Canary Driller Pink - Owner Goldenrod - Health Dent	ethod of development	rs at gpm			60	د د ۲ مارید. دادگراههای در این میکند میکند. دادگراههای در میکند میکند	
Imp capacitygpm gpm Jimp type:	as permanent pumping oquipment		- 8-	1.31	SW	- mild?, , , , , , , , , , , , , , , , , , ,	Contradicional Providence
Imp type:	Imp capacity	stalled? Yes. K No		۰	، و ^ت ،		• 11
illing Method	Imp type:		13-	15 - 6	14 6	RUUN	1 1 1 1 1 1 1
illing Fluid Type of Rig <u>Floid A UGER</u> WH TICK AT 76' ame of Driller <u>CANDE PRITTOK</u> WH TICK AT 76' walth and Safety Plan submitted? Yes No vel of Protection used on site (circle one) Mone D C B A J. License No. <u>1078</u> me of Drilling Company <u>GARTAN STATE INCLUSION</u> ertify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable ate rules and regulations. Driller's Signature Driller's Signature <u>Garage Diffect</u> Driller's Signature <u>COPIES</u> : White & Green - DEPE Copies: White & Green - DEPE Copies: White & Green - DEPE	illing Method	·		1		- / 44	· · ·
and of Driller <u>CADDR PRITOR</u> Palth and Safety Plan submitted? Yes PNo vel of Protection used on site (circle one) Nore D C B A J. License No. <u>1078</u> me of Drilling Company <u>GARTYENTE PRITE PRITE PRITE OF PARE</u> ertify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable ate rules and regulations. Driller's Signature <u>Durified Referenced R</u>	illing Fluid Type	of Rig EGI AUGU	$e \mid c$	NATION	AT -	76	
Pailth and Safety Plan submitted? Yes Yes Yes Vel of Protection used on site (circle one) Yes Yes Yes J. License No. 1078 Yes Yes Yes me of Drilling Company GARDEN STATE INCLUSION Yes Yes Yes ertify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable ate rules and regulations. Date 10-31-92 Driller's Signature Yes Yes Yes Yes COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dent	me of Driller CLAUDE E	RITTOL					
vel of Protection used on site (circle one) None D C B A J. License No. <u>1098</u>	alth and Safety Plan submitted?	Yes No		-			
J. License No. <u>1010</u> me of Drilling Company	el of Protection used on site (circle or	NOTED C B A					
me or Drilling Company GARDEN STATE BUILLING COMPANY ertify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable ate rules and regulations. Driller's Signature Output COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept	License No. <u>1010</u>						
ertify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable ate rules and regulations. Driller's Signature	me of Drilling Company	NO STATE DOLLA		<u> </u>			
Driller's Signature COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept	ertify that I have drilled the above-	referenced well in accor	rdance with	all well permi	it requireme	ents and all applic	able
Driller's Signature COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dent	ine rules and regulations.	C. C. C.		-			
COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dent	Driller's Signat	ure Wando.	12-11-		- -	10.21	-97
COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dent			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		Date	e 10-51	-/
	COPIES: White	& Green - DEPE Canary	- Driller Pi	nk-Owner G	Goldenrod - H	ealth Dent	T 5

	MONITO	RING WE	LL RECOF	RD (S)	1414 h 2	
		Wel	Il Permit No	29 23 2 <u>9</u>		141
	D C BONV	Atla	is Sheet Coord	inates		
OWNER IDENTIFICATION - Owner _	513 MOTOR POOL, 1	110. 75 2	· · · · · · · · · · · · · · · · · · ·			
Address	FUEL WARNAUT		<u>N</u>			
Спу		<u>.</u>	State		Zip Code	
WELL LOCATION - If not the same a	s owner please give addre	ss. Ow	/ner's Well No.		· ·	~
County Address	Municipality	CHT FRAG		_ Lot No	Block N	lo
TYPE OF WELL (as per Well Permit C Regulatory Program Requiring Well	ategorie SONITORING		Date w Case I.	vell completed D. #	<u> 11 / 2/</u>	92
CONSULTING FIRM/FIELD SUPERV	ISOR (if applicable)	Army	1		Tele. # 908	-532-(
WELL CONSTRUCTION	i i se ganna i transferio de la transferio	Denth to	Ne k z h	., <u>-</u>	k tem	
Total depth drilledft.		Top (ft.) [From lat	Bottom (ft.) nd surface]	Diameter (inches)	Type and I	Material
Well finished toft.	Inner Casing				······	
Borehole diameter; Topin.	Outer Casing (Not Protective Casing)	6+	5'	4"	PUC.	F. J.
Bottom <u>12</u> in.	Screen (Note slot size)	E!	15!	41	DIIC	c C
Well was finished: above grade	Tail Piece			,	1-001	
If finished above grade, casing	Gravel Pack	36"	15	120	SAMID	
height (stick up) above land	Annular Seal/Grout	6"	3'6"	12.11	Phana	(
Was steel protective casing installed	Method of Grouting	~~	•		1	
					8 8-10 (1997)	
Static water level after drilling7	<u>6</u> _ft.	GE		(Copies geophys	of other geologic sical logs should	logs and/o be attache
Water level was measured using $\frac{\mathcal{U}_{I}}{\mathcal{U}_{I}}$	FILLE TA DE		MZ21	du	م المعادي المراكبية . محمد المراجب المحمد	• • •
Well was developed for <u>20 miss</u> he	ar s at <u>f</u> gpm				میرونین و	and and the second
wethod of developmentA		_ ;	3-7'-	4L	i s .c .v)
was permanent pumping equipment ii	nstalled? Carries CA No		1-13'-	6 -0	in in the second	
Pump type:) <i>(</i> 1 -	- -	an a
Drilling Method		13	3-15	CI (Coon	
Drilling Fluid Type	of Rig PLI MCGIL					
Name of Driller <u>CIAUP L</u>	3KITEN		LINTE	RAT	721	
Health and Safety Plan submitted?	Yes No			, ,, ,	10	
Level of Protection used on site (circle)	one) (Mone D C B A					
Name of Drilling Company	EDEN STATE LEFELL	NG COMPA	1.			
certify that I have drilled the above	e-referenced well in acc	ordance wit	h all well perr	nit requirem	ients and all app	licable
oraro rujeo ana regulationo.	11 6					_

	MONITO	RING WE	LL RECOF	RD		
		Wel	l Permit No	9 288 	然然。 了 人	·
	· ·	Atla	s Sheet Coord	linates		······
	I.S. ARMY		· · ·	<u>.</u>		
ddress	HAR PARANCE IN THE STATE	utu. 100,				
Sity			State		Zip Code	
VELL LOCATION - If not the same as	owner please give addre	ess. Ow	ner's Well No		<u>í</u>	
County	_ Municipality CORANE	HALL DOMAN		Lot No. 1	Block N	
ddress	×					
YPE OF WELL (as per Well Permit C	ategorieś WITH NATHR		Date w	vell complete	a /1 / 天语(17
Regulatory Program Requiring Well			Case I.	D. #		
	SOB (if applicable)	ARM	• • • • • • • • • • • • • • • • •		Tolo # 910	F22-6
			· · · · · · · · · · · · · · · · · · ·			-126-0
		Depth to	Depth to	Diameter		
otal depth drilled <u>/ =></u> ft.		[From lai	nd surfacel	(inches)	Type and M	ategiai
/ell finished to <u>15</u> ft.	Inner Casing					* -
orehole diameter:	Outer Casing	14				
$\frac{100}{12}$	(Not Protective Casing)	6	5	<i>4</i> ″	P.V.C. F	
	Screen (Note slot size)	:5'	15'	41	PUL F	
/ell was finished: above grade	Tail Piece					
	Crowel Deele	21,11		1001	CALL	
finished above grade, casing eight (stick up) above land	Gravel Pack	36	15	12	SHUD	
urfaceft.	Annular Seal/Grout	6	36	12	RENSEA	C
as steel protective casing installed?	Method of Grouting	1				
Yes I¥No			 		المراجعة المراجعة	Al and the
tatic water level after drilling $\frac{7' \mathcal{L}}{2}$	ft.	GEO		geophys	sicat logs should b	ogs and/or e attached.)
ater level was measured using <u>kr</u>	Ter TADE	6	121 !	2 14	 A state of the sta	
ell was developed for AC An here	rs ratgpm	70		0W	ایند و میکند. دانند به میکنوست از این وافقهای ه	Binan ay Internet Stars
ethod of development (> H >	DUID]]	- 7' 4	44		,
as permanent pumping equipment in	stalled? Yes		- 17	sm	1	4 - 1
Imp capacitygpm		· · · · · ·			•**	
illing Method AUGER		13	-15 C	-6		
illing Fluid Type	of Rig [36] Arca 1	115	11. 4 7 4	1. A.	-1,4	
ame of Driller			WA LUI	·· /T '	/ 6	
ealth and Safety Plan submitted?	Yes ANO					
vel of Protection used on site (circle o	ne) Mone D C B A					:
se No. 1078						
Company	DEN STATE DRILLIN	G CARENT	1			
villed the above	-referenced well in acc	ordance with	n all well pern	nit requirem	ents and all appli	cable
tions.	Con a					19 00
<u>/</u>	1 Carlos	the		_	51 H-G	72

GROUND WATER MONITORING WELL CERTIFICATION - FORM B - LOCATION

Name of Permittee:	United States Army
Name of Facility:	Fort Monmouth - Building No. 750
Location:	Fort Monmouth
	New Jersey
NJPDES Permit No:	NJ 29-28992

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LAND SURVEYOR'S CERTIFICATION

Well Permit Number; As assigned by NJDEPE's Water Allocation Section (609-984-6831): This number must be permanently affixed to the 29-28992 well casing. 74° 02' 58.6" Longitude (one tenth of a second): West 40° 18' 33.4" Latitude (one tenth of a second): North 18.79 Elevation of Top of Casing (cap off) Distance from Top of Casing (cap off) to ground <u>0.10</u> Owner's Well Number (As shown in the application MW-1 or Plans): Benchmark:

AUTHENTICATION:

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

lian L / ellenn

Professional Land Surveyor's Signature

William E. Telling, P.L.S. Professional Land Surveyor's Name

SEAL

<u>N.J.P.L.S. License No. 37211</u> Professional Land Surveyor's License #

GROUND WATER MONITORING WELL CERTIFICATION - FORM B - LOCATION

Name of Permittee:	United States Army
Name of Facility:	Fort Monmouth - Building No. 750
Location:	Fort Monmouth
	New Jersey
NJPDES Permit No:	NJ 29-28993

LAND SURVEYOR'S CERTIFICATION

Well Permit Number; As assigned by NJDEPE's Water Allocation Section (609-984-6831): This number must be permanently affixed to the 29-28993 well casing. 74° 02' 58.3" Longitude (one tenth of a second): West 40° 18' 33.0" Latitude (one tenth of a second): North 18.61 Elevation of Top of Casing (cap off) Distance from Top of Casing (cap off) to ground 0.10 Owner's Well Number (As shown in the application MW-2 or Plans): Benchmark:

AUTHENTICATION:

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E I

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

aus C. lene,

Professional Land Surveyor's Signature

William E. Telling, P.L.S. Professional Land Surveyor's Name

SEAL

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<u>N.J.P.L.S. License No. 37211</u> Professional Land Surveyor's License #

GROUND WATER MONITORING WELL CERTIFICATION - FORM B - LOCATION

Name of Permittee:	United States Army
Name of Facility:	Fort Monmouth - Building No. 750
Location:	Fort Monmouth
	New Jersey
NJPDES Permit No:	NJ 29-28994

LAND SURVEYOR'S CERTIFICATION

Well Permit Number; As assigned by NJDEPE's Water Allocation Section (609-984-6831): This number must be permanently affixed to the 29-28994 well casing. 74° 02' 57.8" Longitude (one tenth of a second): West 40° 18' 32.4" Latitude (one tenth of a second): North 19.04 Elevation of Top of Casing (cap off) Distance from Top of Casing (cap off) to ground 0.16 Owner's Well Number (As shown in the application MW-3 or Plans): Benchmark:

AUTHENTICATION:

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

Illun land

Professional Land Surveyor's Signature

William E. Telling, P.L.S. Professional Land Surveyor's Name

SEAL

<u>N.J.P.L.S. License No. 37211</u> Professional Land Surveyor's License #

GROUND WATER MONITORING WELL CERTIFICATION - FORM B - LOCATION

Name of Permittee:	United States Army
Name of Facility:	Fort Monmouth - Building No. 750
Location:	Fort Monmouth
	New Jersey
NJPDES Permit No:	NJ 29-28995

LAND SURVEYOR'S CERTIFICATION

Well Permit Number; As assigned by NJDEPE's Water Allocation Section (609-984-6831): This number must be permanently affixed to the well casing. <u>29-28995</u> 74° 02' 57.6" Longitude (one tenth of a second): West Latitude (one tenth of a second): 40° 18' 32.5" North Elevation of Top of Casing (cap off) 18.98 Distance from Top of Casing (cap off) to ground 0.19 Owner's Well Number (As shown in the application MW-4 or Plans): Benchmark:

AUTHENTICATION:

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

rein C. Tell lun,

Professional Land Surveyor's Signature

William E. Telling, P.L.S. Professional Land Surveyor's Name

SEAL

<u>N.J.P.L.S. License No. 37211</u> Professional Land Surveyor's License #



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APPENDIX D

WELL SEARCH INFORMATION

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WELL SEARCH SUMMARY TABLE MAIN POST AREA U.S. ARMY FORT MONMOLITH

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				STATIC		
		TOTAL	CASING	WATER		NJDEPE
	WELL	DEPTH	LENGTH	ELEV.	USF	PFRMIT
NO OWNER	ADDRESS	(FEET BGS)	(FEET)	(FEET BGS)	CODE	2
5 Eatontown Senior Housing	55 Wyckoff Road, Eatontown	192	1771	25	9	29-15008
14 Shell Oil Company	Block 110, Lot 25, Oceanport	12	0	4	Σ	29-24953
15 Shell Oil Company	Block 110, Lot 25, Oceanport	12	0	S	Z	29-24953
16 Shell Oil Company	Block 110, Lot 25, Oceanport	12	2	e	×	29-24953
17 Shell Oil Company	Block 110, Lot 25, Oceanport	:	2	3	×	29-24953
34 Boro of Eatowntown	Block 14, Lot 17, Eatontown	20	10	12.1	z	29-28236
35 Dennis Berweiter	Orchard St, Block 73, Lot 36, Eatontown	67	52	16		29-23690
36 Walter & Patricia Zinn	92 Sunnybrook Dr, Shrewsbury Boro	197	191	7		29-23608
37 V. J. Russo Realty	170 Ave of Commons, Shrewsbury Boro	250	245	4	0	29-27756
38 Price Communication Corp	1 Register Plaza, Shrewsbury Boro	28	15	8	Z	29-26185
39 A. Khristiansen	Trafalger PI, Block 69.04, Lot 4, Shrewsbury Bord	50	50	5	G	29-22571
40 H. Kodama	83 Sunny brook Dr, Shrewsbury Boro	250	210	8		29-26704
41 Boro of Eatontown	Block 14, Lot 17, Eatowtown	20	0	117	Z	29-20158
42 Boro of Eatontown	Block 14, Lot 17, Eatowtown	18	80	10.1	×	29-29159
43 Bill Rudolph	Relwof Ave, Block 98, Lot 1&2, Oceanport	45	35	0	Ľ	29-217RD
44 Kleiner Bros. Construction	Allenhurst & Myrtle Aves, Oceanport	50	40	2		29-6499
64 Travis Thomas	112 Orchid St, Oceanport	323	317	16	DG	29-14244
65 N.J. Transit Corporation	Silverside & Fairview Ave, Little Silver	*	*	*	Σ	29-13825
97 Shell Oil Company	1 Main Street, Oceanport	10	0	2.5	W/S	29-12553
98 Shell Oil Company	1 Main Street, Oceanport	6	-	0	N/S	29-12554
99 Shell Oil Company	1 Main Street, Oceanport	6	-	5	M/S	29-12555
100 Anthony S. Camara	121 Horseneck Point Rd, Oceanport	15	12	2		29-5084
101 Bridgewater Townhouse	57 Bridgewater Dr, Oceanport	180	155	12	σ	29-22549
113 Shell Oil Company	Route 35 and South Street, Eatontown	12	N	4.38	Σ	29-14180
	Houte 35 and South Street, Eatontown	12	2	5.1	Σ	29-14181
115 Shell Oil Company	Houte 35 and South Street, Eatontown	12	2	4.47	Σ	29-14182
110 Shell Oll Company	Houte 35 and South Street, Eatontown	12	2	4.39	Σ	29-14183
11/ Shell Oll Company	Houte 35 and South Street, Eatontown	12	2	4.75	Σ	29-14184
116 Shell Oll Company	Houte 35 and South Street, Eatontown	12	2	4.10	Σ	29-14185
	Houte 35 and South Street, Eatontown	12	2	4.82	Σ	29-14186
120 Shell Ull Company	Houte 35 and South Street, Eatontown	12	2	4.30	Σ	29-14187
121 Shell Oll Company	Houte 35 and South Street, Eatontown	12	2	4.54	Σ	29-14188
122 Shell Uli Company	Houte 35 and South Street, Eatontown	12	2	4.34	Σ	29-14189
ID – Identification	- W	Monitoring Well				
BGS – Below Ground Surface	B - 1	Recovery Well				

Below Ground Surface Irrigation Well

Domestic Well

S - Scaled Well
• This information was not available during the well search
• This well has not received a permit by the NJDEPE

U.S. ARMY FORT MONMOUTH

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Q	OWNER	ADDRESS	(FEET BGS)		(FEFT RGS)	305	
123	Shell Oil Company	Route 35 & South Street, Eatontown	12	2	4 22	IN	20-14100
124	Shell Oil Company	Route 35 & South Street, Eatontown	12	2	9.6	ΞZ	29-14101
125	Shell Oil Company	Route 35 & South Street, Eatontown	14.83	4	4	E LL	20-14102
127	Vincent J. Russo, Bldr	Block 70.1, Lot 90, Shrewsbury	184	165	5	10	29-1416B
128	William Goodspeed	30 Alwin Terrace, Little Silver	173	158	9	5 C	29-22526
129	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	5	*	N	29-23732
130	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	2	*	Σ	20 - 23733
5	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	5	*	ž	20-23-24
132	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	2	*	Σ	29-23735
133	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	2	*	Σ	29-24138
134	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	4	*	Σ	29-24139
135	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	5	*	Σ	29-24140
136	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	S	*	Σ	29-24141
13/	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	20	S	2	Σ	29-27072
138	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	16	e	9	Σ	29-29208
138A	Exxon Company, USA	Branch & Sycamore Ave, Little Silver	15	S	9	Ш	29-30283
Haer	Exton Company, USA	Branch & Sycamore Ave, Little Silver	15	S	9	ш	29-30284
651	Hunter's Superior Service	333 Willow Drive, Little Silver	10	-	6.36	Σ	29-12793
	Hunter's Superior Service	333 Willow Drive, Little Silver	10	-	7.08	Σ	29-12794
141	Hunter's Superior Service	333 Willow Drive, Little Silver	10	-	6.34	Σ	29-12795
142	Hunter's Superior Service	333 Willow Drive, Little Silver	10	-	7.59	¥	29-12796
143	Hunter's Superior Service	333 Willow Drive, Little Silver	10	-	6.63	W	29-12797
144	HUNTER S SUPERIOR SERVICE	333 Willow Drive, Little Silver	10	1	6.07	Σ	29-12798
		700 Branch Avenue, Little Silver	σ	1	*	Σ	29-12785
		700 Branch Avenue, Little Silver	0	+-	*	Σ	29-12786
		700 Branch Avenue, Little Silver	S	-	*	W	29-12787
			9	-	*	W	29-12788
		700 Branch Avenue, Little Silver	σ	-	*	W	29-12789
			б	-	*	M	29-12790
		100 Branch Avenue, Little Silver	6	-	*	Σ	29-12792
150	Mobile OII Corporation	700 Branch Avenue, Little Silver	10	-	*	W	29-12793
		700 Dranch Avenue, Little Silver		-	*	¥	29-12794
		/ UU Branch Avenue, Little Silver	Ŧ	-	*	M	29-12795
		rignway 35 & Tinton Avenue, Eatontown	15	S	7	Σ	29-25317
- 701 BGS -	Rehuingroon Relow Ground Surface	- W	- Monitoring Well				
			- Dagman Wall				

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Irrigation Well Domestic Well

E - Recovery Well
S - Sealed Well
S - This information was not available during the well search
- This well has not received a permit by the NJDEPE

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STATIC		(FEFT BGS)	<u> </u>	2	2	2	4.7	9	8.0	5.8	0.0	*	4	7.5	7.5	7.5	7.5	4	2	4	e	2	4.5	9	4	e	3	*	7.1	*	*	5.5	5	9	4	5.08	*	10.83	*	4	4	4				
	CASING	(FEET)	2	2	S	5	3	2	E C	e.	0	1*	4	5	5	2 L	2	2	1.5	N	2	e	+	e	0	2	-	*	S	*	*	3	4	5	2	3.05	1.30	1.62	1.90	3	3	e				- 11-0
		(FEET BGS)	15	15	15	15	16	17	15	15	12	*	14	15	15	15	15	15	17	15	20	15	15	15	15	15	14	15	15	5	5.7	15	14	15	12	9.85	16.99	16.43	10.25	13	13	13	Monitoring Well	Recovery Well	Sealed Well	This information
	WEIL	ADDRESS	Highway 35 & Tinton Avenue, Eatontown	118 Route 35, Eatontown	Main Post, Building 814, Ft Monmouth	Main Post, Building 750, Ft Monmouth ***	Main Post, Building 699, Ft Monmouth	Main Post, Building 1076, Ft Monmouth ***	Main Post, Building 1076, Ft Monmouth ***	Main Post, Building 1076, Ft Monmouth ***	Main Post, Building 65, Ft Monmouth ***	Main Post, Landfill, Fort Monmouth	Main Post, Landfill, Fort Monmouth	Main Post, Landtill, Fort Monmouth	Main Post, Landfill, Fort Monmouth	Main Post, Building 108, Ft Monmouth ***	Main Post, Building 108, Ft Monmouth ***	Main Post, Building 108, Ft Monmouth ***	I W	- B	S 1	•																								
	WELL	OWNER	Mobile Oil Corporation	Mobile Oil Corporation	Mobile Oil Corporation	Mobile Uil Corporation	Exxon Oil Company	Allied Signal, Inc.	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Amy, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Amy, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Army, Fort Monmouth	U.S. Amy, Fort Monmouth	U.S. Amy, Fort Monmouth	U.S. Amy, Fort Monmouth				U.S. Army, Fort Monmouth	U.S. Alitiy, Fort Monmouth					U.S. Army, Fort Monmouth	U.S. AIIIIY, FOIL MUTITIOUIN	U.S. Army, Fort Monmouth	U.S. AITTY, FOR MONTOUR	Identification	Below Ground Surface	Irrigation Well	Domestic Well				
	D	Q	156	15/	802	601		161	162	163	164	165	814/1	1/09/	150/2	/20/3	150/4	699/1	699/2	699/3	699/4	699/5	699/6	699/7	6,669	6/669	01/660	11/880	21/660	1999/13	1029/14	10/0/1	2/0/01	2/0/01	HACO I		212	2	1001		2/001	100/3	- 01	- 07g	ינ	- 2

S - Sealed Well
This information was not available during the well search
This well has not received a permit by the NJDEPE
Form B has been completed for this well.

US Army Fort Monmouth Well Coordinates

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Main Post Area

Well No.	Permit No.	NJ Planar	Coord****	Elevation-TOC	Elevation-GRD
		Northing	Easting		
5	29-15008	534833	2172701	***	30
14	29-24953	539699	2176794	***	***
15	29-24953	539699	2176794	***	***
16	29-24953	539699	2176794	***	***
17	29-24953	539699	2176794	***	***
34	29-28236	536866	2169110	***	***
35	29-23690	534905	2173743	31.5	30
36	29-23608	542674	2175219	41.5	40
37	29-27756	541198	2169014	11	10
38	29-26185	541186	2168357	***	•••
39	29-22571	542306	2172913	31	30
40	29-26704	542869	2173760	21	21
41	29-29158	536588	2169220	***	***
42	29-29159	536292	2169165	***	•••
43	29-21780	540011	2179428	***	9
44	29-6499	539721	2181216	***	48
64	29-14244	541732	2181489	***	***
65	29-13825	544679	2175765	***	***
97	29-12553	539866	2176849	***	***
98	29-12554	539866	2176849	•••	***
99	29-12555	539866	2176849	***	***
100	29-5084	542528	2182033	***	5
101	29-22549	539587	2178036	***	30
113	29-14180	534995	2168385	***	***
114	29-14181	534995	2168385	***	***
115	29-14182	534995	2168385	***	***
116	29-14183	534995	2168385	***	***
117	29-14184	534995	2168385	***	•••
118	29-14185	534995	2168385	***	•••
119	29-14186	534995	2168385	•••	***
120	29-14187	534995	2168385	***	•••
121	29-14188	534995	2168385	***	•••
122	29-14189	534995	2168385	***	•••
123	29-14190	534995	2168385	•••	•••
124	29-14191	534995	2168385	***	•••
125	29-14192	534777	2168285	***	•••

Page 1 of 4

US Army Fort Monmouth

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Well Coordinates

Main Post Area

Well No.	Permit No.	NJ Planar (Coord****	Elevation-TOC	Elevation-GRD
L		Northing	Easting		
127	29-14168	541665	2168429	***	60
128	29-22526	545069	2180319	***	20
129	29-23732	545613	2175613	***	***
130	<u>29-2</u> 3733	545613	2175613	***	***
131	29-23734	545613	2175613	***	***
132	29-23735	545613	2175613	***	***
133	29-24138	545613	2175613	***	***
134	29-24139	545613	2175613	***	***
135	29-24140	545613	2175613	***	***
136	29-24141	545613	2175613	***	***
137	29-27072	545613	2175613	***	***
138	29-29208	545613	2175613	***	***
1 38A	29-30283	545613	2175613	***	***
138B	29-30284	545613	2175613	***	•••
139	29-12793	546086	2175947	***	***
140	29-12794	546086	2175947	***	***
141	29 -12795	546086	2175947	***	•••
142	29-12796	546086	2175947	***	
143	29-12797	546086	2175947	***	***
144	29-12798	546086	2175947	***	***
145	2 9 -12785	546225	2174788	***	***
146	29-12786	546225	2174788	***	***
147	29-12787	546225	2174788	***	***
148	29-12788	546225	2174788	***	***
149	29-12789	546225	2174788	***	***
150	29-12790	546225	2174788	***	***
151	29-12792	546225	2174788	***	***
152	29-12793	546393	2175613	***	***
153	29-12794	546393	2175613	***	***
154	29-12795	546393	2175613	***	•••
155	29-25317	537562	2168385	•••	***
156	29-25316	537562	2168385	***	•••
157	29-25318	537562	2168385	•••	•••
158	29-25319	537562	2168385	•••	•••
159	29- 25320	537562	2168385	***	• • •
160	29-26806	537896	2168078	•••	•••

US Army Fort Monmouth Well Coordinates Main Post Area

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Well No.	Permit No.	NJ Planar (Coord * * * *	Elevation-TOC	Elevation-GRD
		Northing	Easting		
161	29-26807	537896	2168078	***	***
162	29-26808	537896	2168078	***	•••
163	29-26809	537896	2168078	***	***
164	29-28143	537896	2168078	***	***
165	•	534471	2171838	***	***
1076/1	29-26940	537975	2175236	19.44	19.28
1076/2	29-26941	537975	2175236	18.03	17.61
1076/3	29-26942	537975	2175236	19.36	19.28
108/1	29-29739	541565	2178231	11.85	8.48
108/2	29-29740	541565	2178231	10.89	7.65
108/3	29-29741	541565	2178231	8.16	8.06
65A/1	29-26938	541114	2178147	8.47	8.47
699/1	29-23677-1	539367	2171941	15.81	***
699/2	29-23678-9	539486	2171973	16.64	***
699/3	29-23679-1	539399	2173050	15.8	***
699/4	29-23680-7	539380	2171986	15.92	***
699/5	29-23808-1	539409	2173150	15.48	***
699/6	2 9- 23809-9	539342	2173066	15.78	. •••
699/7	29-23810-2	539272	2172914	15.97	***
699/8	29-23811-1	539331	2172842	16.2	***
6 9 9/9	29-24639	539220	2173102	15.96	•••
699/10	29-24640	539171	2173042	15.97	***
699/11	29-28031	539334	2173025	17.14	+++
699/12	29-28907	539194	2172956	16.66	•••
699/13	**	539389	2173010	16.21	***
699/14	**	539351	2173021	15.98	•••
750/1	29-28992	538342	2171950	18.79	18.69
750/2	2 9- 28993	538342	2171950	18.61	18.51
750/3	2 9 -28994	538342	2171950	19.04	18.88
750/4	29-28995	538342	2171950	18.98	18.79
814/1	29-26939	538025	2173387	•••	***
L/1	4 9 -000551	540568	2172144	•••	***
L/2	49-000552	540568	2172144	***	***
L/3	49-000553	540568	2172144	***	***
L/4	49-000554	540568	2172144	***	***

US Army Fort Monmouth

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Well Coordinates

Main Post Area

Well No.	Permit No.	NJ Planar (Coord****	Elevation-TOC	Elevation-GRD
		Northing	Easting		
Alex d main					lan

Notes: * - This information was not available during the well search

** - This well was not issued a permit by NJDEPE

*** - No elevation data was found for this well location.

•••• - Except for wells 699/1-14, all coordinates shown are approximate.

The information given does not represent surveyed coordinates.

TOC - Top of Casing

GRD - Ground Surface

form DWR-138 11/85	NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION PAGE 1 OF 2 DIVISION OF WATER RESOURCES
	WELL RECORD WELL ID NO. 39
	Well Permit No. 29 22571 Atlas Sheet Coordinates 29 : 13 : 653
WNER IDENTIFICATIO	
\ddress	
ity	SHEREWEURY State NJ Zip Code
VELL LOCATION - If not	the same owner please give address. Owner's Well No.
	fzlozy Place
Junty 1-10-17	SHRMSBURY TWP. Lot No. 4 Block No. 69. 04
/ELL USE	Irnigetion Status In Use
ATER USE	Irrigation Average gals daily Maximum gals daily
	- 4 34 89
ILL CONSTRUCTION	Date well completed _7/_7/_7
	Dismeter: Top in. Bottom in.
and Surface Elevation at v	vell 3c. ft. Elevation was determined using Atlas Sheet
asing Height (stick-up) ab	ove land surfaceft.
	DEPTH TO TOP LENGTH DIAMETER TYPE AND MATERIAL
C 1	ATO I Plo-le (had)
Casing 1 Casing 2	JU A UMCKSFEET
Casing 3	
Screen 1	None
Screen 2	
Tail Piece	······································
Gravel Pack	Ber (rol
Grouting Method	Pressure
ELL FLOWS NATURAL	LY gals, per min, at ft, above the land surface.
ECORD OF TEST	Test Date $4/74/79$
aud water-level before pu ater level was measured in	mping It below land surface. Water levelft. below land surface after hrs, of pumping.
ischarge rate measured usi	ng Cal. broten Pa. Discharge Rate 10 gals, per min.
ell was pumped using	Air Compressor Specific Capacity gals. per min. per ft. of drawdown
bserved effects on nearby	wells None
ater Quality (taste, odor, i	color, etc.) <i>rony</i>
RMANENT PUMPING E	QUIPMENT Installed by
frs. Name	Model
APACITY: Pump delivers	GPM at PSI pressure,
EPTHS: Pump	nr au KrM rower Source ft ft ft
AND A DESCRIPTION OF A	in. diameter pipe.
LOW METER: Model	KAYR WELL DRILLING
LOW METER: Model _	Uniling Contractor
LOW METER: Model	. Box 75
LOW METER: Model DNTRACTOR - Name of i ines	. Вох 75 СКЗОЛ State <u>N-J.</u> Zip Code
LOW METER: Model DNTRACTOR - Name of I irres	CKSON Zip Code
LOW METER: Model DNTRACTDR - Name of I Irmss	Box 75 Ckson State N-J. Zip Code Chy Poppe License No. 115-0
LOW METER: Model DNTRACTOR - Name of I irress	Box 75 ckson State N-J. Zip Code ry Poppe License No. 1/50 May Sechner Sec. 1 Franc Date 5/16, 54

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DWR-138 M 6/89	38 M New Jersey Department of Environmental Protection Division of Water Resources						
	MONITORI	NG WE		D			
		W	ell Permit No.	29.2	3677		
		At	as Sheet Coord	inates 29	13 665		
OWNER IDENTIFICATION - Owner	US ARMY					_	
Address	167 RIVERSIDE DR	-	NT.				
City	FORT MONEDUTH		State		_ Zip Code <u>0770 3</u> _		
WELL LOCATION - If not the same as	s owner please give addre	iss. O	wner's Well No.	1			
County Manmouth		PORT FOR	n	Lot No.	TAXES HOLE BIOCK No. TAX		
Address Bldg G99, SAItz	mon Ave , For	4 Man	mouth N	507	703		
TYPE OF WELL (as per Well Permit C	ategories		_ Date w	eil complete	ed 11, 2, 89		
Regulatory Program Requiring Well			Case I.	D. #			
CONSULTING FIRM/FIELD SUPERV	ISOR (if applicable)	nodr	sterdE	wiran Su	In Tele. # <u>201-5-30-4</u>	187	
WELL CONSTRUCTION		Depth to	Depth to	D ia		-	
Total depth drilledft.		Top (ft.)	Bottom (ft.)	(inches)	Type and Material	1	
Well finished to 15 ft.	r <u>=</u>	[From I	and surface)			_	
ehole diameter:	Inner Casing	Ø	2	4	Son HOLVE Solid		
Topin.	Outer Casing	_	- 1				
Bottomin.	Screen	2	1,	11	SLUDIN FET	-	
Well was finished: 🔲 above grade	(Note slot size)	02	1/3	4	KN40FVL DZ	<u> </u>	
flush mounted	Tail Piece			. <u></u>		_	
If finished above grade, casing	Gravel Pack	2	15		# D. Maria Glaver	<u>/</u>	
height (stick up) above land	Annular Seal/Grout	.5	1,5		Berton to Polleta	त	
Was steel protective casing installed	Method of Grouting	0-	5 Sluce	\sim		4	
	L	<u> </u>	0 0/01	7			
Static water level after drilling	ft. ,	G	EOLOGIC LOG	(Copie geoph	s of other geologic logs and/or ysical logs should be attached	.)	
Water level was measured using 1	tecfore probe					T	
Well was developed forho	urs at <u>2-3</u> gpm						
Method of development Auroled	with Pump						
Was permanent pumping equipment in	nstalled? 🗌 Yes 🛛 🗶 No						
Pump capacitygpm	NAN						
Drilling Method							
Drilling Fluid None Type	of Rig TH-11						
Name of Driller Grege Mure (S	<u> </u>						
Health and Safety Plan submitted?	Yes No						
Level of Protection used on site (circle of	one) None D C B A						
N.J. License No. <u>J 1472</u> B	L. MYKRS BROS. I	NC.					
me of Drilling Company		L				<u>_</u> .	
I certify that I have drilled the above	e-referenced well in acc	ordance w	rith all well perr	nit requirer	ments and all applicable	-	
State rules and regulations.		11	for no		al las		
Driller's Sian	ature Moresa At	Illino	'ougg //lly	in D	ate 2/15-190		
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6/89	New Jersey Depar Divisio	rtment of Envi	ronmental Pro esources	tection		
	MONITOR	ING WEL		D		
		Wei	Permit No.	29.2	3678	1
		Atia	s Sheet Coord	inates _29	13 665	_
OWNER IDENTIFICATION - Owner	US ARMY		·			
Address	TOT RIVERSIDE DE	ł	NT			_
City			State		Zip Code <u>0770 3</u>	-
WELL LOCATION - If not the same as	s owner please give addre	ess. Ow	ner's Weil No.	<u></u>		
County ///OMAIN/	Municipality OCEAN	FORT-BORG		Lot No	TAXICITAT Block No. TAX	-
Address Dial (199 SATT	ernan rake for	<u>Ct illenmad</u>	ln_{r}	8770	15	—
TYPE OF WELL (as per Well Permit C	ategories		Date w	reil compiete	nd <u>11 12199</u>	
Regulatory Program Requiring Well		1	Case I.	D. #		<u>_</u> -
CONSULTING FIRM/FIELD SUPERV	ISOR (if applicable)	Idwaterd Li	nicon Ju	<u>s, Inc.</u>		57
WELL CONSTRUCTION		Depth to	Depth to	Diameter		٦
Total depth drilled ft.		Top (ft.)	Bottom (ft.)	(inches)	Type and Material	
Well finished to <u>/7</u> ft.	lana Casia-				CI DUCEST,	\downarrow
rehole diameter:		<u> </u>	~	4	ENHO FUL Solid	
Top <u>///</u> in.	(Not Protective Casing)					
	Screen (Note slot size)	1.5	17	4	ShHAPIC FJT	1
Well was finished: above grade	Tail Piece					1
	Gravel Reek	1-			#7 M ()	4
reight (stick up) above land		1.5	//		"2 Illarie Gravel	1
surfaceft.	Annular Seal/Grout	15	1.5		Bonton, te Pellets	
Was steel protective casing installed?	Method of Grouting	0-1	5 Sluri	Ŷ		
Yes XNo				7 (Copies	of other geologic logs and/or	-
Static water level after drilling	the large of ha	GEC		geophy	sical logs should be attached.)	7
Veli was developed for / how	$\frac{2}{3}$					
Method of development RUGPOL	with rump					
Vas permanent pumping equipment in	stailed? Yes X No					
Pump capacity <u>NA</u> gpm						
Pump type:						
Prilling Method Huger						
Irilling Fluid <u>APD AC</u> Type	of Rig / 17 - 10	{				
ealth and Safety Plan submitted?						
evel of Protection used on site (circle o						
J. License Non J1472						
me of Drilling CompanyB	.L. MYKES BROS., I	NC.				
certify that I have drilled the above	-referenced well in acc	ordance with	all well norm	it requirem	ents and all applicable	
itate rules and regulations.	0/	Lo				-
Deilleste Sinn-	Marson A	Il - Y	MIL	-	alida	
	VILLANN TOLL					

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

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г ъ	DWR-138 M New Jersey Department of Environmental Protection								
- 4	0/89 Division of Water Resources								
12 J	MONITORING WELL RECORD								
Щ.									
			Atias	Sheet Coord	inates 29	13 665			
ور ۲	Address	167 RIVERSIDE DR.				······································	•		
ΞÌ	City	FORT MONMOUTH		State NJ		Zip Code	•		
					ろ				
	WELL LOCATION - If not the same as	owner please give addre	ss. Owi	ner's Well No.					
	Address BLa 699 St	_ Municipality _OCEANE	ORT_DORO	Manaul	LOIND.	TAYFYEMPORICK NO. TAY			
- 1	AddressAddA				/////	<u> </u>	•		
-	TYPE OF WELL (as per Well Permit Ca	ategorie CONTRORING		Date w	eil complete				
11	Regulatory Program Requiring Well			Case I.	D. #		7		
63	CONSULTING FIRM/FIELD SUPERVI	SOR (if applicable) <u>(F/cr.)</u>	ndwater	a COULTO	SYCENT	<u>1C</u> Tele. # <u>201-530-478 1</u>			
	WELL CONSTRUCTION		Depth to	Depth to	Diameter		•		
	Total depth drilledft.		Top (ft.)	Bottom (ft.)	(inches)	Type and Material			
	Well finished to /5 ft.	·····	[From lan	d surface]		a Area art			
ال	ehole diameter:	Inner Casing	0	1.5	H	SchHOPPC intid			
с э.	Top	Outer Casing	-						
	Bottomin.	Screen	Tamo	1,		SI 110 PILL EST			
ت. اهب	Well was finished: 🛄 above grade	(Note slot size)	ALLE L	/5	7	r.n.n.n.			
	flush mounted	Tail Piece	-						
e a	If finished above grade, casing	Gravel Pack	1.5	15		#Morie Gravel			
- *	height (stick up) above land	Annular Seal/Grout	.5	15		Botos to Pollete			
	surfacett.			- Church	I	-CITINGE CHEIS			
	Was steel protective casing installed?	Method of Grouting	O		<u> </u>				
	Static water level after drilling	1	GEC	DLOGIC LOG	(Copie:	s of other geologic logs and/or			
	Water level was measured using / M	crace probe			geophy	Sical bys should be alloched.)			
	Well was developed for / hou	rs at 2-3 gpm							
- ī	Method of development <u>Culard</u>	uith pump							
	Was permanent pumping equipment in	stalled? 🗍 Yes 🛛 No	,						
5. J	Pump capacity								
11	Pump type: Centrager Pump	np//A							
، ۔ لاے	Drilling Method								
	Drilling Fluid None Type of Rig 7/4-/0								
	Name of Driller <u>Grea</u> Mers								
E. 3	Health and Safety Plan submitted?								
~ 3	N.I. License Mo. T. 47-7	ne) None U C B A							
-	me of Drilling Company B .	L. MYERS BROS., I	NC.						
ق ـ			b		-14				
n	I certify that I have drilled the above State rules and regulations	-referenced well in acc	ordance with	a ali weli pern	nit requirer	nents and all applicable			
. 4			1/ 10	z Na		al_{1}			
تى -	Driller's Signa	iture Thorepa M	Mino'a	rag/////h	<u> </u>	ate <u>21151 90</u>			
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COPIES: White & Green . DEP Canary . Driller Pink . Owner Goldenrod . Health Dept.

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D WR-138 M		New Jorney Depart	most of Could						
6/89	6/89 Division of Water Resources								
Ë.		MONITORI	NG WELI	LRECOR	D				
			Well	Permit No.	29.2	3680	Г		
			Atlas	s Sheet Coord	inates _29	13	665		
OWNER IDENTIFIC	ATION - Owner	US ARMY					<u> </u>		
Address		167 RIVERSIDE DR	•	NJ					
" Ci ty			·· <u>···</u>	State	11	Zip Code			
WELL LOCATION -	If not the same as	owner please give addre	ss. Ow	ner's Well No.	_7_				
County MOn Mau	M/ 609 Soli-	_ Municipality	PORT BORO		Lot No	TAXEXIMPBlock	No		
Address () /0// (et 1, JA ITZ	<u> </u>	4 monn	WALL //	5 07	<u>/// ></u>	90		
TYPE OF WELL (as	per Well Permit Ca	tegories)		Date w	reil complete	od <u>//</u> bo	89		
Regulatory Program	Requiring Well	-		Case I.	D. #				
		SOR (if applicable) (1000	IdwAterd	CAN. MADUC	S. LOC	⊺el e . #	<u>521-7/8/</u>		
WELL CONSTRUCT	N		Depth to	Depth to	Dlameter				
Total depth drilled	$\frac{\mathcal{F}(\mathcal{F})}{\mathcal{F}(\mathcal{F})}$ ft.		From lar	Bottom (ft.)	(inches)	Type and	Materiai		
Well finished to	<u>ft.</u>	Inner Casing			4	Shhin Pik	ETTI		
* shole diameter:	i-	Outer Casing				211/01/02	Solid		
Bottom //2	m. in.	(Not Protective Casing)			`_				
инене. Кілільени Г	 7	(Note slot size)	2	20	4	SAHOM	.02		
		Tail Piece							
If finished above gra	ide, casing	Gravel Pack	1.5	20		#21noin fr	PUO/		
height (stick up) abo	ve land	Annular Seal/Grout	. 5-	15		Restante	Pollets		
		Method of Grouting	(3 -	5 10			<u>,</u>		
	casing installed 1				<u> </u>				
Static water level aff	er drilling	ft. ,	GEC	DLOGIC LOG	i (Copie: geophy	s of other geologi vsical logs should	c logs and/or i be attached.)		
Water level was mea	isured using Inte	rface probe							
Well was developed	for hou	rs at <u>2-3</u> gpm							
Method of developm	ent <u>A J GEO 4</u>								
Was permanent pum	iping equipment in:	stailed? 🛄 Yes (XI No							
Pump type:		NA-NA							
Drilling Method _A	Vall								
Drilling Fluid	Tre Type	of Rig 7 4 - 10							
Name of Driller	reg Myers								
Health and Safety Pl	ab/submitted?								
N.J. License No.	-147Z						ĺ		
me of Drilling Com	ipanyB.	L. MYKRS BROS., L	XC.						
- I certify that I have	drilled the above	referenced well in acc	ordance with	all well perm	nit requirer	nents and all an	plicable		
State rules and reg	julations.	n/	A / :	he			-		
ت_	Orillada Sia	there the	alters !	rana M	4 5		-190		
j	Uniter's Signa	ture <u>2100/1620 - 72</u>	a min -	- H Chre	9 <u>-</u> Da				
(COPIES: White a	& Green - DEP Canary	- Dtiller F	rink – Öwner	G oidenr od	- Health Dept.			
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5 11	DWR-138 M New Jersey Department of Environmental Protection 6/89 Diverses Diverses of Water Resources									
- 3		MONITORI	NG WEL	L. RECUN	J					
			Wei	i Permit No	-2	3808	-			
L L			Aua	s Sneet Coord	austes 77	·· · _ <u>134</u> ·	<u> 629</u>	╺╴╘╍╍┹╌	• ·	
er 11	OWNER IDENTIFICATION - Owner _	UC ADMY				····		-		
	Address	167 RIVERSIDE DR.		State NT				-		
ц.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	City	PORT DATENDIN	. <u></u>	State				-		
	WELL LOCATION - If not the same as	owner please give addre	ss. Ow	ner's Well No.	<u> </u>					
	County 110 mouth	Municipality			_ Lot No. ,	Block	No	•-		
	Address 0109 (077,0017	ZMAN AVE, F	c+mamai	H/N_	\	<u> </u>	2	-		
	TYPE OF WELL (as per Well Permit C	ategories)		Date v	veil completi	od <u>11, 30,</u>	84			
	Regulatory Program Requiring Well			Case I	.D. #			~ —		
e71	CONSULTING FIRM/FIELD SUPERVI	SOR (if applicable) (Ydi	induster+	ENTRON SUL	<u>s Tre</u>	* Tele. # <u></u> //	<u>531-478</u>	:7		
101 111 Halabiera	WELL CONSTRUCTION		Depth to	Depth to	Diameter			1		
1	Total depth drilled ft.		Top (ft.)	Bottom (ft.)	(inches)	Type and	Material			
	Well finished toft.				4	Rillshop	IN FIT.			
لا ب	ີວ rehole diameter: Top	Outer Casing			- 7	mal 17	USOMA			
Ē,	Bottomin.	(Not Protective Casing)								
L b	Well was finished: above grade	(Note slot size)	3	15	4	Sch40PVC	02		-	
	flush mounted	Tail Piece								
	If finished above grade, casing	Gravel Pack	3	15		#2 Maria	Grave /			
اتر ہے	height (stick up) above land surface ft.	Annular Seal/Grout	1	3		Rontonite	Pellets			
	Was steel protective casing installed?	Method of Grouting	$\mathcal{O} - \mathcal{I}$	' Sluc						
	Yes No				(Caaia			•		
5.3	Static water level after drilling	ft.	GE	DLOGIC LOG	geopiny	s of biner geologi /sical logs should	be attached.)			
	Water level was measured using _///7	ertare probe								
أقدرها	Well was developed forhou	rs at gpm								
÷ 3	Method of development <u><u><u><u></u></u><u><u><u></u><u><u></u><u><u></u></u><u><u></u><u><u></u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u></u></u>	wh pump								
	Was permanent pumping equipment in	stalled? 🗌 Yes 🔟 No								
الاست	Pump capacity ////- gpm									
<u> </u>	Pump type:/// //									
	Drilling Method <u>Huger</u>	- +11 (1)	i				ł			
с. <i>Я</i>	Drilling Fluid Type	of Rig / // -//								
- -	Name of Driller	P HAMONY KI								
	Health and Safety Plan submitted?	Yes XINO					1			
9 1	Level of Protection used on site (circle o	ne) None D C B A							·	
- 1										
- 4			L							
- n	 certify that I have drilled the above State rules and regulations. 	-referenced well in acc	ordance witi	n all weil perr	nit requirer	nents and all ap	plicable	_		
		// /.//	1 pr A	nthony K	V//	<u>a</u> 1.	10.			
ن ت	Driller's Signa	iture <u>Meresa Ally I</u>			D:	ate <u>2/15/</u>	70			
÷ :	COPIES: White	& Green • DEP Canary	- Driller 1	Pink • Owner	Goldenrod	- Health Dept.				

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6/89 New Jersey Department of Environmental Protection Division of Water Resources.									
	MONITORI	NG WELI	HECOR	U					
		Weil	Permit Nop	9 .5	800				
		Atias	Sheet Coord	inates 29	[:] 13 [:] 629				
OWNER IDENTIFICATION - Owner									
Address	US ABEN								
City	167 ELVELLE IL.		State NLT		Zip Code				
·				6					
WELL LOCATION - If not the same as	s owner please give addre	ss. Own	ner's Well No.						
County 10 MMOVT	Municipality		Tech M	_ Lot No	Block No.				
Address <u>B/00 (0 1 7, 5/4 17</u>	TIMANNA		TACT I DA	novin					
TYPE OF WELL (as per Well Permit C	ategories)		Date w	eil complete	d/21/189				
Regulatory Program Requiring Well _	MONITORING	. <u> </u>	Case i.	D. #					
CONSULTING FIRM/FIELD SUPERV	ISOR (if applicable)	VODUNAT	for the suce		_ Tele. # 201-5-20-+1				
WELL CONSTRUCTION		Depth to	Depth to	Diameter	Turne and Metavial				
Total depth drilled ft.		(From ian	d surface)	(inches)	iype and material				
Well finished to ft.				21	SLUDAN FOT				
Porehole diameter:				7	VINHOFVC Salid				
Topin.	Outer Casing (Not Protective Casing)		-						
Jottomin.	Screen	2	10-	11	Scholl PILL FIT				
Well was finished: Above grade	(Note slot size)		13	7	020, 01/10/112				
flush mounted	Tail Piece		-						
If finished above grade, casing	Gravel Pack	1	15		#7 Moria Gravol				
height (stick up) above land	Acquier Soci/Grout		/		R. J. ida Pallato				
surfaceft.			/		Lentonie Pilers				
Was steel protective casing installed	Method of Grouting	Slurr	<u>y 0-</u>	,5					
1 1 57			<i>i</i>	(Conie	s of other geologic logs and/or				
L_]Yes [∑-]No									
Static water level after drilling	ft.	GEC	DLOGIC LOG	geophy	sical logs should be attached.)				
Yes 124 No Static water level after drilling Water level was measured using 121	tertar probe	GEC	DLOGIC LOG	geophy	sical logs should be attached.)				
Yes Yes IN No Static water level after drilling Water level was measured using IM Well was developed forho	tt. ter the probe	GEC	DLOGIC LOG	geophy	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 77 Well was developed forho Method of development	tt. <u>e(IAe βöb</u> e urs atgprn w; th cumP	GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of development Was permanent pumping equipment in	tt. <u>te(JAr µUb</u> e urs at <u></u> gpm <u>w; +h µmP</u> ustalled? ∐Yes ⊠Nc	GEC		geophy	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of developmentho Was permanent pumping equipment in Pump capacitygpm	tt. <u>ter A α βοb</u> e urs at <u>gprn</u> with <u>cum</u> stalled? Yes X No	GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of developmentho Mas permanent pumping equipment in Pump capacity gpm Pump type:	tt. <u>e(1Ae βCb</u> e urs atgprn <u>w; th ρυm</u> hstalled? [] Yes [] No	, GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of developmentho Method of developmentho Mas permanent pumping equipment in Pump capacityh pump type:h Drilling Methodh1/20.	tt. <u>fe(JAc βOb</u> e urs at <u>gpm</u> <u>w; +h ρυmP</u> ustailled? □Yes ⊠Nc	GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of development Was permanent pumping equipment in Pump capacity Pump type: Drilling Method Drilling Fluid Was permanent pumping equipment in Pump type: Drilling Fluid MAC Type	$\frac{ft.}{e(HAe \mu Obe}$ urs atgprm $w_i + h \rho u m P$ stalled? Yes No	GEC	DLOGIC LOG	g eoph	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of development Was permanent pumping equipment in Pump capacityAgpm Pump type:Agpm Drilling Method Drilling FluidType Name of Driller	$\frac{\text{ft.}}{P(1Ae \mu Obe}$ $\text{urs at } gpm$ $\frac{W_{1} + h \mu P}{W_{1} + h \mu P}$ $\text{ustalled? } Yes \square Nc$ $\frac{W_{1}}{P} + \frac{W_{2}}{P} + \frac{W_{2}}{P}$ $\frac{W_{1}}{P} + \frac{W_{2}}{P} + \frac{W_{2}}{P}$	GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
Yes Yes Static water level after drilling	tt. $fe(\underline{Ae} \ \mu \nabla be$ urs atgpm $w_i \pm h \ p um P$ ustalled? Yes \square No \square Yes \square No \square Yes \square Hon, A, Ku \square Yes \square Ho	GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
L Yes 124 No Static water level after drilling Water level was measured using 1/1 Well was developed forhow Method of development <u>DV(Ge.d.</u> Was permanent pumping equipment in Pump capacity/ A gpm Pump type:A Drilling MethodA1/CO Drilling FluidA0/0 Name of DrillerA Health and Safety Plan submitted? Level of Protection used on site (circle	tt. $\frac{g(A_{e} \cap \Delta b)}{gpm}$ $w_{i} + h \cap \beta b$ $w_{i} + h \cap \beta b$	GEC	DLOGIC LOG	g eoph	sical logs should be attached.)				
Yes 24 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of development Was permanent pumping equipment in Pump capacity gpm Pump type: Drilling Method Type Name of Driller Health and Safety Plan submitted? Level of Protection used on site (circle of N.J. License No	tt. $\frac{e(Ae AObe}{gom}$ w; H pump w;	GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
L Yes 124 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of development <u>prified</u> Was permanent pumping equipment in Pump capacityA gpm Pump type:A Drilling MethodA1/Qe Drilling FluidA Name of DrillerA Health and Safety Plan submitted? Level of Protection used on site (circle of N.J. License NoA	tt. $fe(\underline{Ae} \ \mu \nabla be$ $w_i \pm h \ \mu mP$ $w_i \pm h \ \mu mP$ $h = h \ h \$	GEC	DLOGIC LOG	geoph	sical logs should be attached.)				
L Yes 124 No Static water level after drilling Water level was measured using 1/1 Well was developed forhow Method of developmenthow Method of development Was permanent pumping equipment in Pump capacitygpm Pump type: Drilling Methodfgpm Pump type: Drilling Fluidfgpm Heatth and Safety Plan submitted? Level of Protection used on site (circle of N.J. License No Name of Drilling Company Name of Drilling Company	tt. $\frac{f(A_{R}, A_{C})be}{gpm}$ w; H pump w; H pum	GEC	DLOGIC LOG	geoph geoph	nents and all applicable				
L Yes 124 No Static water level after drilling Water level was measured using 1/1 Well was developed forho Method of development <u>prified</u> Was permanent pumping equipment in Pump capacityA gpm Pump type:A Drilling MethodA Drilling FluidA Name of DrillerA Health and Safety Plan submitted? Level of Protection used on site (circle INJ. License NoA Name of Drilling CompanyA certify that I have drilled the above State rules and regulations.	tt. $fe(\underline{Ae} \ \beta Cbe)$ $fe(\underline{Ae} \ \beta Cbe)$ $fe(\underline{Ae} \ \beta Cbe)$ gpm $w; \underline{Ab} \ \beta Cbe)$ $hord Rig \underline{THOMY} \ A - RULL$ $hord Rig \ C B A$ $fi(\underline{Ab} \ b)$ for even b c B A for even b c B A	GEC		geoph geoph nit require	nents and all applicable				
L Yes 124 No Static water level after drilling Water level was measured using 1/1 Well was developed forhow Method of development Was permanent pumping equipment in Pump capacityA gpm Pump type:A gpm Pump type:	tt. $fe(\underline{Ae} \ \mu \nabla be$ $wistand \underline{Ae} \ $	GEC	n all well pert	geophy geophy nit requirer	nents and all applicable				

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

DWR-138 M	New Inc. De		···············			
6/89	New Jersey Depart Division	ment of Envi n of Water Ri	ronmental Pro esources	tection		1
	MONITORI	NG WEL	L.RECOR	D		
		Wei	i Permit No. 🦩	×a -2*	381.0	
		Atla	s Sheet Coord	linates 20	: <u>13</u> : <u>629</u>	
OWNER IDENTIFICATION - Owner_				<u>_</u>		
Address	167 RIVEREIDE DE.					
City	FORT MONMOUTH	<u> </u>	State <u>N.T</u>		Zip Code	
WELL LOCATION - If not the same as $County BHa 699$	s owner piease give addre: Municipality	ss. Ow	mer's Well No.		Block No.	
Address Ser Home	Ave, OCEANE	ORT BORD	Fort	unnuu tr	AX N/J OTO 3 KIEPT	
TYPE OF WELL (as per Well Permit C	ateoories)		Date v	veil complete	121/189	
Regulatory Program Requiring Well	HONITORING	<u> </u>	Case i	.D. #	······································	
CONSULTING FIRMFIELD SUPERV	ISOR (if applicable)	muste	- AFNViror	SUCS IN	16. Tele. # 201-5 30-478	37
		Depth to	Depth to Bottom (ft)	Diameter	Type and Material	
$\frac{1}{\sqrt{2}} \qquad \text{filled} \qquad \frac{1}{\sqrt{2}} \qquad \text{filled} \qquad \frac{1}{\sqrt{2}} \qquad \text{filled} \qquad \frac{1}{\sqrt{2}} \qquad \text{filled} \qquad \frac{1}{\sqrt{2}} \qquad \frac{1}{$		(From lar	nd surface)	(Inches)		
Well finished to <u>75</u> ft.	Inner Casing	Ô	3	4	SCHAPPIC ET	
Top / C in	Outer Casing					
Jottom / in.	(Not Protective Casing)					
	(Note slot size)	3	15	4	SCHHO PVC Solid	~
	Tail Piece	ļ	-			•
	Gravel Pacid	7	15-		#2Ma Flaup 1	
eight (stick up) above land	Accular SociOccus		75		R I PULC	
urfaceft.		\sim	2	[]	Den-hnite rellets	
Vas steel protective casing installed	Method of Grouting	Shin	-1 0 - 1	5		
	<i>b</i> .	/ 65/		(Copie:	s of other geologic logs and/or	
Nation water level atter drilling	to the anho			geophy	rsical logs should be attached.)	
Vell was developed for / how	Is at 2-3 mm					
lethod of development <u>Durac</u>	4)ith Dimp					
Vas permanent pumping equipment ir	stalled?					
ump capacitygpm						
ump type://A		Ì				
nilling Method <u>Avge</u>						
rilling Fluid <u>NOné</u> Type	of Rig / //-/()					
ame of Driller	Anthonijkv					
earth and Safety Plan Sobmitted?	Yes XINo					
ever or Protection used on site (circle o	one) None (D) C B A					
ame of Drilling Company					l I	
			!			
		الأنبير ممحماهم	n ali weli nem	nit requirer	nents and all applicable	
certify that I have drilled the above	-referenced well in acco					
certify that I have drilled the above tate rules and regulations.	referenced well in acco					

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/89	Divisio	n of Water R	ionmental Pro esquices	(actiol).		
	MONITORI	NG WEL	L RECOR	D		
		Wei	l Permit No. <u>2</u>	92	811	
		Atia	s Sheet Coord	inates <u>29</u>	: <u>13</u> : <u>629</u>	₋└┵
WNER IDENTIFICATION - Owner						_
ddress	167 RIVIGESIDE DR.				·····	
ity	FORT FORFOUTH		State NJ		Zip Code	-
ELL LOGATION - If not the same a	is owner please give addre	iss. Ow	mer's Well No.	_8		
ounty Monmouth	Municipality			_Lot No.	Block No	<u> </u>
ddress <u>3/20 (0995AH</u>	IMAN AVE, FOR	+ Month	with M	<u> </u>		-
YPE OF WELL (as per Well Permit (Categories)		Date w	eii compieti	121/189	
egulatory Program Requiring Well _			Case I.	D. #		
ONSULTING FIRM/FIELD SUPERV	/ISOR (if applicable)	duater	d Environ	Sucs, II	2 Tele. # 201-530-47	87
ELL CONSTRUCTION		Depth to	Depth to	<u> </u>		г
otal depth drilled 15 ft.		Top (ft.)	Bottom (ft.)	Diameter (inches)	Type and Material	i
Vell finished to 15 ft.	r	[From la	nd surface)			l
prehole diameter	Inner Casing	0	2	4	SchHOPVC Sind	
Topin.	Outer Casing	-	-			
ottomin.	Screen		1-		CI DUC ATT	
ell was finished: 🔲 above grade	(Note slot size)	$ \propto$	1/2	4	SCH HITTL , 02	
Ilush mounted	Tail Piece	~	-			
finished above grade, casing	Gravel Pack	2	15		#2 Mora France	
hight (stick up) above land	Annular Seal/Grout	/	2		Real and Pollate	
ITT BCBΤ.	Method of Grouting	C luce		/ /	SENTEDITE / C/1475	
		SIVI	<u> </u>	/]	-
atic water level after drilling	ft.	GE	DLOGIC LOG	(Copie:	s of other geologic logs and/or	
ater level was measured using 1/17	terfare nonbe			900000	and any arrest of the (Att)	
ell was developed forho	urs at <u>2-3</u> gpm					
thod of development <u><i>Pulla</i>c</u>	with pump					
as permanent pumping equipment i	nstailed? 🗌 Yes 🔀 No	,				
mp capacity <u>14A</u> gpm						
mp type:						
illing Method <u>Auger</u>						
illing Fluid <u>None</u> Typ	• of Rig <u>74 - 10</u>					
me of Driller <u>Anthon</u> Au	<u>Kyll</u>					
atth and Safety Plan submitted?	∐Yes ⊠No					
	one) None D C B A					
vel of Protection used on site (circle	—	1				
vel of Protection used on site (circle I. License No. $\frac{7/3/7}{2}$						
vel of Protection used on site (circle J. License No. 7/3/7 me of Drilling CompanyA	THONY A. KULL					
rel of Protection used on site (circle License No. 7/3/7 ne of Drilling CompanyA Intify that I have drilled the abov	e-referenced well in acco	ordance with	h all well pern	nit requiren	nents and all applicable	

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

Nect Fort Monmouth	Owner_E-Systems, inc
cation Fort Monmouth	Eatontown Permit No 2924639
n <u>il Number 9</u>	Total Depth 15' Diameter 10"
sing Elevation	Water Level: Initial 5.0' Static
preen Diameter 4"	Length 13' Slot Size .020"
E T	

sing Diameter 4" Length 2' Type Sch 40 PVC

Miling Method Auger Sample Method Split Spoon

ompletion Details Flush mount, with manhole cover, Inner locking cap



lier	B.L. Mye	ers	Log By J. Gallagher Date Dril	led <u>5/1/90</u>
epth	Well Constr	HNu ppm	Lithological Description	Comments
			0-2' SAND Brown-black Silt, medium (-) to fine SAND trace fine Gravel	No odor slightly moist
3			2-4' SAND Brown fine SAND, trace Silt	
5		0	4-8' SAND Light Brown fine SAND, some Silt little Clay	Groundwater encountered @ 4'
			SAND Green-brown SAND, some clay	No odor or sheen
		o	9-10' CLAY Gray, some orange fine Sand	
			10 - SANDGreen-gray to orange coarse12'to fine SAND, some Clay	
-14		0	12- 15' CLAY Light-brown, some fine Sand	
-16			END HOLE @ 15'	
: 17				
-19				
20				
23				
24.				-
25	-			

	<u> </u>	Systems, Inc.	
- Jocation Fort Monmouth	Eatontown	Permit No	2924640
- Vell Number 10	Total Depth	15' Diameter	10"
asing Elevation	Water Level: In	itial 5.0'	Static
<u>Screen Diameter 4"</u>	Length 13'	Slot Size	020"
asing Diameter 4"	Length 2'	Туре	Sch .40 PVC

Trilling Method Auger Sample Method Split Spoon

- - - #

ompletion Details Flush mount, with manhole cover, Inner locking cap



riller	B.L. Mye	ers		<u>.og By J. Gallagher Date Dr</u>	illed 5/1/90
Depth	Well Constr	HNu ppm		Lithological Description	Comments
1			0-2' SAND	Brown, fine SAND little Gravel	No odor or sheen
3			3-4' SILT	Gravel Brown, fine Sand, some SILT trace Clay	Groundwater
5 		0	4-7' SAND	Light green coarse to fine SAND little Clay	encountered @4
		0	7-12' CLAY	Orange CLAY & fine Sand	Saturated, no odor
-10 			12- 15' CLAY	Light green CLAY, some fine Sand	
-12		0		Black CLAY, little Sand	No odor
-14					
¹ 1 6			END HOLE @	15'	
1 8 - 1 9					
20					
22					
24					

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DWR-138 M 12/91	New Jorsey Departme Bur	nt of Environm reau of Water A	ental Protection Jocation	and Energy	
	MONITO	RING WE		RD [.]	
		Wei	Permit No.	2 9 -	28031
		Atla	Sheet Coord	inates	29_:14:444
OWNER IDENTIFICATION - Own					
Address	U S ADEL	600			·····
City	FORT MONMOUTH		State N	J	Zip Code
WELL LOCATION - If not the sam	ie as owner niesse nive addre		nore Well No	E-1/E	(24 499)
County	Municipality			Lot No.	Block No.
Address	OCEA	NPORT BOB	0		N/A N/
TYPE OF WELL (as per Well Pern	nit Categories)		Date v	reil completi	ed 5 /23 /92
Regulatory Program Regulatory We	recovery		Case i	D. #	
CONSULTING FIRM/FIELD SUPE	ERVISOR (if applicable) ひご	semilow	UCA ADDE		Tele, #
	,				
		Depth to	Depth to	Dlameter	
lotal depth drilled _20f	it.	[From iai	nd surface)	(inches)	iype and material
Well finished to <u>200</u> ft.	Inner Casing			1.0	End that is a
Top // in	Outer Casing		<u> </u>	10	<u>/_</u> r <u> </u>
	(Not Protective Casing)				
	(Note slot size)	5	20	10	FAC. ECHAD ZOSIDT
Well was finished: date grad	ted Tail Piece				
If finished above grade, casing	Gravel Pack				Box Scort >
height (stick up) above land	Annular Seal/Grout	7	20	16	MACHERIC K
surfaceft.		0	4	16	Blini / Manne - Bett
Was steel protective casing instal	lled? Method of Grouting		Them		
V Yes No		CE		(Copie	s of other geologic logs and/
Static water level after drilling	6ft.			geoph	sical logs should be attache
Water level was measured using 2	CANE EQUER	0			
Vell was developed for	_nours at gpm		BAN F-CS	And Lot	C. T. BREAME. TR. SINT
Method of development					
Was permanent pumping equipme	nt installed? 🛄 Yes 🗹 No				
Pump capacity gpm		ž	Kr. T. Sena	o, Earra (510.
	<u> </u>				
	Type of Rig <u>CreChicat G-14</u>	<u>o</u>			
Name of Driller <u>(1) 11 in Arra Skink</u>		zo	Bet City	5. y EM.T (meri-)
Hearn and Safety Plan submitted?					
Level of Protection used on site (cin	caeone) None (OD) C B A				
INJ. LICENSE NO. 1239					
me or Uniling Company	TABASCO DRILLING (
entify that I have drilled the ab State rules and regulations.	oove-referenced well in acc	ordance will	all weil perr	nit requirer	nents and all applicable
-		R	/	-	
Driller's S	ignature	X-4-	//·····	D,	ate <u>5.20.92</u>
		U_ /			

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



WELL ID NO. 699/12 WELL ID NO. 699/13 WELL ID NO. 699/14

PROJECT NOTE

		S	. GOLUB
			Originator
TO: <u>U.S.Ar</u>	MY, FT. MONMOUTH	DATE:	FEB 2, 1994
ROM: <u>STE</u>	VEN GOLUB	W.O. NO.: 03	8886-088-001-0003
SUBJECT:	WELL RECORD FOR BUILDIN	IGS 699/12, 13,14	

JOTES	MONITORING HELLS RECORDS		
	699/14 WERE INAVATIANT	DIPING THIS WELLS	TARCH AS THEODIART
	BECOMES AVAILABLE CONCER	NING THESE WELLS.	IT WILL BE INCORPORA
	INTO THE REPORT.		
	······································	<u></u>	
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BUILDING 699 MONITORING WELL STATE PLANE COORDINATES





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APPENDIX E

CERTIFICATION OF SOIL RECLAMATION

nk\FortMonm\Bldg750.Rpt

a solution and the second lange of the second lange	SOIL, RFMFDIATION of Philadelphia, Inc. 3201 South 61st Street Philadelphia, pA 19153 Pennsylvania Department of Environmental Resources Permitted Facility	CERTIFICATE OF SOIL REMEDIATION	Soil Remediation of Philadelphia, Inc. certifies that $\underline{2422}$ froms of non-hazardous petroleum contaminated soil delivered by $\underline{ALUIEV ENVIRANT}$ and identified as hold $\# \underline{42/}$ has been processed to destroy the hydrocarbon contamination. This soil has been remediated to meet level Λ Protection as established by the Pennsylvania Department of Environmental Resources Cleanup Standards issued October 18, 1991. This states that the hydrocarbons are removed so that they are non-detectable thereby allowing the soil to be considered clean fill.	Certificate Issued To: US. ARMY FORT MONMONTH	Authorized Signature: Alley Martin	Date: 8-3-93	
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APPENDIX F

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ANALYTICAL DATA PACKAGE

nk\FortMonm\Bldg750.Rpt

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	<u> </u>
2.	Table of Contents	
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds	<u> </u>
4.	Summary Table cross-referencing field ID #'s vs. Lab ID #'s	/
5.	Document bound, paginated and legible	<u> </u>
6.	Chain of Custody	<u> </u>
7.	Methodology Summary	
8.	Laboratory Chronicle and Holding Time Check	<u> </u>
9.	Results submitted on a dry weight basis (if applicable)	NA
10.	Method Detection Limits	/
11.	Lab certified by NJDEPE for parameters or appropriate category of parameters or a member of the USEPA CLP	<u> </u>
12.	Non-Conformance Summary	<u> </u>

Laboratory Manager or Environmental Consultant's Signature

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1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORD, N.J. 08536 609-799-8787 FAX: 609-799-8262

E-SYSTEMS, INC./SAI P.O. Box 360 Fort Monmouth, NJ 07703

SAMPLE DATE: 6/2/92

REPORT DATE: 6/12/92

: 	SAMPLE ID	LAB LOG NO	ANATVETE
أهد	C92-841	3406-1	ANALISIS
	C92-842	3406-2	PD
_ ,	C92-843	3406-2	PD
	C92-844	3400-3	Pb
	C92-845	3406-4	РЬ
6 1	C92-846	3406-5	РЪ
	C92-847	3406-6	РЪ
1	C92-848	3406-7	РЪ
	C92-849	3406-8	РЪ
E B	C92-850	3406-9	РЪ
 . i	C02_951	3406-10	Pb
~ .	C92-851	3406-11	РЬ
<u>-</u> .		3406-12	РЪ
	C92-853	3406-13	Pb
ë. 3	092-854	3406-14	РЪ
	C92-855	3406-15	Pb
22	C92-856	3406-16	Pb
	C92-857	3406-17	Pb
e_3	C92-858	3406-18	Ph
с п	C92-859	3406-19	Ph
	C92-860	3406-20	РЪ

Approved by

Filt Raymond

Raymond J. Feldt Chemistry Lab Manager



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NJ DEP# 12660

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- 3 - - TABLE OF CONTENTS

SECTION

Chain of Custody/Lab Chronicles	1
Methodology Summary/Data Reporting Qualifiers	2
Data - Lead	3
QA/QC Summary Sheets	4



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SES REOUFSTED		REHAPKS	at 4°C	· · · · · · · · · · · · · · · · · · ·		DATE TIME RECEIVED BY:	DATE TIME RECEIVED EY:
CLIENT MALE COND. CEALN OF CUBTODY PLCOND	SITE LOCATION: PO BOX 369 BLDG 490 FL. MOWMOUTH NJ 07703 (908)542-4359 SAMPLERS: C. APPLERSY G. Roch Kowsky	SAMPLE DATE TIME MAT D B ID. PATE TIME MAT D B RIX F B SAMPLE LOCATION F F C C92-855 6/2 1440 Sold X Set 0 51344 945 Sta 1 X X C92-856 1 1455 X 2 of 0 51344 945 Sta 1 X X	C92-857 I565 $K \leq e^{4} \cdot Q''$ $K \times \times$ C92-858 I515 $K \leq e^{4} \cdot Q''$ $I \times \times$ C92-857 $V = 1515$ $K \leq e^{4} \cdot R''$ $I \times \times$	C92-860 6/2 1525 Sol/ X Spt" 51344 Gas Sta 1 X X C92-861 6/2 Frew Brank 2 X	TOTALS	SAMPLE CONTAINERS PREPARED BY: RELINQUISHED BY:	AELINQUISHED AT DATE TIME RECEIVED BY: RELINQUISHED RY: AELINQUISHED AT 39, 256 (OK LOLAN RELINQUISHED RY: AELINQUISHED AT DATA NON NU. DATE TIME RECEIVED AT ANA OPATON NU.



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LABORATORY CHRONICLE (p. 1 9 2)

Ph

CLIENT: <u>3- Systems / SAT</u> MATRIX: <u>Sout</u>

ANALYTICAL PARAMETER:

DATE SAMPLED: <u>6/3/52</u> DATE SUBMITTED: <u>6/3/52</u>

SAMPLE NUMBER	EXTRACTION DATE/TIME	EXTRACTOR'S INITIALS	ANALYSIS DAIE/IIME	ANALYST'S
3406-1	6/10/92	mT	6/11/92	MT
-2		1		1
-3				
- 3				
-6				
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-9'	-			
-10				
-11				
-12			<u> </u>	
14				
-15				
-16				



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NJDEP CERTIFICATION # 12660

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LABORATORY CHRONICLE (r 2 + 2)

CLIENT: C- Systems / SAI	DATE SAMPLED: 6/2/92
MATRIX: 5-06	DATE SUBMITTED: <u>6/3/92</u>
ANALYTICAL PARAMETER: +6	

SAMPLE NUMBER	EXTRACTION DATE/TIME	EXTRACIOR'S INITIALS	ANALYSIS DATE/TIME	ANALYST'S INITIALS
3406 - 17	6/10/42	MT	6/11/92	MT
-182				
-19				
-20		<u> </u>	4	
			·	
	. 			<u> </u>
	•	·	······································	- <u></u> .
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SECTION 2



1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORO, N.J. 08536 609-799-8787 FAX: 609-799-8262

NJ DEP# 12660

METHODOLOGY SUNNARY

PRIORITY POLLUTANT METALS:

Netals analyses in water are performed by atomic absorption using EPA methods presented in "Methods for Chemical Analysis of Water and Wastewater" (EPA 600/4-79-020). Solid sample analyses are conducted as specified in the EPA publication "Test Methods for Evaluating Solid Waste" (SW-846, 3rd Edition). Specific method references are as follows:

PARAMETER	WATER	METHODS	SOLID M	ETHOD
	FLAME	FURNACE	FLAME	FURNACE
Antimony	204.1	204.2	7040	7041
Arsenic		206.2	-	7060
Rervilium	210.1	210.2	7090	7091
Cadmium	213.1	213.2	7130	7131
Chromium	218.1	218.2	7190	7191
Conner	720.1	220.2	7210	7,211
Lead	239.1	239.2	7420	7421
Nercurva	245.1	-	7470,7471**	-
Nickel	249.1	249.2	7520	-
Selenium	-	270.2	-	7740
Silver	772 1	272.2	7760	-
Thellium	272.1	279.2	7840	7841
Zinc	289.1	289.2	7950	-

Cold vapor technique.
** Method 7470 is for liquid waste; 7471 is for solid or semisolid waste.

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1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORO, N.J. 08536 609-799-8787

NJDEP CERTIFICATION # 12660

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DATA REPORTING QUALIFIERS

The compound was not detected at the indicated concentration.

The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.



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SECTION 3



1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORD, N.J. 08536 609-799-8787 FAX: 609-799-8262

NJ DEP# 12660

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REPORT TO: E-Systems, Inc/Serv-Air	DATE SAMPLED: 6/2/92
P.O. Box 360	SAMPLED BY: customer
Fort Monmouth, NJ	DATE SUBMITTED: 6/3/92
07703	DATE EXTRACTED: 6/10/92
ATTN: Barbara/Chuck	DATE ANALYZED: 6/11/92
REPORT DATE: 6/11/92	A. A. LAB LOC NO. 3406 (1 2

A.A. LAB LOG NO: 3406 (1-20)

CUSTOMER SAMPLE ID: See below

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PARAMETER MEASURED: Lead

UNITS: mg/kg

	CUSTOMER SAMPLE ID	RESILTS	
an early a			DETECTION LIMITS
-	C92-841	ND	0.40
ت	C92-842	5 46	2.40
	C92-843		2.40
a a	C92-844	5.75	2.40
	C92-845	2.81	2.40
]	C92-846	2.51	2.40
: 	C92-847	4.38	2.40
	C92_8/8	5.54	2.40
	C02_040	ND	2.25
-		9.58	2.40
	C92-650	2.88	2.40
		3.50	2,40
in state	092-852	2.74	2.40
	092-853	2.40	2 40
	C92-854	2.87	2.40
	C92-855	ND	2.40
- 1	C92-856	ND	2.34
	C92-857	ND	2.34
	C92-858	ND	2.23
7 1	C92-859	6 88	2.30
: ;	C92-860	0.00	2.40
Ë =	•	0.00	2.40

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D = not detected. >> = less than.

Raymond J. Fieldt



1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORO, N.J. 08536 609-799-8787

NJDEP CERTIFICATION # 12660

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	3406			talk:	ADED (SA)	10.3265	.1832			 			 . 		- -				 					-
	QC BATCH #: AMPLE ID #:			SWALE	RESILT (SR)	3.5942	<2.4418							-		- -			 					
neversity presservices in the second	FOR A.A. LAB S and NJ labs		SPIRE CAME	TIMS COULS	RESIT (SSR)	19.1850	8.8703)	
n saad kaadadadadadada	111			CUNER LIMIT	R	75-125	75-125							 										
	: soil mg/kg	•		RPD			NC		<u> </u>						/ 									
t 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	MATRIZ UNITS:			DIFLICATE	2 504.0	7460.0	2.4418																	
fitter of the future for the fitter of the f	RANCE DATA		MALICATE	SWITE	< 4011	1101.2	3.4976																 	
таралария Балалария Балалария	USSA TTLA ASSU			. SAPLE ID	3406-1	34.06 11	11-00+0																	
	LABS, INC. Environmental Testing			ampan	Lead (for -1 to - 10) -	Lead (for 2)h ty																		



ND = not detected.

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Raymond J. Feldt

Chemistry Laboratory Manager

	Analytical As	LAE ssociates Labo	BS, IN Dratory	С.		1375 OF PRINCET(P.O. BOX PLAINSB(609-799- FAX: 609-	RCE CENTER DN MEADOWS 749 DRO, N.J. 08536 8787 799-8262
() () () () () () () () () ()	REPORT TO:	E-Systems, P.O. Box 36 Fort Monmou 07703 ATTN: Barba E: 6/11/92	Inc./Serv-Ai 50 1th, NJ ara/Chuck	r	DATE SAMPLED: SAMPLED BY: DATE SUBMITTE DATE EXTRACTE DATE ANALYZED A.A. LAB LOG N	- - D: - D: 6/10/92 : 6/11/92 NO: -	
ar song Contraction	CUSTOMER SA	MPLE ID:	Method Blan	k for 3406-1 th: <u>RESULTS</u>	rough -10 I	DETECTION	LIMITS
	Lead			ND		0.050	mg/L
- #							
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1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORO, N.J. 08536 609-799-8787

NONCONFORMANCE SUMMARY

No nonconformance reported.



1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORD, N.J. 08536 609-799-8787 FAX: 609-799-8262

NJ DEP# 12660

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LABORATORY CHRONICLE

CLIENT: ESuptem	DATE SAMPLED: 6/2/92
MATRIX: Sace/He O	DATE SUBMITTED: 6/3/92
ANALYTICAL PARAMETER: JOR +15	

SAMPLE	EXTRACTION	EXIRACIOR'S	ANALYSIS	ANALYST'S
NUMBER	DATE/TIME	INITIALS	DATE/TIME	INITIALS
13608	NA	N A	6-4-92/13:08	<u>je</u> l
13609	<u> </u>		13:55	
13610			14:43	
13611			<u></u> ;31	
13612			16:19	
13613			/ 7.67	
13614			17:55	
17615	<u> </u>		18:46	
13616	`		19:34	
13617			20:21	<u> </u>
13618			6-5-92 / 16:08	YFB
13619			16:56	
13620			17:43	
13621			/F:31	
136.22			19:19	
13623	<u> </u>		30.06	
13624			20:54	
13625			21:42	
13626	,		32:29	.
13617			618192 / 19:44	l
13628	ł	Ļ	619192 /14:08	RL
A.A.LABS, INC. nalytical Associates Laboratory

M DEP# 12660

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1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORO, N.J. 08536 609-799-8787 FAX: 608-799-8262

E SYSTEMS, INC./SERV-AIR

VOLATILES REPORT

SAMPLE DATE: 6/2/92 REPORT DATE: 6/10/92

۽ ٻ	SAMPLE ID	NJ ASSAY.#	A.A. LAB LOG #	ANALYSES
1	C92- 841	3 406- 1	013608	8240
	C92-842	3406-2	013609	8240
	C92-843	3406-3	013610	8240
	C92-844	3406-4	013611	8240
	C92-845	3406-5	013612	8240
E A	C92-846	3406+6	013613	8240
	C92-847	3406-7	013614	8240
الا.يا	C92-848	3406-8	013615	8240
ž	C92-849	3406-9	013616	8240
-	C92-850	3406-10	013617	8240
أد _	C92-851	3406-11	013618	8240
	C92-852	3406-12	013619	8240
11	C92-853	3406-13	013620	8240
ات م ات م	C92-854	3406-14	013621	8240
	C92-855	3406-15	013622	8240
	C92-856	3406- 16	013623	8240
and a second	C92-857	3406-17	013624	8240
	C92-858	3406-18	013625	8240
ر "	C92-859	3406-19	013626	8240
,	C92-860	3406-20	013627	8240
~ ~	C92-861	3406-21	013628	624

Approved by



222 EASTON AVENUE NEW BRUNSWICK, NEW JERSEY 08901 TELEPHONE: (908) 249-0148 TELEFAX: (908) 249-0243

Division: PHARMETICS LABORATORY

E-SYSTEMS, INC./SAI P.O. Box 360 Fort Monmouth, NJ 07703

SAMPLE	DATE:	6/2/92
REPORT	DATE:	6/12/92

...

SAMPLE ID	LAB LOG NO	ANALYSIS
C92-841	3406-1	Pb
C92-842	3406-2	Pb
C92-843	3406-3	РЪ
🚑 C92-844	3406-4	Pb
C92-845	, 3406-5	РЪ
ີ C92-846	3406-6	Pb
≝∎ C92-847	3406-7	Pb
C92-848	3406-8	Pb
^{E]} C92-849	3406-9	Pb
C92-850	3406-10	Pb
- C92-851	3406-11	Pb
🚽 C92-852	3406-12	Pb
C92-853	3406-13	Pb
C92-854	3406-14	Pb
C92-855	3406-15	Pb
C92-856	3406-16	Pb
- C92-857	3406-17	Pb
C92-858	3406-18	Pb
C92-859	3406-19	Pb
C92-860	3406-20	Pb

Approved by

Raymond J. Filett

Raymond J. Feldt Chemistry Lab Manager

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NONCONFORMANCE SUMMARY LABORATORY CHRONICLES CHAIN OF CUSTODY METHODOLOGY SUMMARY

METHOD BLANK RESULTS SAMPLE RESULTS

BFB TUNE CHECK FORM SPECTRA, CHROMATOGRAM, AND TABULATION OF BFB INITIAL CALIBRATION SUMMARY CONTINUING CALIBRATION SUMMARY 2

5

SURROGATE RECOVERIES MATRIX SPIKE RECOVERIES METHOD BLANK SUMMARY

BLANK AND SAMPLE RAW DATA: QUANT REPORTS CHROMATOGRAMS SPECTRA OF HITS

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SAMPLE RS: ROCHKOUSLY SAMPLE DATE TIME G R Multication \$				REMARKS
BAMPLE DATE TIME DOT EAMPLE DATE TIME DOT EAMPLE LOCATION 292-7 11/2 1020 X M.W.#3 5#5 11/2 1020 X M.W.#3 5#5 11/2 <	TAINERS			REMARKS
925-3 11/2 1020 × M.W#3 5#5 1023 11/2 1040 × M.W#3 5#6 19254 11/2 1170 × M.W#3 5#7 1034 1170 × M.W#3 5#7				
192-7 11/2 1040 × m.w#3 5#6 192-4 11/2 1170 × mw#3 5#7 1034 11/2 1170 × mw#3 5#7				
192-4 112 1170 × mw#3 5#7				
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			C92-103	- 25 - 101 - 10 - 2
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Relinquished by: (Signeture) Date / Time Received by: (Sign	neture)	Relinquished by: (Signe	ure) Date/Time	Received by: (Signature)
Relinquished by: (Signature) Date/Time Received for Leb	oratory by:	,Date/Time	imarks	

		Bld. 7.	· 2	ה המ	Thotallotion - Split Josen Sample	NO	2	ONTAINER T	YPE	
SAMPLI	нs: Л.АА	46 1	N3C	6	. Roch Kousky Sorv- 1310 .	5				DENADVC
SAMPLE	DATE	TIME	SOIL	.04	SAMPLE LOCATION	CON- TAINERS	23-1			ЛЕМАНАЗ
092 - 1038	eE/01	105	X	18	10#1 5", 8750 .	-				
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042 - 20 10 30	10/30	1415	×	3_	10" 2 5#3 B750 .				11 - 6000	
1501250	10/30	1430	X	2	12 524 B750	~			1 50000	
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		·								KO AL
								2.27	75% - 28	N 567 114
									20	19,5,71 15
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						N	NALYSES	REQUE	STED	Kage 1 7 0 -	
CLIENT NAME: SERV-A SITE LOCATION: P0 B0 F1. H	IR INC. X 369 BLI OHMOUTH N.	06 490 1 07703 (908)54	2-4359			· 0 h Z					
SAKTLERS: C. Repl.	· 4.	-		TOF SATF							
G.R.DCHI	Konsey			VIJ RE	~	/ d/				-	
SAMPLE DATE TIME 1D.	RIX RIX CONB	SAMPLE LOCA	TION	CONT.	in y OA					REMAPKS	
C92-841 6/2 1055	2016	X Spt A SI34	5 9 4 5 5 te		× × ×	↓ ↓_	\downarrow	\downarrow			
C92-842 1100	<	× 5,0+ "B" A	4		< ×					VEDT CT	
C92-843 1110		× 5.01"e".		-	X					4°C.	
C92-844 1120		z s. ot "D"		-	×						
C72-845 1125		× 5. dt "E"		-	×					Tire H-Ver	
C72-846 1135		X S. pt "F"									
C72-847 140		× S. of "6"			×			\$			
C92-848 1150		× 5 pt "H"			×						
c32-847 1:355		× 5.pt "T			×					1	
C72-550 1401		× 5. <i>ct</i> ")"		. /	×			 			
CF2-851 1410		× S. ot "K"		/	×	×					
C92-852 1415		× 5. pt "L"		/	×	×					
C72-853 142	· · · ·	× 5.et "m"			x	×					
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1375 OFFICE CENTER PRINCETON MEADOWS P.O. BOX 749 PLAINSBORO, N.J. 08536 609-799-8787

GC/MS VOLATILE ORGANIC METHODOLOGY

Aqueous samples are analyzed in accordance with USEPA Methods 624, 40 CRF Ch. 1 Part 136 (7-1-85 Edition). A five mL portion of sample is purged at ambient temperature and then rapidly desorbed onto a GC/MS.

Soil samples are analyzed in accordance with USEPA SW-846 Methods for Evaluating Solid Waste (9/86) Rev. 0 Method 8240 and 5030. 5 grams of sample are purged at 40 $^{\circ}$ C and then rapidly desorbed onto a GC/MS.

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LAB ID	UBLK	<u> </u>		Hatrix _	Soil		
CLIENT NAME	<u> </u>			DILUTION FACTOR _	1.00		
CLIENT ID		UBLK 6/8		qa batch _			
DATA FILE	>T4463			date analyzed	06/08/92		
COMPOUND		UG⁄KG	HDL	COMPOUND		U G/K G	HDL
	************		*****	*	*********	********	
Chloromethane		ND	10	Trichloroetheme		ND	5
Bromomethane		ND	10	Dibromochlorometha	ne	ND	5
Vinyl Chloride		ND	10	1,1,2-Trichloroeth	ne	ND	5
Chloroethane		ND	10	Benzene		ND	5
Methylene Chlorid	la	2.4 J	5	2-Chloroethyl vinyl	lether	ND	10
Acrolein		ND	50	Trans-1,3-Dichlorog	ropene	ND	5
Acrylonitrile		ND	50	Ethylene Dibromide	-	ND	5
tert-Butyl alcoho	1	ND	50	Diisopropylether		ND	5
Trichlorofluorome	thane	ND	5	Bromoform		ND	5
1,1-Dichloroethen	6	ND	5	2-Hexanone		ND	5
1,1-Dichloroethan	8	ND	5	4-Methyl-2-pentanor	18	ND	5
trans-1,2-Dichlor	oethene	ND	5	Tetrachloroethene		ND	5
Chloroform		ND	5	1,1,2,2-Tetrachloro	ethane	ND	5
2-Butanone		ND	5	Toluene		ND	5
1,2-Dichloroethan	6	ND	5	Chlorobenzene		ND	5
tert-Butyl methyl	ether	ND	5	Ethylbenzene		ND	5
1,1,1-Trichloroet	hane	ND	5	Sturene		ND	5
1,4-Dioxane		ND	50	m-Xulene		ND	5
Carbon Tetrachlor	ide	ND	5	o,p-Xulene		ND	5
Bromodichlorometh	ane	ND	5	1.3-Dichlorobenzene		ND	5
,2-Dichloropropa	ne	ND	5	1.2-Dichlorobenzene		ND	5
is-1.3-Dichlorop	ropene	ND	5	1.4-Dichlorobenzene		ND	5

Percent Solid of 100. is used for all Target compounds.

(J) Indicates detected below HDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

1E VOLATILE ORGANICS AN TENTATIVELY IDENTI	LAB SAMPLE NO
Lab Name: AA LABS NJDEP Cert. # 12660	Contract: I
Lab Code: GC/MS Case No.:	SAS No,: SDG No,:
Matrix: SOIL	Lab Sample ID: UBLK
Sample wt/vol: 5.0 (g/ml) g	Lab File ID: >T4448
Level: (low/med) LOW	Date Received: NA
** Moisture: not dec	Date Analyzed: 06/05/92
Column: PACK	Dilution Factor: 1.00
Number of TICs found: 0	CONCENTRATION UNITS: ug/Kg
CAS NUMBER I COMPOUND NAME	RT EST. CONC. Q
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LAB ID	13608			HATRIX	Soil		
CLIENT NAME	E-SYSTH.			DILUTION FACTOR	1.00		
CLIENT ID		841-A		QA BATCH			
DATA FILE	<u>> T4436</u>		<u>,</u>	DATE ANALYZED	06/04/9	2	
						1983-1991-1982-1 110 A/O	
		06/66	пу <u>г</u>	CURPUUNU		U6/K6	
Chloromethane		ND	13	Trichloroethene		ND	6
Bromomethane		ND	13	Dibromochlorometha	ne	ND	6
Vinyl Chloride		ND	13	1,1,2-Trichloroeth	ane	ND	6
Chloroethane		ND	13	Benzene		ND	6
Hethylene Chlorid	le	2.0 JB	6	2-Chloroethyl viny	l ether	ND	13
Acrolein		ND	63	Trans-1,3-Dichloro	propene	ND	6
Acrylonitrile		ND	63	Ethylene Dibromide	r	ND	6
tert-Butyl alcoho	1	ND	63	Diisopropylether		ND	6
Trichlorofluorome	thane	ND	6	Bromoform		ND	6
1,1-Dichloroethen	C	ND	6	2-Hexanone		ND	6
1,1-Dichloroethan	e	ND	6	4-Methyl-2-pentano	ne	ND	6
trans-1,2-Dichlor	oethene	ND	6	Tetrachloroethene		ND	6
Chloroform		ND	6	1,1,2,2-Tetrachlor	oethane	ND	6
2-Butanone		ND	6	Toluene		ND	. 6
1,2-Dichloroethan	8	ND	6	Chlorobenzene		ND	6
tert-Butyl methyl	ether	6.4	6	Ethylbenzene		ND	6
1,1,1-Trichloroet	hane	ND	- 6	Styrene		ND	6
1,4-Dioxane		ND	63	m-Xylene		ND	6
Carbon Tetrachlor:	ide	ND	6	o,p-Xylene		ND	8
Bromodichlorometh	ane	ND	6	1,3-Dichlorobenzene	5	ND	6
1,2-Dichloropropa	ne	ND	6	1,2-Dichlorobenzene		ND	6
cis-1,3-Dichlorop	copene	ND	6	1,4-Dichlorobenzene	3	ND	6

Percent Solid of 79.8 is used for all Target compounds.

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

	1E VOLATILE ORGANICS ANG TENTATIVELY IDENTIF	ILYSIS DATA SHEET IED COMPOUNDS	LAB SAMPLE I
Lab Name: AA LABS	NJDEP Cert.# 12660	Contract:	
Lab Code: GC/MS	Case No.:	SAS No.:	SDG No.:
Matrix: SOIL		Lab Samp	le ID: UBLK
Sample wt/vol:	5.0 (g/m1) g	Lab File	ID: > T4463
Level: (low/med) LOW	Date Rec	eived: NA
% Moisture: not d	ec	Date Ana	lyzed: 06/08/92
Column: PACK		Dilution	Factor: 1.00
Number of TICs for	und: O	CONCENTRATION	UNITS: ug/Kg
Cas Number I	COMPOUND NAME		EST. CONC. I Q
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	UOLATILE ORGANICS ANA TENTATIVELY IDENTIF	LYSIS DATA SHE IED COMPOUNDS	ET · I	841-A
Lab Name: AA LABS	5 NJDEP Cert.# 12660	Contract:		
ab Code: GC/MS	Case No :	SAS No.:	- SDG N	lo.:
atrix: SOIL		Lab S	ample ID:	13608
Sample wt/vol:	5.0 (g/ml) g	Lab F	ile ID: >T	'4436
evel: (low/med	i) LOW	Date	Received:	NA
.] % Moisture: not d	lec	Date	Analyzed:	06/04/92
olumn: PACK		Dilut	ion Factor	: 1.00
Number of TICs fo	und: 0	CONCENTRAT	ION UNITS: ug/Kg	
CHS NUMBER			. <u>L</u> JI. 	
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LAB ID	13609	HATRIX	Soil	
CLIENT NAME	E-SYSTM.	DILUTION FACTOR	1,00	
CLIENT ID	842-B	QA BATCH -		
DATA FILE	>14437	DATE ANALYZED	06/04/92	

COMPOUND	UG/KG	HDL	COMPOUND	

Chloromethane	ND	12	Trichloroeth	
Bromomethane	ND	12	Dibromochlor	
Vinyl Chloride	ND	12	1,1,2-Trichl	
Chloroethane	ND	12	Benzene	
Hethylene Chloride	3.7 JB	6	2-Chloroethy	
Acrolein	ND	60	Trans-1,3-Di	
Acrylonitrile	ND	60	Ethylene Dib	
tert-Butyl alcohol	ND	60	Diisopropyle	
Trichlorofluoromethane	ND	6	Bromoform	
1,1-Dichloroethene	ND	6	2-Hexanone	
1,1-Dichloroethane	ND	6	4-Methul-2-pe	
trans-1,2-Dichloroethene	ND	6	Tetrachloroe	
Chloroform	ND	6	1.1.2.2-Tetra	
2-Butanone	ND	6	Toluene	
1,2-Dichloroethane	ND	6	Chlorobenzene	
tert-Butyl methyl ether	8.6	6	Ethulbenzene	
1,1,1-Trichloroethane	ND	6	Sturene	
1,4-Dioxane	ND	60	m-Xulane	
Carbon Tetrachloride	ND	6	o.p-Xulene	
Bromodichloromethane	ND	6	1.3-Dichlorob	
1,2-Dichloropropane	ND	6	1.2-Dichlorob	
cis-1,3-Dichloropropene	ND	6	1.4-Dichlorob	

Compound	UG/KG	HDL
Trichlorostheme	ND	 6
Dibromochloromethane	ND	6
1,1,2-Trichloroethane	ND	6
Benzene	2.7 J	6
2-Chloroethyl vinyl ether	ND	12
Trans-1,3-Dichloropropene	ND	6
Ethylene Dibromide	ND	6
Diisopropylether	ND	6
Bromoform	ND	6
2-Hexanone	ND	6
4-Methyl-2-pentanone	ND	6
Tetrachloroethene	ND	6
1,1,2,2-Tetrachloroethane	ND	6
Toluene	ND	6
Chlorobenzene	ND	6
Ethylbenzene	ND	6
Styrene	ND	6
m-Xylane	3.7 J	6
o,p-Xylene	11	6
1,3-Dichlorobenzene	ND	6
1,2-Dichlorobenzene	61	6
1.4-Dichlorobenzene	ND	6

6 1.4 ppb,

Percent Solid of 83.0 is used for all Target compounds.

(J) Indicates detected below HDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

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1E VOLATILE ORGANICS ANA TENTATIVELY IDENTIF Lab Name: AA LABS NJDEP Cert.# 12660 Lab Code: GC/MS Case No.:	LYSIS DA IED COMF Contrac SAS No.	ATA SHEET POUNDS st:	- I SDG N	LAB SA 842	MPLE NO). _!
Matrix: SOIL		Lab Sam	ple ID:	13609		
$= 3 \operatorname{ample} \omega \tau / 0 \operatorname{ol}; 5.0 (g/ml) g$		Lab Fil	e ID: >T	4437		
ever: (low/med) LOW		Date Re	ceived:	NA		
* Moisture: not dec		Date And	alyzed:	06/04/9	92	
olumn: PACK		Dilution	n Factor	: 1.00		
Number of TICs found: 0	CONC	ENTRATION	N UNITS: ug/Kg		:	
CAS NUMBER I COMPOUND NAME	 	RT	EST.	CONC.	QI	
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COMPOUNDUG/KGHDLCOMPOUNDUG/KGHDLChloromethaneND12TrichloroetheneND6BromomethaneND12DibromochloromethaneND6Uinyl ChlorideND121,1,2-TrichloroethaneND6ChloroethaneND12BenzeneND6ChloroethaneND12BenzeneND6ChloroethaneND12BenzeneND6ChloroethaneND60Trans-1,3-DichloropropeneND6AcroleinND60Ethylene DibromideND6AcroleinND60Ethylene DibromideND6AcroleinND60Ethylene DibromideND6AcroleinND60Ethylene DibromideND61,1-DichloroetheneND6Z-HexanoneND61,1-DichloroetheneND6TetrachloroetheneND61,2-DichloroetheneND6TolueneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,1-TrichloroethaneND6ChlorobenzeneND61,1-TrichloroethaneND6StyreneND61,1-TrichloroethaneND6StyreneND61,1-TrichloroethaneND6TolueneND6 <th>Lab ID Client Name Client ID Data File</th> <th>13610 E-SYSTH, 843-C >T4438</th> <th></th> <th>Hatrix Dilution factor QA Batch Date Analyzed</th> <th>Soil 1.00 06/04/92</th> <th></th>	Lab ID Client Name Client ID Data File	13610 E-SYSTH, 843-C >T4438		Hatrix Dilution factor QA Batch Date Analyzed	Soil 1.00 06/04/92	
ChloromethaneND12TrichloroetheneND6BromomethaneND12DibromochloromethaneND6Vinyl ChlorideND121,1,2-TrichloroethaneND6ChloroethaneND12BenzeneND6Methylene Chloride6.6B62-Chloroethyl vinyl etherND12AcroleinND60Trans-1,3-DichloropropeneND6AcroleinND60Ethylene DibromideND6AcroleinND60Ethylene DibromideND6AcroleinND60DiisopropyletherND6AcroleinND60DiisopropyletherND6AcroleinND62-HexanoneND61,1-DichloroetheneND62-HexanoneND61,1-DichloroetheneND61,1,2,2-TetrachloroetheneND61,1-DichloroethaneND61,1,2,2-TetrachloroethaneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6StyreneND61,1-Trichloroethane <td< th=""><th>COMPOUND</th><th>UG/KG</th><th>HDL</th><th>Compound</th><th>UG/KG</th><th>HDL</th></td<>	COMPOUND	UG/KG	HDL	Compound	UG/KG	HDL
BromomethaneND12DibromochloromethaneND6Uinyl ChlorideND121,1,2-TrichlorosthaneND6ChlorosthaneND12BenzeneND6Methylene Chloride6.6 B62-Chlorosthyl vinyl etherND12AcroleinND60Trans-1,3-DichloropropeneND6AcrylonitrileND60Ethylene DibromideND6AcrylonitrileND60DiisopropyletherND6tert-Butyl alcoholND6BromoformND61.1-DichlorostheneND6Z-HexanoneND61.1-DichlorostheneND6TetrachlorostheneND61.1-DichlorostheneND6TetrachlorostheneND61.2-DichlorostheneND6TolueneND61.2-DichlorostheneND6TolueneND61.2-DichlorosthaneND6ChlorobenzeneND61.2-DichlorosthaneND6ChlorobenzeneND61.2-DichlorosthaneND6StyreneND61.1-TrichlorosthaneND6TranseneND61.1.1-TrichlorosthaneND6StyreneND61.1.1-TrichlorosthaneND6TolueneND61.1.2-TichlorosthaneND6TolueneND61.1.1-TrichlorosthaneND6 <td>Chloromethane</td> <td>ND</td> <td>12</td> <td>Trichloroethene</td> <td>ND</td> <td>6</td>	Chloromethane	ND	12	Trichloroethene	ND	6
Uinyl ChlorideND121,1,2-TrichlorosthaneND6ChlorosthaneND12BenzeneND6Methylene Chloride6.6B62-Chlorosthyl vinyl etherND12AcroleinND60Trans-1,3-DichloropropeneND6AcroleinND60Ethylene DibromideND6AcroleinND60Ethylene DibromideND6AcroleinND60DiisopropyletherND6AcroleinND60DiisopropyletherND6TrichlorofluoromethaneND6BromoformND61,1-DichlorosthaneND62-HexanoneND61,1-DichlorosthaneND6TetrachlorostheneND61,2-DichlorosthaneND61,1,2,2-TetrachlorosthaneND6ChloroformND6TolueneND62-ButanoneND6ChlorobenzeneND61,1,1-TrichlorosthaneND6StyreneND61,1,1-TrichlorosthaneND6StyreneND61,4-DioxaneND6n-XyleneND62-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND6<	Bromomethane	ND	12	Dibromochlorometham	s ND	6
ChloroethaneND12BenzeneND6Methylene Chloride6.6 B62-Chloroethyl vinyl etherND12AcroleinND60Trans-1,3-DichloropropeneND6AcrylonitrileND60Ethylene DibromideND6tert-Butyl alcoholND60DiisopropyletherND6TrichlorofluoromethaneND6BromoformND61,1-DichloroethaneND62-HexanoneND61,1-DichloroethaneND64-Methyl-2-pentanoneND61,1-DichloroethaneND61,1,2,2-TetrachloroethaneND6ChloroformND61,1,2,2-TetrachloroethaneND62-ButanoneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,1-TrichloroethaneND6StyreneND61,1-TrichloroethaneND6styreneND61,1-TrichloroethaneND6styreneND61,4-DioxaneND6styreneND6Carbon TetrachlorideND61,3-DichlorobenzeneND61,2-DichloromethaneND61,2-DichlorobenzeneND61,2-DichloropenpeneND61,2-DichlorobenzeneND61,3-DichloropenpeneND61,2-DichlorobenzeneND61,2-	Vinyl Chloride	ND	12	1,1,2-Trichloroetha	ne ND	6
Methylene Chloride6.6 B62-Chloroethyl vinyl etherND12AcroleinND60Trans-1,3-DichloropropeneND6AcrylonitrileND60Ethylene DibromideND6tert-Butyl alcoholND60DiisopropyletherND6TrichlorofluoromethaneND6BromoformND61,1-DichlorostheneND62-HexanoneND61,1-DichlorostheneND64-Methyl-2-pentanoneND61,1-DichlorostheneND6TetrachlorostheneND61,2-DichlorostheneND61,1,2,2-TetrachlorostheneND6ChloroformND6TalueneND62-ButanoneND6ChlorobenzeneND61,2-DichlorosthaneND6ChlorobenzeneND61,1-TrichlorosthaneND6StyreneND61,1-TrichlorosthaneND60m-XyleneND61,4-DioxaneND60m-XyleneND61,4-DioxaneND61,3-DichlorobenzeneND6ArbonotchloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6	Chloroethane	ND	12	Benzene	ND	6
AcroleinND60Trans-1,3-DichloropropeneND6AcrylonitrileND60Ethylene DibromideND6tert-Butyl alcoholND60DiisopropyletherND6TrichlorofluoromethaneND6BromoformND61,1-DichlorostheneND62-HexanoneND61,1-DichlorostheneND64-Methyl-2-pentanoneND61,1-DichlorostheneND6TetrachlorostheneND61,1-DichlorostheneND6TetrachlorostheneND6ChloroformND61,1,2,2-TetrachlorostheneND6ChloroformND6TolueneND62-ButanoneND6ChlorobenzeneND61,2-DichlorosthaneND6ChlorobenzeneND61,1-TrichlorosthaneND6StyreneND61,1,1-TrichlorosthaneND60m-XyleneND61,4-DioxaneND60m-XyleneND61,2-DichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-Dichlo	Methylene Chloride	6.6 B	6	2-Chloroethyl vinyl	ether ND	12
AcrylonitrileND60Ethylene DibromideND6tert-Butyl alcoholND60DiisopropyletherND6TrichlorofluoromethaneND6BromoformND61,1-DichloroethaneND62-HexanoneND61,1-DichloroethaneND64-Methyl-2-pentanoneND61,1-DichloroethaneND6TetrachloroetheneND61,1-DichloroethaneND61,1,2,2-TetrachloroetheneND6ChloroformND61,1,2,2-TetrachloroethaneND62-ButanoneND6TolueneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6StyreneND61,1,1-TrichloroethaneND6StyreneND61,4-DioxaneND60m-XyleneND6Garbon TetrachlorideND60,p-XyleneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6	Acrolein	ND	60	Trans-1,3-Dichlorop	opene ND	6
tert-Butyl alcoholND60DiisopropyletherND6TrichlorofluoromethaneND6BromoformND61,1-DichlorostheneND62-HexanoneND61,1-DichlorosthaneND64-Methyl-2-pentanoneND61,1-DichlorosthaneND6TetrachlorostheneND6trans-1,2-DichlorostheneND6TetrachlorostheneND6ChloroformND61,1,2,2-TetrachlorosthaneND62-ButanoneND6TolueneND61,2-DichlorosthaneND6ChlorobenzeneND61,2-DichlorosthaneND6ChlorobenzeneND61,2-DichlorosthaneND6StyreneND61,1,1-TrichlorosthaneND6StyreneND61,4-DioxaneND60m-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND6	Acrylonitrile	ND	60	Ethylene Dibromide	- ND	6
TrichlorofluoromethaneND6BromoformND61,1-DichlorostheneND62-HexanoneND61,1-DichlorostheneND64-Methyl-2-pentanoneND6trans-1,2-DichlorostheneND6TetrachlorostheneND6ChloroformND61,1,2,2-TetrachlorostheneND62-ButanoneND6TolueneND61,2-DichlorosthaneND6ChlorobenzeneND61,2-DichlorosthaneND6ChlorobenzeneND61,1,1-TrichlorosthaneND6StyraneND61,4-DioxaneND60m-XyleneND6Garbon TetrachlorideND61,3-DichlorobenzeneND6I,2-DichlorosthaneND61,2-DichlorobenzeneND61,4-DioxaneND60,p-XyleneND6I,2-DichlorosthaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6Cis-1,3-DichloropropeneND61,4-DichlorobenzeneND6	tert-Butyl alcohol	ND	60	Diisopropylether	ND	6
1,1-DichlorostheneND62-HexanoneND61,1-DichlorosthaneND64-Methyl-2-pentanoneND6trans-1,2-DichlorostheneND6TetrachlorostheneND6ChloroformND61,1,2,2-TetrachlorostheneND62-ButanoneND6TolueneND61,2-DichlorosthaneND6ChlorobenzeneND61,2-DichlorosthaneND6ChlorobenzeneND61,1,1-TrichlorosthaneND6StyreneND61,4-DioxaneND60m-XyleneND6Garbon TetrachlorideND61,3-DichlorobenzeneND61,2-DichlorosthaneND61,3-DichlorobenzeneND61,4-DioxaneND61,3-DichlorobenzeneND61,2-DichlorosthaneND61,3-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND61,2-DichlorosthaneND61,2-DichlorobenzeneND <t< td=""><td>Trichlorofluoromethar</td><td>ne ND</td><td>6</td><td>Bromoform</td><td>ND</td><td>6</td></t<>	Trichlorofluoromethar	ne ND	6	Bromoform	ND	6
1,1-DichloroethaneND64-Methyl-2-pentanoneND6trans-1,2-DichloroethaneND6TetrachloroethaneND6ChloroformND61,1,2,2-TetrachloroethaneND62-ButanoneND6TolueneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6EthylbenzeneND61,1,1-TrichloroethaneND6StyreneND61,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND6	1,1-Dichlorostheme	ND	6	2-Hexanone	ND	6
trans-1,2-DichloroetheneND6TetrachloroetheneND6ChloroformND61,1,2,2-TetrachloroethaneND62-ButanoneND6TolueneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND61,1,1-TrichloroethaneND6StyreneND61,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND60,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND6	1,1-Dichloroethane	ND	6	4-Methyl-2-pentanone	ND	6
ChloroformND61,1,2,2-TetrachloroethaneND62-ButanoneND6TolueneND61,2-DichloroethaneND6ChlorobenzeneND61,2-DichloroethaneND6ChlorobenzeneND6tert-Butyl methyl ether3.4 J6EthylbenzeneND61,1,1-TrichloroethaneND6StyreneND61,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND60,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6cis-1,3-DichloropropeneND61,4-DichlorobenzeneND6	trans-1,2-Dichloroeth	iene ND	6	Tetrachloroethene	ND	6
2-ButanoneND6TolueneND61,2-DichlorosthaneND6ChlorobenzeneND6tert-Butyl methyl ether3.4 J6EthylbenzeneND61,1,1-TrichlorosthaneND6StyraneND61,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND6o,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND61,2-DichloropropaneND61,2-DichlorobenzeneND6	Chloroform	ND	6	1,1,2,2-Tetrachloroe	thane ND	6
1,2-DichloroethaneND6ChlorobenzeneND6tert-Butyl methyl ether3.4 J6EthylbenzeneND61,1,1-TrichloroethaneND6StyraneND61,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND6o,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6cis-1,3-DichloropropeneND61,4-DicklorobenzeneND6	2-Butanone	ND	6	Toluene	ND	6
tert-Butyl methyl ether3.4 J6EthylbenzeneND61,1,1-TrichloroethaneND6StyreneND61,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND6o,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6cis-1,3-DichloropropeneND61.4-DichlorobenzeneND6	1,2-Dichloroethane	ND	6	Chlorobenzene	ND	6
1,1,1-TrichloroethaneND6StyreneND61,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND6o,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6cis-1,3-DichloropropeneND61.4-DichlorobenzeneND6	tert-Butyl methyl eth	er 3.4 J	6	Ethylbenzene	ND	6
1,4-DioxaneND60m-XyleneND6Carbon TetrachlorideND6o,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6cis-1,3-DichloropropeneND61.4-DichlorobenzeneND6	1,1,1-Trichloroethane	ND	6	Styrene	ND	6
Carbon TetrachlorideND60,p-XyleneND6BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6cis-1,3-DichloropropeneND61.4-DichlorobenzeneND6	1,4-Dioxane	ND	60	m-Xylene	ND	6
BromodichloromethaneND61,3-DichlorobenzeneND61,2-DichloropropaneND61,2-Dichlorobenzene3.7 J6cis-1,3-DichloropropeneND61.4-DichlorobenzeneND6	Carbon Tetrachloride	ND	6	o,p-Xylene	ND	6
1,2-Dichloropropane ND 6 1,2-Dichlorobenzene 3.7 J 6 cis-1,3-Dichloropropene ND 6 1.4-Dichlorobenzene ND 6	Bromodichloromethane	ND	6	1,3-Dichlorobenzene	ND	6
cis-1,3-Dichloropropene ND 6 1.4-Dichloropenzene ND 6	1,2-Dichloropropane	ND	6	1,2-Dichlorobenzene	3.7 J	6
	cis-1,3-Dichloroproper	ne ND	6	1,4-Dichlorobenzene	ND	6

Percent Solid of 03.0 is used for all Target compounds.

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

1E VOLATILE ORGANICS ANALY	SIS DATA SHEET	LAB SA	MPLE NO.
TENTATIVELY IDENTIFIE	D COMPOUNDS	 843-	C I
Lab Name: HA LABS NJDEP Cert.# 12660 C	ontract:	· 1	I
Lab Code: GC/MS Case No.: S	AS No.:	SDG No.:	
Matrix: SOIL	Lab Samp	le ID: 13610	
∃Sample wt∕vol: 5.0 (g∕ml) g	Lab File	ID: > T4438	
Level: (low/med) LOW	Date Rec	eived: NA	
% Moisture: not dec	Date Ana	lyzed: 06/04/9	92
Column: PACK	Dilution	Factor: 1.00	
	CONCENTRATION	UNITS:	
Number of TIUs found: 2	·····**	ug/Kg	·
CAS NUMBER I COMPOUND NAME	I RT I	EST. CONC.	
*!Acetone	7.94_1	6	= = = = =
11Unknown_alkane1	19.34_ <u> </u>	6	
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*Quantitated from calibration	III	I	I
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LAB ID	13611	HATRIX	Soil
CLIENT NAME	E-SYSTH.	DILUTION FACTOR	1,00
CLIENT ID	<u> </u>	QA BATCH	
DATA FILE	> T44 39	DATE ANALYZED	06/04/92

HDL

COMPOUND	UG/KG	HDL	COMPOUND	UG/KG	HDL
Chloromethane	ND	12	Trichloroethene	ND	
Bromomethane	ND	12	Dibromochloromethane	ND	6
Vinyl Chloride	ND	12	1,1,2-Trichloroethane	ND	6
Chloroethane	ND	12	Benzene	ND	6
Methylene Chloride	6.3 E	3 6	2-Chloroethyl vinyl ether	ND	12
Acrolein	ND	58	Trans-1,3-Dichloropropene	ND	6
Acrylonitrile	ND	58	Ethylene Dibromide	ND	6
tert-Butyl alcohol	ND	58	Diisopropylether	ND	6
Trichlorofluoromethane	ND	6	Bromoform	ND	6
1,1-Dichloroethene	ND	6	2-Hexanone	ND	6
1,1-Dichloroethane	ND	6	4-Hethyl-2-pentanone	ND	6
trans-1,2-Dichloroethene	ND	6	Tetrachloroethene	ND	6
Chloroform	ND	6	1,1,2,2-Tetrachloroethane	ND	6
2-Butanone	ND	6	Toluene	ND	6
l,2-Dichloroethane	ND	6	Chlorobenzene	ND	6
tert-Butyl methyl ether	ND	6	Ethulbenzene	ND	6
1,1,1-Trichloroethane	ND	- 6	Sturene	ND	6
,4-Dioxane	ND	58	w-Xulene	ND	6
arbon Tetrachloride	ND	6	o.p-Xulene	ND	6
Fromodichloromethane	ND	6	1.3-Dichlorobenzene	ND	6
,2-Dichloropropane	ND	6	1.2-Dichlorobenzene	ND	6
is-1,3-Dichloropropene	ND	6	1.4-Dichlorobenzene	ND	6

Percent Solid of 86.0 is used for all Target compounds.

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

UOLATILE ORGANICS ANA TENTATIVELY IDENTIF	LYSIS DATA SHEET IED COMPOUNDS	LAB SAMPLE NO
Lab Name: AA LABS NJDEP Cert.# 12660	Contract:	844-D .
Lab Code: GC/MS Case No.:	SAS No.: SDG	No.:
Matrix: SOIL	Lab Sample ID:	13611
Sample wt/vol: 5.0 (g/ml) g	Lab File ID: >	T4439
Level: (low/med) LOW	Date Received:	NA
% Moisture: not dec	Date Analyzed:	06/04/92
Column: PACK	Dilution Facto	r: 1.00
Number of TICs found: 1	CONCENTRATION UNITS ug/Kg	:
CAS NUMBER I COMPOUND NAME	I RT I EST.	CONC. Q
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LAB ID	13612	HATRIX	Soil
CLIENT NAME	E-SYSTH.	DILUTION FACTOR	1.00
CLIENT ID	845-E	QA BATCH	
DATA FILE	> T444 0	DATE ANALYZED	06/04/92

	***********		*****
COMPOUND	UG/KG	HDL	COMPO

Unioromethane	ND	11	Trich
Bromomethane	ND	11	Dibro
Vinyl Chloride	ND	11	1,1,2-
Chloroethane	ND	11	Benzer
Hethylene Chloride	8.3	B 6	2-Chio
Acrolein	ND	57	Trans-
Acrylonitrile	ND	57	Ethyle
tert-Butyl alcohol	ND	57	Diisop
Trichlorofluoromethane	ND	6	Bromof
1,1-Dichloroethene	ND	. 6	2-Hexa
1,1-Dichloroethane	ND	6	4-Heth
trans-1,2-Dichloroether	ND ND	6	Tetrac
Chloroform	ND	6	1.1.2.
2-Butanone	ND	6	Toluen
1,2-Dichloroethane	ND	6	Chloro
tert-Butyl methyl ether	ND	6	Ethulb
1,1,1-Trichloroethane	ND	6	Sturen
1,4-Dioxan o	ND	57	m-Xule
Carbon Tetrachloride	ND	6	o.p-Xu
Bromodichloromethane	ND	6	1.3-Di
1,2-Dichloropropane	ND	ĥ	1.2-Di
cis-1.3-Dichloropropene	ND	6	1 4 _Di
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1	COMPOUND .	UG⁄KG	HDL
	Trichloroethene	ND	6
	Dibromochloromethane	ND	6
	1,1,2-Trichloroethane	ND	6
	Benzene	ND	6
	2-Chloroethyl vinyl ether	ND	11
	Trans-1,3-Dichloropropene	ND	6
	Ethylene Dibromide	ND	6
	Diisopropylether	ND	6
	Bromoform	ND	6
	2-Hexanone	ND	6
	4-Hethyl-2-pentanone	ND	6
	Tetrachloroethene	ND	6
	1,1,2,2-Tetrachloroethane	ND	6
	Toluene	ND	6
	Chlorobenzene	ND	6
	Ethylbenzene	ND	6
	Styrene	ND	6
	m-Xylene	ND	6
	o,p-Xylene	ND	6
	1,3-Dichlorobenzene	ND	6
	1,2-Dichlorobenzene	ND	6
	1,4-Dichlorobenzene	ND	6

Percent Solid of 87.0 is used for all Target compounds.

(J) Indicates detected below HDL(B) Indicates also present in blank

(ND) Indicates compound not detected

	1E UOLATILE ORGANICS AND TENTATIVELY IDENTIE	ALYSIS DATA SHEET TIED COMPOUNDS	LAB SAMPLE I
Lab Name: AA LAB	S NJDEP Cert.# 12660	Contract:	845-E
Lab Code: GC/MS	Case No.:	SAS No.: SD	G No.:
Matrix: SOIL		Lab Sample I	D: 13612
Sample wt/vol:	5.0 (g/ml) g	Lab File ID:	>T4440
Level: (low/med	I) LOW	Date Received	i: NA
• % Moisture: not d	lec	Date Analyzed	1: 06/04/92
Column: PACK		Dilution Fact	tor: 1.00
Number of TICs fo	und: 2	CONCENTRATION UNIT	1 S : 1
Cas Number (COMPOUND NAME	 RT ES1	CONC. 1 Q
	Unknown alkane		

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lab ID Client Name	<u>13613</u> E-SYSTH		. <u> </u>	<u></u>	HATRIX <u>Soi</u>	<u>1</u> 0	
CLIENT ID		846-F			OA BATCH		
DATA FILE	>T4441				DATE ANALYZED 06/0	04/92	
	28823382222						******
		UG/KG		HDL	COMPOUND	UG/KG	HDL
Chlozopethane	***********	#200022 LID	190281	10		1923222222 NR	
Bronomethane		עא אול		12	Inichioroethene	עא עא	0
Vinul Chloride		עא מע		12	1 1 2-Trichlorgethane	ND ND	о с
Chloroethane		ער תא		12	Renzene	ND	6
Hethulene Chloride		ND	R	â	2-Chlornethul uinul ether	ND	12
Acrolein		ND	~	58	Trans-1.3-Dichloropropene	ND	6
Acrylonitrile		ND		58	Ethulene Dibromide	ND	6
tert-Butyl alcohol		ND		58	Diisopropulether	ND	6
Trichlorofluoromet	hane	ND		6	Bromoform	ND	6
1,1-Dichloroethene		ND		6	2-Hexanone	ND	6
1,1-Dichloroethane		ND		6	4-Methyl-2-pentanone	ND	6
trans-1,2-Dichloro	ethene	ND		6	Tetrachloroethene	ND	6
Chloroform		ND		6	1,1,2,2-Tetrachloroethane	ND	6
2-Butanone		ND		6	Toluene	NÐ	6
1,2-Dichloroethane		ND		6	Chlorobenzene	ND	6
tert-Butyl methyl a	ether	ND		6	Ethylbenzene	ND	6
1,1,1-Trichloroeth	ane -	ND		6	Styrene	ND	6
1,4-Dioxane		ND		58	m-Xylene	ND	6
Carbon Tetrachlorid	ie	ND		6	o,p-Xylene	ND	6
Bromodichloromethar	he	ND		6	1,3-Dichlorobenzene	ND	6
1,2-Dichloropropane	3	NÐ		6	1,2-Dichlorobenzene	ND -	6
cis-1,3-Dichloropro	pene	ND		6	1,4-Dichlorobenzene	ND	6

Percent Solid of 86.0 is used for all Target compounds.

(J) Indicates detected below HDL(B) Indicates also present in blank

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(ND) Indicates compound not detected

1E VOLATILE ORGANICS AN TENTOTIUSIN IDENT	ALYSIS DATA SHEET	LAB SAMPLE I
IENTHTIVELY IDENTI	FIED COMPOUNDS	1 846-F
Lab Name: AA LABS NJDEP Cert.# 12660 1	Contract:	l'
Lab Code: GC/MS Case No.:	SAS No.: SI)G No.:
Matrix: SOIL	Lab Sample I	D: 13613
Sample wt/vol: 5.0 (g/ml) g	Lab File ID:	>T4441
Level: (low/med) LOW	Date Receive	d: NA .
% Moisture: not dec	Date Analyze	d: 06/04/92
Column: PACK	Dilution Fac	tor: 1.00
Number of TICs found: 2	CONCENTRATION UNI ug/K	TS: g
I Cas Number I compound Nami	E I RT I ES	T. CONC. Q
1 * Acetone	7.84_1	7
III	19.35_ !!	5 I
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	I I I	I
	III	/
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*Quantitated from calibration	iii	
FORM I	VOA-TIC	1/87 Rev

LAB ID	13614	HATRIX	Soil
CLIENT NAME	E-SYSTM.	DILUTION FACTOR	1.00
CLIENT ID	847-G	QA BATCH	
DATA FILE	>T4442	DATE ANALYZED	06/04/92

		AREARES MINT		iic <i>i</i> ic	
Chloromethane	ND	11	Trichlorostheme	ND	6
Browomethane	ND	11	Dibromochloromethane	ND	6
Vinyl Chloride	ND	11	1,1,2-Trichloroethane	ND	6
Chloroethane	ND	11	Benzene	ND	6
Methylene Chloride	7.5 B	6	2-Chloroethyl vinyl ether	ND	11
Acrolein	ND	57	Trans-1,3-Dichloropropene	ND	6
Acrylonitrile	ND	57	Ethylene Dibromide	ND	6
tert-Butyl alcohol	ND	57	Diisopropylether	ND	6
Trichlorofluoromethane	ND	6	Bromoform	ND	6
1,1-Dichloroethene	ND	6	2-Hexanone	ND	6
1,1-Dichloroethane	ND	6	4-MethyI-2-pentanone	ND	6
trans-1,2-Dichloroethene	ND	6	Tetrachloroethene	NÐ	6
Chloroform	ND	6	1,1,2,2-Tetrachloroethane	ND	6
2-Butanone	ND	6	Toluene	ND	6
1,2-Dichlorosthans	ND	6	Chlorobenzene	ND	6
tert-Butyl methyl ether	ND	6	Ethulbenzene	ND	6
1,1,1-Trichloroethane	ND	6	Sturene	ND	6
1,4-Dioxane	ND .	57	m-Xulene	ND	6
Carbon Tetrachloride	ND	6	o.p-Xulene	ND	6
Bromodichloromethane	ND	6	1,3-Dichlorobenzene	ND	6
,2-Dichloropropane	ND	6	1,2-Dichlorobenzene	ND	6
cis-1,3-Dichloropropene	ND	6	1.4-Dichlorobenzene	ND	6

Percent Solid of 87.0 is used for all Target compounds.

(J) Indicates detected below HDL (B) Indicates also present in blank

(ND) Indicates compound not detected

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1E VOLATILE ORGANICS ANAL TENTATULELY IDENTIEL	YSIS DATA SHEET	LAB	SAMPLE
Lab Name: AA LABS NJDEP Cert.# 12660 (Contract:	- I	47-G ·
Lab Code: GC/MS Case No.: 9	5AS No.:	SDG No.:	
Matrix: SOIL	Lab Samj	ple ID: 1361	4
Sample wt/vol: 5.0 (g/ml) g	Lab File	D: >T4442	
Level: (low/med) LOW	Date Rec	ceived: NA	
% Moisture: not dec	Date Ana	alyzed: 06/04	4/92
Column: PACK	Dilutior	n Factor: 1.0	D O
		-23	
CAS NUMBER I COMPOUND NAME	 RT	EST. CONC.	I Q
CAS NUMBER COMPOUND NAME	RT 1 <	EST. CONC.	
CAS NUMBER COMPOUND NAME	RT 1 <	EST. CONC.	
CAS NUMBER COMPOUND NAME 11 *!Acetone 21 !Unknown alkane	RT 1 <	EST. CONC.	

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FORM I VOA-TIC

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1/87 Rev

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LAB ID	13615	HATRIX	Soil
CLIENT NAME	E-SYSTH.	DILUTION FACTOR	1.00
CLIENT ID	848-H	QA BATCH	
DATA FILE	>14443	DATE ANALYZED	06/04/92

COMPOUND	UG/KG	HDL	Compound	UG/KG	HDL
Chloromethane	 ND	11	Trichloroethene	ND	
Bromomethane	ND	11	Dibromochloromethane	ND	5
Vinyl Chloride	ND	11	1.1.2-Trichlorgethame	ND	5
Chloroethane	ND	11	Benzene	3.6 J	5
Hethylene Chloride	4.2 JB	5	2-Chloroethul vinul ether	ND	11
Acrolein	ND	55	Trans-1.3-Dichloropropene	ND	5
Acrylonitrile	ND	55	Ethulene Dibromide	ND	5
tert-Butyl alcohol	ND	55	Diisopropulether	ND	5
Trichlorofluoromethane	ND	5	Bromoform	ND	5
1,1-Dichloroethene	ND	5	2-Hexanone	ND	5
1,1-Dichloroethane	ND	5	4-Methul-2-pentanone	ND	5
trans-1,2-Dichloroethene	ND	5	Tetrachloroethene	ND	5
Chloroform	ND	5	1.1.2.2-Tetrachlorosthame	ND	5
2-Butanone	ND	5	Toluene	ND	5
1,2-Dichloroethane	ND	5	Chlorobenzene	ND	5
tert-Butyl methyl ether	9.3	5	Ethulbenzene	ND	5
1,1,1-Trichloroethane	ND	5	Sturene	ND	5
1,4-Dioxane	ND	55	R-Xulene	ND	5
Carbon Tetrachloride	ND	5	a.m-Xulene	ND	5
Bromodichloromethane	ND	5	1.3-Dichlorobenzene	ND	5
,2-Dichloropropane	ND	5	1.2-Dichlorobenzene	ND	5
is-1,3-Dichloropropene	ND	5	1.4-Dichlorobenzene	ND	5

-3,6 pp.

HDL

Percent Solid of 91.0 is used for all Target compounds.

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

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1E LAB SAMPLE NO. VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS 848-H Lab Name: AA LABS NJDEP Cert.# 12660 Contract:-----Lab Code: GC/MS Case No.: ----SAS No.: ----SDG No.: ----Matrix: SOIL Lab Sample ID: 13615 [∃] Sample wt∕vol: 5.0 (g/ml) g Lab File ID: >T4443 Level: (low/med) LOW Date Received: NA % Moisture: not dec.____ Date Analyzed: 06/04/92 Column: PACK Dilution Factor: 1.00 CONCENTRATION UNITS: Number of TICs found: 2 ug/Kg CAS NUMBER COMPOUND NAME RT I EST. CONC. I Q 1 11 *lAcetone 7.91_I___ 1 4 21 _!Unknown alkane__ 19.39_1__ 5 1 Quantitated from calibration

FORM I VOA-TIC

1/87 Rev

LAB ID	13616	HATRIX	Soil
CLIENT NAME	E-SYSTH.	DILUTION FACTOR	1.00
CLIENT ID	849-I	QA BATCH	
data file	>T4444	DATE ANALYZED	06/04/92

**********************	************		*****
Compound	UG/KG	HDL	COHPOL

Chloromethane	ND	12	Trich
Browomethane	ND	12	Dibro
Vinyl Chloride	ND	12	1,1,2-
Chloroethane	ND	12	Benzer
Hethylene Chloride	5.2 JB	6	2-Chlo
Acrolein	ND	60	Trans-
Acrylonitrile	ND	60	Ethyle
tert-Butyl alcohol	ND	60	Diisop
Trichlorofluoromethane	ND	6	Bromof
1,1-Dichloroethene	ND	6	2-Hexa
1,1-Dichloroethane	ND	6	4-Heth
trans-1,2-Dichloroethene	ND	6	Tetrac
Chloroform	ND	6	1.1.2.
2-Butanone	ND	6	Toluen
1,2-Dichloroethane	ND	6	Chloro
tert-Butyl methyl ether	160	6	Ethulbe
1,1,1-Trichloroethane	ND	6	Sturane
1,4-Dioxane	ND	60	m-Xuler
Carbon Tetrachloride	ND	6	ο
Bromodichlorowethane	ND	6	1.3-Dic
1,2-Dichloropropane	ND	6	1.2-Dic
cis-1,3-Dichloropropene	ND	6	1,4-Dic

•	***************************************	*************	
L	COMPOUND	UG/KG	HDL
=	531#8562\$522222 2 688884488882		*******
2	Trichloroethene	ND	6
2	. Dibromochloromethane	ND	6
2	1,1,2-Trichloroethane	ND	6
2	Benzene	ND	6
6	2-Chloroethyl vinyl ether	ND	12
	Trans-1,3-Dichloropropene	ND	6
)	Ethylene Dibromide	ND	6
)	Diisopropylether	ND	6
;	Bromoform	ND	6
5	2-Hexanone	ND	6
;	4-Methyl-2-pentanone	ND	6
;	Tetrachloroethene	NÐ	6
	1,1,2,2-Tetrachloroethane	ND	6
	Toluene	ND	6
	Chlorobenzene	ND	6
	Ethylbenzene	ND	6
	Styrane	ND	6
	m-Xylene	ND	6
	o,p-Xylene	6.9	6
	1,3-Dichlorobenzene	ND	6
	1,2-Dichlorobenzene	ND	6
	1,4-Dichlorobenzene	ND	6

6,9 ppb

Percent Solid of 84.0 is used for all Target compounds.

(J) Indicates detected below HDL(B) Indicates also present in blank

(ND) Indicates compound not detected

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t	JOLATILE ORGANICS ANA TENTATIVELY IDENTIF	LYSIS DATA IED COMPOUN	SHEET DS		LAB SF	
Lab Name: AA LABS	NJDEP Cert.# 12660	Contract:-			849)-I ·
Lab Code: GC/MS	Case No.:	SAS No.: -		SDG	No.:	-
Matrix: SOIL		La	b Sampl	e ID:	13616	
Sample wt/vol: 5	.0 (g∕ml) g	La	b File	ID: >	F4444	
Level: (low/med)	LOW	Da	te Rece	ived:	NA	
% Moisture: not de	C	Dat	te Anal	yzed:	06/04/	92
Column: PACK		Dil	lution	Factor	:: 1.00	
Number of TICs four I CAS NUMBER I				g/Kg		
	COMPOUND NHME	X ==== 	T ==== ==	EST.	CONC.	Q = = = = =
*IAc	cetone		.91_1_	-	9 I 5 I	
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LAB ID	13617	HATRIX _	Soil	
CLIENT NAME	E-SYSTH.	DILUTION FACTOR	1,00	
CLIENT ID	850-J	QA BATCH		
DATA FILE	>T4445	DATE ANALYZED	06/04/92	

# # # # # # # # # # # # # # # # # # #			*******
COMPOUND	UG/KG	HDL	COMPOUNI
Chloromethane	ND	11	Trichlo
Bromomethane	ND	11	Dibromod
Vinyl Chloride	ND	11	1, 1,2-T i
Chloroethane	ND	11	Benzene
Methylene Chloride	4.3 JB	6	2-Chlord
Acrolein	ND	57	Trans-1,
Acrylonitrile	ND	57	Ethylene
tert-Butyl alcohol	ND	57	Diisopro
Trichlorofluoromethane	ND	6	Bromofor
1,1-Dichloroethene	ND	6	2-Hexano
1,1-Dichloroethane	ND	6	4-Methyl
trans-1,2-Dichloroethene	ND	6	Tetrachl
Chloroform	ND	6	1,1,2,2-
2-Butanone	ND	6	Toluene
1,2-Dichloroethane	ND	6	Chlorobe
tert-Butyl methyl ether	5.7	6	Ethylben
1,1,1-Trichloroethane	ND	6	Styrene
1,4-Dioxane	. ND	57	m-Xylene
Carbon Tetrachloride	ND	6	o,p-Xyle
Bromodichloromethane	ND	6	1,3-Dich
1,2-Dichloropropane	ND	6	1,2-Dich
cis-1,3-Dichloropropene	ND	6	1,4-Dich
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.... ------D UG/KG HDL _____ roethene ND 6 chloromethane ND 6 richloroethane ND 6 ND 6 ND 11 oethyl vinyl ether ND 6 ,3-Dichloropropene e Dibromide 6 ND opylether ND 6 6 ND ND 6 one 6 -2-pentanone ND 6 loroethene ND 6 Tetrachloroethane ND 6 ND 6 nzene ND 6 ND nzene 6 ND ND 6 ND 6 ne 6 ND lorobenzene 6 lorobenzene ND lorobenzene 6 ND

Percent Solid of 88.0 is used for all Target compounds.

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

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TATIVELY IDENTI	ALYSIS I FIED COM	ATA SHEET IPOUNDS		LAB SA	MPLE
EP Cert.# 12660	Contra	ct:	-	I 850	J-J .
ase No.:	SAS No	.:	SDG	No.:	
		Lab Sam	ple ID:	13617	
(g∕ml) g		Lab Fil	e ID: >	T4445	
យ		Date Re	ceived:	NA	
		Date And	alyzed:	06/04/	92
		Dilution	n Factor	r: 1.00	
			ug/Kg		
COMPOUND NAME		RT	EST.	CONC.	Q ====
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	<pre>IEP Cert. # 12660 ase No.: (g/ml) g W 0 COMPOUND NAME</pre>	IEP Cert.# 12660 Contra ase No.: SAS No (g/m1) g W	<pre>IEP Cert.# 12660 Contract: Lab Sam (g/ml) g Lab Fil W Date Re Date An Dilution CONCENTRATION 0 COMPOUND NAME RT /pre>	IMPROVED INDENTIFIED CONFORMES IEP Cert.# 12660 Contract: SDG Lab Sample ID: (g/m1) g Lab File ID: > U Date Received: Date Analyzed: Dilution Factor U CONCENTRATION UNITS: U COMPOUND NAME RT EST. COMPOUND NAME RT EST. COMPOUND NAME	Impleted intribution interview of the inter

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LAB ID	13618	HATRIX	Soil
CLIENT NAME	E-SYSTM.	DILUTION FACTOR	1.00
CLIENT ID	851-K	QA BATCH	
DATA FILE	> T444 9	DATE ANALYZED	06/05/92

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COMPOUND	UG/KG	HDL	COMPOUND	UG/KG	HDL
Chloromethane	ND	11	Trichloroethene	ND	·=====================================
Bromomethane	ND	11	Dibromochloromethane	ND	6
Vinyl Chloride	ND	11	1.1.2-Trichloroethane	ND	6
Chloroethane	ND	11	Benzene	ND	6
Hethylene Chloride	4.3 JB	6	2-Chloroethul vinul ether	ND	11
Acrolein	ND	56	Trans-1.3-Dichloropropene	ND	6
Acrylonitrile	ND	56	Ethulene Dibromide	ND	6
tert-Butyl alcohol	ND	56	Diisopropulether	ND	6
Trichlorofluoromethane	. ND	6	Browoform	ND	6
1,1-Dichloroethene	ND	6	2-Hexanone	ND	6
1,1-Dichloroethane	ND	6	4-Methul-2-pentanone	ND	6
trans-1,2-Dichloroethene	ND	6	Tetrachloroethene	ND	6
Chloroform	ND	6	1.1.2.2-Tetrachloroethane	ND	6
2-Butanone	NÐ	6	Toluene	ND	6
l,2-Dichlorosthans	ND	6	Chlorobenzene	ND	6
tert-Butyl methyl ether	2.0 J	6	Ethulbenzene	ND	6
1,1,1-Trichloroethane	ND	6	Sturene	ND	6
,4-Dioxane	ND	56	m-Xulene	ND	6
Carbon Tetrachloride	ND	6	o,p-Xulene	ND	6
Fromodichloromethane	ND	6	1,3-Dichlorobenzene	ND	6
,2-Dichloropropane	ND	6	1,2-Dichlorobenzene	ND	6
is-1,3-Dichloropropene	ND	6	1.4-Dichlorobenzene	ND	6

Percent Solid of 89.0 is used for all Target compounds.

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

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Interint IDENTIFIED CONFORMUS 851-K Lab Name: AA LABS NJDEP Cert.# 12660 Contract: SDG No.: Matrix: SOIL Lab Sample ID: 13618 Sample wt/vol: 5.0 (g/ml) g Lab File ID: >T4449 Level: (low/med) LOW Date Received: NA % Moisture: not dec Date Analyzed: 06/05/92 Column: PACK Dilution Factor: 1.00 Mumber of TICs found: 1 ug/Kg		1E Tile organics ana	LYSIS D	ATA SHEET		LAB SA	MPLE NO.
Lab Code: GC/MS Case No.: SAS No.: SDG No.: Matrix: SOIL Lab Sample ID: 13618 Sample wt/vol: 5.0 (g/ml) g Lab File ID: >T4449 Level: (low/med) LOW Date Received: NA % Moisture: not dec Date Analyzed: 06/05/92 Column: FACK Dilution Factor: 1.00 Mumber of TICs found: 1 ug/Kg	Lab Name: AA LABS NJ	Name: AA LABS NJDEP Cert.# 12660 Contrac			-	851	-K .
Matrix: SOIL Lab Sample ID: 13618 Sample wt/vol: 5.0 (g/ml) g Lab File ID: >T4449 Level: (low/med) LOW Date Received: NA % Moisture: not dec Date Analyzed: 06/05/92 Column: PACK Dilution Factor: 1.00 Image: Solid content of TICs found: 1 ug/Kg Image: Solid content of TICs found: 1 ug/Kg Image: Solid content of TICs found: 10.40	Lab Code: GC/MS	Case No.:	SAS No	.:	SDG N	10.:·	
Sample wt/vol: 5.0 (g/ml) g Lab File ID: >T4449 Level: (low/med) LOW Date Received: NA % Moisture: not dec Date Analyzed: 06/05/92 Column: PACK Dilution Factor: 1.00 Number of TICs found: 1 ug/Kg CAS NUMBER COMPOUND NAME RT EST. CONC. Q	Matrix: SOIL			Lab Sam	ple ID:	13618	
Level: (low/med) LOU Date Received: NA % Moisture: not dec Date Analyzed: 06/05/92 Column: PACK Dilution Factor: 1.00 Number of TICs found: 1 ug/Kg I CAS NUMBER COMPOUND NAME RT I CAS NUMBER COMPOUND NAME RT EST. CONC. Q I IUnknown 10.40_ 8	^{5 ™} Sample wt∕⊍ol: 5.0	(g∕ml) g		Lab File	∃ ID: >1	4449	
% Moisture: not dec Date Analyzed: 06/05/92 Column: PACK Dilution Factor: 1.00 Number of TICs found: 1 ug/Kg I CONCENTRATION UNITS: Number of TICs found: 1 ug/Kg I COMPOUND NAME I IO.40_ B IO.40_ I IO.40_	Level: (low/med) L(οω		Date Red	ceived:	NA	
Column: PACK Dilution Factor: 1.00 CONCENTRATION UNITS: CONCENTRATION UNITS: Number of TICs found: 1 CAS NUMBER COMPOUND NAME I Unknown 10.40 8 I Interview I Interview <	% Moisture: not dec			Date Ana	alyzed:	06/05/9	92
Number of TICs found: 1 concentration UNITS: I ug/Kg I CAS NUMBER COMPOUND NAME RT EST. CONC. Q I Unknown 10.40 8 Image: Compound in the second in the	Column: PACK			Dilution	n Factor	: 1.00	
CAS NUMBER COMPOUND NAME RT EST. CONC. Q 10.40_ 8	Number of TICs found:	· 1	CONC	CENTRATION	N UNITS: ug∕Kg		
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1/87 Rev

LAB ID	13619			HATRIX Soil		
CLIENT NAME	E-SYSTM.			DILUTION FACTOR 1.00		
CLIENT ID		852-L		QA BATCH		
DATA FILE	> 14450			DATE ANALYZED 06/05	/92	
55225225555555555555555555555555555555						******
CURPOUND		UG/KG	MDL	COMPOUND	UG/KG	HDL
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$				LIR.	
Chioromethane		NU	11	Trichlorosthene	NU	6
Dromomethane		ND	11	Dibromochloromethane	ND	6
Vinyi Chiorida		ND	11	1,1,2-Trichloroethane	ND	6
Chloroethane		ND	11	Benzene	ND	6
Methylene Chlori	de	5.2 JB	6	2-Chloroethyl vinyl ether	ND	11
Herolein		ND	56	Trans-1,3-Dichloropropene	ND	6
Acrylonitrile		ND	56	Ethylene Dibromide	ND	6
tert-Butyl alcoh	ol	ND	56	Diisopropylether	ND	6
Trichlorofluorom	ethane	ND	6	Bromoform	ND	6
1,1-Dichloroethe	ne	ND	6	2-Hexanone	ND	6
1,1-Dichloroetha	ne	ND	6	4-Methyl-2-pentanone	ND	6
trans-1,2-Dichlo	roethene	ND	6	Tetrachloroethene	ND	6
Chloroform		ND	6	1,1,2,2-Tetrachloroethane	ND	6
2-Butanone	•	ND	6	Toluene	ND	6
1,2-Dichloroetha	ne i	ND	6	Chlorobenzene	ND	6
tert-Butyl methyl	l ether	2.2 J	6	Ethulbenzene	ND	6
1,1,1-Trichloroe	thane	ND	6	Sturene	ND	6
1,4-Dioxane		ND	56	m-Xulene	ND	6
Carbon Tetrachlor	ride	ND	6	a.m-Xulene	ND	6
Bromodichlorometh	ane	ND	6	1.3-Dichlorobenzene	ND	6
1,2-Dichloropropa	ine	ND	6	1.2-Dichlorobenzene	ND	6
cis-1,3-Dichlorop	ropene	ND	6	1.4-Dichlorobenzene	ND	6
· · · · · ·	-			•		-

Percent Solid of 89.0 is used for all Target compounds.

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

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	1E OLATILE ORGANICS ANA TENTATIVELY IDENTIF	LYSIS DATA IED COMPOUN	SHEET NDS		LAB SA	MPLE NO
Lab Name: AA LABS	NJDEP Cert.# 12660	Contract:-		-	852 <u>·</u>	-L .
Lab Code: GC/MS	Case No.:	SAS No.: -		SDG 1	No.;	
Matrix: SOIL		Le	ab Samp	ole ID:	1 3619	
Sample wt/vol: 5	.0 (g∕ml) g	La	ab File	ID: >1	4450	
Level: (low/med)	LOW	Da	te Rec	eived:	NA	
% Moisture: not dec	÷	Da	te Ana	lyzed:	06/05/	92
Column: PACK		Di	lution	Factor	: 1,00	
Number of TICs four	nd: 0	CONCENT	RATION	UNITS: ug/Kg		
			RT			
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LAB ID	13620	HATRIX	Soil
CLIENT NAME	E-SYSTH,	DILUTION FACTOR	1.00
CLIENT ID	853-H	QA BATCH	
DATA FILE	>T4451	DATE ANALYZED	06/05/92

COMPOUND	UG/KG	HDL	Compound	UG/KG	HDL
Chloromethane	**************************************	11	Trichloroethene	••••••••••••••••••••••••••••••••••••••	
Bromomethane	ND	11	Dibromochloromethane	ND	6
Vinyl Chloride	ND	11	1.1.2-Trichloroethane	ND	6
Chloroethane	ND	11	Benzene	ND	6
Hethylene Chloride	6.7 B	6	2-Chloroethul vinul ether	ND	11
Acrolein	ND	57	Trans-1.3-Dichloropropene	ND	6
Acrylonitrile	NÐ	57	Ethulene Dibromide	ND	6
tert-Butyl alcohol	ND	57	Diisopropulether	ND	6
Trichlorofluoromethane	ND	6	Bromoform	ND	ő
1,1-Dichloroethene	ND	6	2-Hexanone	ND	6
1,1-Dichloroethane	ND	6	4-Hethul-2-pentanone	ND	6
trans-1,2-Dichloroethene	ND	6	Tetrachloroethene	ND	6
Chloroform	ND	6	1.1.2.2-Tetrachloroethane	ND	6
2-Butanone	ND	6	Toluene	ND	6
1,2-Dichloroethane	ND	6	Chlorobenzene	ND	6
tert-Butyl methyl ether	8.8	6	Ethulbenzene	ND	6
1,1,1-Trichloroethane	ND	6 -	Sturene	ND	6
l,4-Dioxane	ND	57	m-Xulene	ND	6
Carbon Tetrachloride	ND	6	o.p-Xulene	ND	6
romodichloromethane	ND	6	1,3-Dichlorobenzene	ND	6
,2-Dichloropropane	ND	6	1,2-Dichlorobenzene	ND	6
is-1,3-Dichloropropene	ND	6	1,4-Dichlorobenzene	ND	6
			•		-

Percent Solid of 87.0 is used for all Target compounds.

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

	1E Volatile organics and Tentatively identif	ALYSIS DATA SHEET FIED COMPOUNDS	LAB SA	MPLE
Lab Name: AA Li	ABS NJDEP Cert.# 12660	Contract:	853- 	-M .
Lab Code: GC/M	3 Case No.:	SAS No.:	SDG No.:	
Matrix: SOIL		Lab Samp	le ID: 13620	
Sample wt/vol:	5.0 (g/ml) g	Lab File	ID: >T4451	
- Level: (low/m	ned) LOW	Date Rec	eived: NA	
% Moisture: not	: dec.	Date Ana	luzed: 06/05/9	92
Column: PACK		Dilution	Factor: 1.00	
COC LUNDER	rouna: 1		1g/Kg	
CAS NUMBER	I COMPOUND NAME		I Est. Conc. I	Q
1!	_!Unknown alkane	19.35_1	5	
the second statement in the second statement is the second statement in the second statement is the se	1	;;-		
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LAB ID	13621			HATRIX	Soil	
CLIENT NAME	<u>E-SYSTH.</u>			DILUTION FACTOR	1,00	<u> </u>
CLIENT ID		854-N	<u> </u>	qa batch		····
DATA FILE	> T4452			date analyzed	06/05/92	
	*********			======================================		
		06/66				ᄡᅝᅟᅟᄭᄔ
Chloromethane		ND	12	Trichloroethene	ND	6
Browowethane		ND	12	Dibromochloromethane	ND	6
Vinyl Chloride		ND	12	1,1,2-Trichloroethan	e ND	6
Chloroethane		ND	12	Benzene	ND	6
Hethylene Chloride		3.9 JB	6	2-Chloroethyl vinyl	ether ND	12
Acrolein		ND	58	Trans-1,3-Dichloropr	opene ND	6
Acrylonitrile		ND	58	Ethylene Dibromide	- ND	6
tert-Butyl alcohol		ND	58	Diisopropylether	ND	6
Trichlorofluorometh	ane	ND	6	Bromoform	ND	6
1,1-Dichlorostheme		ND	6	2-Hexanone	ND	6
1,1-Dichloroethane		ND	6	4-Methyl-2-pentanone	ND	6
trans-1,2-Dichloroe	thene	ND	6	Tetrachloroethene	ND	6
Chloroform		ND	6	1,1,2,2-Tetrachloroe	thane ND	6
2-Butanone		ND	6	Toluene	ND	6
1,2-Dichloroethane		ND	6	Chlorobenzene	ND	6
tert-Butyl methyl ei	ther	ND	6	Ethylbenzene	ND	6
1,1,1-Trichloroetha	ne	ND	6	Styrene	ND	6
1,4-Dioxane		ND	58	m-Xylene	ND	6
Carbon Tetrachloride	3	ND	6	o,p-Xylene	ND	6
Bromodichloromethane	3	ND	6	1,3-Dichlorobenzene	ND	6
1,2-Dichloropropane		ND	6	1,2-Dichlorobenzene	ND	6
cis-1,3-Dichloroprop	pane	ND	6	1,4-Dichlorobenzene	ND	6

Percent Solid of 86.0 is used for all Target compounds.

(J) Indicates detected below HDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

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	1E VOLATILE ORGANICS ANA	LYSIS DATA SHEET	LAB SAMPLE NO
	TENTATIVELY IDENTIF	IED COMPOUNDS	1 854-N
Lab Name: AA LABS	NJDEP Cert.# 12660	Contract:	۱
Lab Code: GC/MS	Case No.:	SAS No.: SDG	No.:
Matrix: SOIL		Lab Sample ID	: 13621
⊡Sample wt∕vol:	5.0 (g/ml) g	Lab File ID:	>T4452
Level: (low/med) LOW	Date Received	: NA
ි% Moisture: not d	ec	Date Analyzed	06/05/92
Column: PACK		Dilution Facto	or: 1.00
Number of TICs for	und: 0	CONCENTRATION UNITS	5:
CAS NUMBER	COMPOUND NAME	I RT I EST.	CONC. I Q I
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LAB ID	13622			HATRIX	Soil		
CLIENT NAME	E-SYSTH.	·		DILUTION FACTOR	1.00		
CLIENT ID		855-0		QA BATCH			
DATA FILE	<u>>T4453</u>		<u> </u>	DATE ANALYZED	06/05/	92	
COMPOUND		UG/KG	HDL	COMPOUND	2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	UG/KG	HDI
Chloromethane	442292#22	ND	12	Trichloroethere		••••••••••••••••••••••••••••••••••••••	
Bromomethane		ND	12	Dibromochloromethan	e .	ND	6
Vinyl Chloride		ND	12	1.1.2-Trichloroetha	TR.	ND	â
Chloroethane		ND	12	Benzene		ND	6
Hethylene Chloride		5.5 JB	6	2-Chloroethul vinul	ether	ND	12
Acrolein		ND	60	Trans-1.3-Dichlorop	ropene	ND	6
Acrylonitrile		ND	60	Ethulene Dibromide		ND	6
tert-Butyl alcohol		ND	60	Diisopropulether		ND	6
richlorofluorometha	ne	ND	6	Bromoform		ND	6
i,1-Dichloroethene		ND	6	2-Hexanone		ND	6
.,1-Dichloroethane		ND	6	4-Methyl-2-pentanone	3	ND	6
rans-1,2-Dichloroet	hene	ND	6	Tetrachloroethene		ND	6
hloroform		ND	6	1,1,2,2-Tetrachloroe	thane	ND	6
-Butanone	•	ND	6	Toluene		ND	6
,2-Dichloroethane	•	NÐ	6	Chlorobenzene		ND	6
ert-Butyl methyl eth)er	ND	6	Ethylbenzene		ND	6
.,1,1-Trichlorosthane	1	ND	6	Styrene		ND	6
,4-Dioxane		ND	60	m-Xylene		ND	6
arbon Tetrachloride		ND	6	o,p-Xylene		ND	6
romodichloromethane		NÐ	6	1,3-Dichlorobenzene		ND	6
,2-Dichloropropane		ND	6	1,2-Dichlorobenzene		ND	6
15-1,3-Dichloroprope	ne	ND	6	1,4-Dichlorobenzene		ND	6

Percent Solid of 83.0 is used for all Target compounds.

(J) Indicates detected below HDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

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UC Lab Name: AA LABS Lab Code: GC/MS Matrix: SOIL Sample wt/vol: 5. Level: (low/med) % Moisture: not dec Column: PACK	1E DLATILE ORGANICS ANA TENTATIVELY IDENTIF NJDEP Cart.# 12660 Case No.: 0 (g/ml) g LOW	LYSIS DATA SHEE IED COMPOUNDS Contract: SAS No.: Lab Sar Lab Fil Date Re Date Ar Dilutic	LAB SAN I	1PLE NO. -0 1 -0 1 1 1 -22 22
Number of TICs foun	d: 0	CONCENTRATIC	N UNITS: ug/Kg	
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LAB ID	13623			HATRIX	Soil	
CLIENT NAME	-SYSTH,		· .	DILUTION FACTOR	1.00	
CLIENT ID	856-	P		OA BATCH		
DATA FILE	T4454			DATE ANALYZED	06/05/92	
COMPOUND			na seese			
*****************		**==***			04/ 6 4	ועה
Chloromethane	N)	13	Trichloroethere	ND	6
Bromomethane	Ы)	13	Dibromochloromethar	ne ND	ŝ
Vinyl Chloride	N)	13	1.1.2-Trichloroethe	ine ND	6
Chloroethane	NE)	13	Benzene .	1.5 J	e e
Methylene Chloride	7.	1 B	6	2-Chloroethul vinul	ether ND	13
Acrolein	ND)	64	Trans-1.3-Dichlorop	rapene ND	6
Acrylonitrile	ND)	64	Ethulene Dibromide	ND	ă
tert-Butyl alcohol	ND	ı.	64	Diisopropulather	ND	6
richlorofluoromethan	n ND	i	6	Bromoform	ND	6
1,1-Dichloroethene	ND	i.	6	2-Hexanone	ND	6
,1-Dichloroethane	ND		6	4-Methul-2-pentanon	e ND	â
rans-1,2-Dichloroethe	ne ND		6	Tetrachloroethene	ND	6
hloroform	ND		6	1.1.2.2-Tetrachloro	sthane ND	â
-Butanone	ND		6	Toluene	ND	6
,2-Dichloroethane	ND		6	Chlorobenzene	ND	6
ert-Butyl methyl ethe	r 4.2	2 J	6	Ethulbenzene	ND	ĥ
,1,1-Trichloroethane	ND		6	Sturene	ND	6
,4-Dioxane	ND		64	m-Xulene	ND	a
arbon Tetrachloride	ND		6	0.p-Xulene	ND	a
romodichloromethane	ND		6	1.3-Dichlorobenzene	ND	â
,2-Dichloropropane	ND		6	1.2-Dichlorobenzene	ND	6
is-1,3-Dichloropropen	nd ND		6	1.4-Dichlorobenzene	ND	ŝ

Percent Solid of 78.0 is used for all Target compounds.

1,5 ppb

(J) Indicates detected below HDL (B) Indicates also present in blank

(ND) Indicates compound not detected

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Lab Name: AA LABS NJDEP Cert. # 12660 Contra b Code: GC/MS Case No.: SAS No Matrix: SOIL Sample wt/vol: 5.0 (g/ml) g	ct: Lab Samp	SDG N	956- 	·P .
<pre>Inb Code: GC/MS Case No.: SAS No Matrix: SOIL Sample wt/vol: 5.0 (g/ml) g Invel: (low/med) LOW</pre>	Lab Sam	SDG N	4o.:	
<pre>Matrix: SOIL Sample wt/vol: 5.0 (g/ml) g Vel: (low/med) LOW</pre>	Lab Samp	ole ID:		
Sample wt/vol: 5.0 (g/ml) g	Lab File	•	13623	
Jvel: (low/med) LOW	000 file	ID: >7	(4454	
	Date Rec	eived:	NA	
% Moisture: not dec	Date Ana	lyzed:	06/05/9	2
Lumn: PACK	Dilutior	Factor	·: 1.00	
Number of TICs found: 1		UNITS: ug/Kg		:
CAS NUMBER I COMPOUND NAME	RT i	EST.	CONC.	Q
1!*_!Acetone!	7.95_1		.6i	1
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	LAB ID	13624				HATRIX Soi	i 1	
e - 1	CLIENT NAME	E-SYSTH.		_	_	DILUTION FACTOR 1.0	0	
Line	CLIENT ID		857-0			QA BATCH		
r Lini	DATA FILE	<u>> T4455</u>				DATE ANALYZED <u>06/</u>	05/92	
	Compound	12222222222	UG/KG		HDL.	COMPONIND		9829289 1011
C 7	****************							
	Chloromethane		ND		11	Trichloroethere	ND	<u>د</u>
	Bromomethane		ND		11	Dibromochloromethane	ND	0 2
	Vinyl Chloride		ND		11	1.1.2-Trichloroethane	ND	6
	Chloroethane		ND		11	Banzane	ND	6
E.	Hethylene Chloride		ND	8	6	2-Chlornethul vinul ether	ND	11
	Acrolein		ND		57	Trans-1.3-Dichloropropene	ND	2
	Acrylonitrile		ND		57	Ethulene Dibromide	ND	6
[]	tert-Butyl alcohol		ND		57	Diisopropulather	ND	6
liter.	Trichlorofluorometh	ane	ND		6	Bronoform	ND	â
1	1,1-Dichloroethene		ND		6	2-Hexanone	ND	6
	1,1-Dichloroethane		ND		6	4-Methul-2-pentanone	ND	6
3	trans-1,2-Dichloroed	hene	ND		6	Tetrachloroethene	ND	6
أهب	Chloroform		ND		6	1.1.2.2-Tetrachloroethane	ND	ő
	2-Butanone		ND		6	Toluene	ND	6
7	1,2-Dichloroethane		ND		6	Chlorobenzene	ND	6
- 1	tert-Butyl methyl et	her	ND		6	Ethylbenzene	ND	6
	1,1,1-Trichloroethan	ið i	ND		6	Styrene	ND	6
ڊ ~	1,4-Dioxane		ND		57	m-Xulene	ND	6
- 4	Carbon Tetrachloride		ND		6	o,p-Xulene	ND	6
کلا ـــا	Bromodichloromethane		ND		6	1,3-Dichlorobenzene	ND	6
e 1	1,2-Dichloropropane		ND		6	1,2-Dichlorobenzene	ND	6
	cis-1,3-Dichloroprop	ene	ND		6	1,4-Dichlorobenzene	ND	6

Percent Solid of 87.0 is used for all Target compounds.

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

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1E LAB SAMPLE NO. VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS 857-Q Lab Name: AA LABS NJDEP Cert.# 12660 Contract:-----L b Code: GC/MS Case No.: ---- SAS No.: ---- SDG No.: ----Matrix: SOIL Lab Sample ID: 13624 Sample $\omega t/vol$: 5.0 (g/ml) g Lab File ID: >T4455 Level: (low/med) LOW Date Received: NA % Moisture: not dec.____ Date Analyzed: 06/05/92 C lumn: PACK Dilution Factor: 1.00 trinuita Internation CONCENTRATION UNITS: Number of TICs found: 0 ug/Kg CA3 NUMBER COMPOUND NAME I EST. CONC. I 1 RT 1 0

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LAB ID	13625	HATRIX	Sail
CLIENT NAME	E-SYSTH.	DILUTION FACTOR	1.00
DOTO FILT	<u>858-R</u>	QA BATCH	
	<u> </u>	date analyzed	06/05/92

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			\$232222222200022222222222222		
COMPOUND	UG/KG	HDL	COMPOUND	UG/KG	HDL
Chloromethane	112222222222222 111				******
Brannethane		11	Trichlorosthene	ND	6
Uinul Chlorida	ND	11	Dibromochloromethane	ND	6
Chloroethane	NU ND	11	1,1,2-Trichloroethane	ND	6
Mathulana Chlasid	NU	11	Benzene	ND	6
	4.6 JB	6	2-Chloroethyl vinyl ether	ND	11
HCrolein	ND	56	Trans-1,3-Dichloropropene	ND	6
Hcrylonitrile	ND	56	Ethylene Dibromide	ND	6
tert-Butyl alcohol	ND	56	Diisopropulether	ND	6
Trichlorofluoromethane	ND	6	Bronoform	ND	6
1,1-Dichlorostheme	ND	6	2-Hexanope	ND	6
1,1-Dichloroethane	ND	6	4-Methul-2-mentanone	ND	с С
trans-1,2-Dichloroethene	ND	6	Tetrachloroathene	ND	о с
Thioroform	ND	6	1.1.2.2-Tetrachloroethane	ND ND	C C
2-Butanone	ND	ĥ		ND	0
,2-Dichloroethane	ND	ĥ	Chlorohenrene		b
ert-Butyl methyl ether	ND	6			Ь
1,1,1-Trichloroethane	ND	ć	Chungene	UN	6
.4-Dioxane		50		NU	6
arbon Tetrachloride	עוז תו	20	R-Xylene	ND	6
romodichloromethane	עה	b	o,p-Aylene	ND	6
2-Dichloropropage	עה	5	1,3-Dichlorobenzene	ND	6
is 1 2 Dichlesses	UN	6	1,2-Dichlorobenzene	ND	6
ra-r'a-preurocobcobeue	UM	6	1,4-Dichlorobenzene	ND	6

Percent Solid of 90.0 is used for all Target compounds.

(J) Indicates detected below HDL (B) Indicates also present in blank

(ND) Indicates compound not detected

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1E VOLATILE ORGANICS AND	ALYSIS DATA SHEET	LAB SAMPLE N
Lab Name: AA LABS NJDEP Cert.# 12660	Contract:	858-R .
Lab Code: GC/MS Case No.:	SAS No.: SDG I	No.:
Matrix: SOIL	Lab Sample ID:	13625
Sample wt/vol: 5.0 (g/ml) g	Lab File ID: >'	F4456
Level: (low/med) LOW	Date Received:	NA
% Moisture: not dec	Date Analyzed:	06/05/92
Jolumn: PACK	Dilution Factor	:: 1.00
Number of TICs found: 1	CONCENTRATION UNITS: ug/Kg	
CAS NUMBER I COMPOUND NAME	I RT I EST.	CONC. 1 Q
llUnknown	1 30.52_1	5 ii
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LAB ID1	3626			HATRIX	Sail	
CLIENT NAME E-	SYSTH.		·	DILUTION FACTOR	1.00	
CLIENT ID	859	-5		OA BATCH		
DATA FILE	4457			DATE ANALYZED	06/05/92	
######################################				******************	13 # # # # # # # # # # # # # # # # # # #	
	UG	/KG	HDL	COMPOUND	UG/KG	HDI
Chloromethane	·	ND	 11	Trichloroethere	**************************************	**************************************
Bromomethane	ł	Œ	11	Dibromochloromethan	w ND	6
Vinyl Chloride	ŀ	١D	11	1.1.2-Trichloroetha	ne ND	
Chloroethane	ŀ	٩D	11	Benzene	ND	a a
Hethylene Chloride	h	Ð	B 6	2-Chloroethul vinul	ether ND	11
Acrolein	N	ID	57	Trans-1.3-Dichlorom	ropene ND	6
Acrylonitrile	N	Ð	57	Ethulene Dibromide	ND	â
tert-Butyl alcohol	N	D	57	Diisopropulether	ND	e a
Trichlorofluoromethane	N	D	6	Browoform	ND	6
1,1-Dichloroethene	н	D	6	2-Hexanone	ND	6
1,1-Dichloroethane	N	D	6	4-Methul-2-pentanone	n ND	6
trans-1,2-Dichloroethem	e N	Ð	6	Tetrachloroethene	ND	â
Chloroform	N	D	6	1.1.2.2-Tetrachloroe	thane ND	6
2-Butanone	N	D	6	Toluene	ND	6
1,2-Dichloroethane	N	D	6	Chlorobenzene	NÐ	ĥ
tert-Butyl methyl ether	Ы	D	6	Ethulbenzene	ND	6
1,1,1-Trichloroethane	NI	D	6	Styrene	ND	6
1,4-Dioxane	Ы)	57	m-Xylene	ND	6
Carbon Tetrachloride	NE)	6	o,p-Xylene	ND	6
romodichloromethane	NE)	6	1,3-Dichlorobenzene	ND	6
,2-Dichloropropane	ND)	6	1,2-Dichlorobenzene	ND	6
is-1,3-Dichloropropene	ND)	6	1,4-Dichlorobenzene	ND	6

Percent Solid of 87.0 is used for all Target compounds.

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

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LAB SAMPLE NO. 1EVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS 859-S . Lab Name: AA LABS NJDEP Cert.# 12660 Contract:-----Leb Code: GC/MS Case No.: ---- SAS No.: ---- SDG No.: ----METTIX: SOIL Lab Sample ID: 13626 Sample wt/vol: 5.0 (g/ml) g Lab File ID: >T4457 Lel: (low/med) LOW Date Received: NA % Moisture: not dec.____ Date Analyzed: 06/05/92 Cilumn: PACK Dilution Factor: 1.00 CONCENTRATION UNITS: Number of TICs found: 1 uq/Kq CAS NUMBER RT I EST. CONC. I I COMPOUND NAME 1 Q ___1|____*|Acetone__ 2.87_1___ I. 18 I *Quantitated from calibration FORM I VOA-TIC 1/87 Rev

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m . ¥	LAB ID	13627				Hatrix Soij		
: 		E-SYSTH.				DILUTION FACTOR 1.0)	
لاست		86	<u>0-T</u>			QA BATCH		
- 1		<u>74464</u>				DATE ANALYZED06/0	8/92	

د	COMPOUND	Ŭ	G/XG		HDL	Compound	UG/KG	HDI
E PROVER T	Chloromethane		ND.		12	zazutzesevenezennezenezen Trichlenenikere	2270722222223 LIN	
- 5	Bromomethane		ND		12	Diberrationer iters	NU	6
	Vinul Chloride		מא		12	1 1 2 Tricklassetter	UN ND	6
	Chloroethane		מא		13	1,1,2-IFICHIOFOEthane	NU	6
5	Methulene Chloride		15	D	13		UN ND	6
	Acrolein		ND	D	0	Z-Chiordetnyi Vinyi ether	UN	13
~)	Acrulonitrile		ND		00	Irans-1,3-Dichioropropene	ND	6
2	tert-Butul alcohol		עדי אזא		03	LUNYIANE DIDFOMICE	UN	6
لشيقأ	Trichlorofluorometham		ערו מע		63	Disopropyletner	ND	6
	1.1-Dichloraethene	•	ערי תע		6		ND	6
	1.1-Dichloroathane		ער מוט		D C	2-Mexanone	ND	6
	trans-1.2-Dichloroethe		าม เกิ่		ь с	4-Methyl-2-pentanone	ND	6
	Chloroform		עוי הנ		. 0	letrachloroethene	ND	6
	2-Butanone		ער הת		b	1,1,2,2-Tetrachioroethane	ND	6
atti 112.	1.2-Dicklorgethane	r L	۹D MD		6	Toluene	ND	6
او ۱۰	tert-Butul methul atha	- r	יייי		6	Chlorobenzene	ND	6
7 1	1.1.1-Trichlorosthape	L			6	Ethylbenzene	ND	6
1	1.4-Dioxane	r	ili In		6	Styrene	ND	6
= ಸ	Carbon Tetrachlorida	N	U D		65	m-Xylene	ND	6
	Bronodichloronothese	N	U -		6	o,p-Xylene	ND	6
ا : ``	1 2-Dichloromethane	N	U		6	1,3-Dichlorobenzene	ND	6
	cisal 3-Dichlasses	N	D		6	1,2-Dichlorobenzene	ND	6
12, 36	ers-r's-nicutotobeo	e K	D		6	1,4-Dichlorobenzene	ND	6

Percent Solid of 77.0 is used for all Target compounds.

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

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LAB SAMPLE NO. 1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS 860-T Lab Name: AA LABS NJDEP Cert.# 12660 Contract:-----L b Code: GC/MS Case No.: ---- SAS No.: ---- SDG No.: ----Matrix: SOIL Lab Sample ID: 13627 Sample wt/vol: 5.0 (g/ml) g Lab File ID: >T4464 Livel: (low/med) LOW Date Received: NA % Moisture: not dec.____ Date Analyzed: 06/08/92 C lumn: PACK Dilution Factor: 1.00 Alfantan - -CONCENTRATION UNITS: Number of TICs found: 1 ug/Kg CAS NUMBER I COMPOUND NAME I RT I EST. CONC. I 0 ___11__ |Unknown alkane___ 1 19.35_1___ 5 |

FORM I VOA-TIC

1/87 Rev

1E LAB SAMPLE NO. VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS 5995T,VOA Lab Name: AA LABS NJDEP Cert. # 12660 Contract:-----L-b Code: GC/MS Case No.: ----SAS No.: ---- SDG No.: -----Mitrix: SOIL Lab Sample ID: 5995T, VOA Sample $\omega t / vol: 5.0 (g/ml) g$ Lab File ID: >T4435 L vel: (low/med) LOW Date Received: NA % Moisture: not dec.____ Date Analyzed: 06/04/92 C lumn: PACK Dilution Factor: 1.00 bilisiddu . CONCENTRATION UNITS: Number of TICs found: 0 ug/Kg L CAS NUMBER I. COMPOUND NAME 1 RT I EST. CONC. I Q r. FORM I VOA-TIC 1/87 Rev

LAB ID	13628			HATRIX	Water		
CLIENT NAME	E-SYSTH.			DILUTION FACTOR	1.00		
CLIENT ID		FIELD BLK		QA BATCH			
DATA FILE	> T44 70			DATE ANALYZED	06/09/5	2	

		UG/L .	MDL	COMPOUND	**********	UG/L	HDL
Chloromethane		ND	10	Trichloroethene		ND	5
Bromomethane		ND	10	Dibromochloromethar	10	ND	5
Vinyl Chloride		ND	10	1,1,2-Trichloroetha		ND	5
Chloroethane		ND	10	Benzene		ND	5
Hethylene Chloride		3.8 JB	5	2-Chloroethyl vinyl	ether	ND	10
Acrolein		ND	50	Trans-1,3-Dichlorop	ropene	ND	5
Acrylonitrile		ND	50	Ethylene Dibromide	•	ND	5
tert-Butyl alcohol		ND	50	Diisopropylether		ND	5
Trichlorofluorometh	ane	ND	5	Bromoform		ND	5
1,1-Dichloroethene		ND	5	2-Hexanone		ND	5
1,1-Dichloroethane		ND	5	4-Methyl-2-pentanon	8	ND	5
trans-1,2-Dichloroe	thene	ND	5	Tetrachloroethene		ND	5
Chloroform		ND	5	1,1,2,2-Tetrachloro	ethane	ND	5
2-Butanone		ND	5	Toluene		ND	5
1,2-Dichloroethane		ND	5	Chlorobenzene		ND	5
ert-Butyl methyl et	ther	ND	5	Ethylbenzene		ND	5
1,1,1-Trichloroethar	he	ND	5	Styrene		ND	5
l,4-Dioxane		ND	50	m-Xylene		ND	5
arbon Tetrachloride	3	ND	5	o,p-Xylene		ND	5
lromodichloromethane	•	ND	5	1,3-Dichlorobenzene		ND	5
.,2-Dichloropropane		ND	5	1,2-Dichlorobenzene		ND	5
is-1,3-Dichloroprop;	ene -	ND	5	1.4-Dichlorobenzene		ND	5

(J) Indicates detected below HDL

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

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1E LAB SAMPLE NO. VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS FIELD BLK Lab Name: AA LABS NJDEP Cert.# 12660 Contract:-----Lob Code: GC/MS Case No.: ---- SAS No.: -----SDG No.: ----Matrix: WATER Lab Sample ID: 13628 Sample wt/vol: 5.0 (g/ml) ml Lab File ID: >T4470 Level: (low/med) LOW Date Received: NA % Moisture: not dec.____ Date Analyzed: 06/09/92 Cc.umn: PACK Dilution Factor: 1.00

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The result

_ J

Number of TICs found:

0

CONCENTRATION UNITS:

FORM I VOA-TIC

1/87 Rev

LAB ID59951	, VOA		HATRIX	Soil		<u> </u>
CLIENT ID	URLY OTIGD					
DATA FILE >T4435			DATE ANALYZED	06/04/92		
COMPOUND	UG⁄KG	HDL	COMPOUND	***********	UG/KG	HDI
Chloromethane	**************************************	10	Trichloroethene		ND	•••••==== 5
Bromomethane	ND	10	Dibromochloromethan	1	ND	5
Jinyl Chloride	ND	10	1,1,2-Trichloroetha	- NC	ND	5
Chloroethane	ND	10	Benzene .		ND	5
fethylene Chloride	2.9 J	5	2-Chloroethyl vinyl	ether	ND	10
Acrolein	ND	50	Trans-1,3-Dichlorop	ropene	ND	5
crylonitrile	ND	50	Ethylene Dibromide	•	ND	5
ert-Butyl alcohol	ND	50	Diisopropylether		ND	5
richlorofluoromethane	ND	5	Bromoform		ND	5
,1-Dichloroethene	ND	5	2-Hexanone		ND	5
,1-Dichloroethane	ND	5	4-Methyl-2-pentanone	1	ND	5
rans-1,2-Dichloroethene	ND	5	Tetrachloroethene		ND	5
hloroform	ND	5	1,1,2,2-Tetrachloroe	thane	ND	5
-Butanone	ND	5	Toluene		ND	5
,2-Dichloroethane	ND	5	Chlorobenzene		ND	5
ert-Butyl methyl ether	ND	5	Ethylbenzene		ND	5
,1,1-Trichloroethane	ND	5	Styrene		ND	5
,4-Dioxane	ND .	50	m-Xylene		ND	5
arbon Tetrachloride	ND	5	o,p-Xylene		ND	5
romodichloromethane	ND	5	1,3-Dichlorobenzene		ND	5
,2-Dichloropropane	ND	5	1,2-Dichlorobenzame		ND	5
is-1,3-Dichloropropene	ND	5	1.4-Dichlorobenzene		ND	5

Percent Solid of 100. is used for all Target compounds.

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

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LAB ID	BLK	<u> </u>	HATRIX <u>Soil</u>		<u></u>
CLIENT NAME	UBLY 6-5	<u> </u>	OA RATCH		
DATA FILE	4448		DATE ANALYZED 06/05/	92	
COMPOUND	UG/KG	JTH	Compound	UG/KG	HDL
Chloromethane	ND	10	Trichloroethene	ND	5
Bromonethane	ND	10	Dibromochloromethane	ND	5
Uinul Chloride	ND.	10	1.1.2-Trichlorosthane	ND	5
Chloroethane	div div	10	Banzana	ND	5
Hethulene Chloride	2.6.1	5	2-Chloroethul vinul ether	ND	10
Acrolein	ND	50	Trans-1.3-Dichloropropene	ND	5
Acrulonitrile	ND	50	Ethulene Dibromide	ND	5
tert-Butul alcohol	ND	50	Diisopropylether	ND	5
Trichlorofluoromethane	ND	5	Bromoform	ND	5
1.1-Dichloroathene	ND	5	2-Hexanone	ND	5
1.1-Dichloroethane	ND	5	4-Hethyl-2-pentanone	ND	5
trans-1.2-Dichloroathe	ne ND	5	Tetrachloroethene	ND	5
Chloroform	ND	5	1,1,2,2-Tetrachloroethane	ND	5
2-Butanone	ND	5	Toluene	ND	5
1.2-Dichloroethane	ND	5	Chlorobenzene	ND	5
tert-Butul methul ethe	r ND	5	Ethylbenzene	ND	5
1.1.1-Trichloroethane	ND	5	Styrene	ND	5
1.4-Dioxane	ND	50	m-Xulene	ND	5
Carbon Tetrachloride	ND	5	o,p-Xylene	ND	5
Browodichlorowethane	ND	5	1,3-Dichlorobenzene	ND	5
1.2-Dichloropropane	ND	5	1,2-Dichlorobenzene	ND	5
cis-1,3-Dichloropropen	ND ND	5	1,4-Dichlorobenzene	ND	5

Percent Solid of 100. is used for all Target compounds.

.

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

Serv-Air, Inc.

A Subsidiary of E-Systems, Inc. Environmental and Energy Laboratory P.O. Box 369 Fort Monmouth, NJ 07703 908-532-6147

NJDEPE Certified Laboratory # 13461

Report of Analysis

Analysis by: Sarah J. Hubbard

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Project: <u>MW Installation Bldg. # 750</u>

Date Started: 10-30-92 Date Complete: 11-04-92

> Reviewed: 11-09-92 Revised: NA 11-09-92 Released:

MA By:

Brian K. McKee Environmental and Energy Chief

Serv-Air, Inc.

A Subsidiary of E-Systems, Inc. Environmental and Energy Laboratory P.O. Box 369 Fort Monmouth, NJ 07703 908-532-6147

NJDEPE Certified Laboratory # 13461

Project: MW Installation Bldg. 750 Sample Matrix: Soil Parameter: Total Petroleum Hydrocarbon Method: 418.1

Sample ID Rec'd |Extract | Anaylsis | Results (mg/Kg) | Detection Limit (mg/Kg) <u>C92-1028</u> 10/30 | 11/02 11/02 177.0 3.3 C92-1029 10/30 | 11/02 11/02 3.3 ND C92-1030 10/30 111/02 11/02 | 8.20 3.3 <u>C92-1031</u> 10/30 1 11/02 11/02 ND 3.3 1 C92-1032 1.11/02 11/03 11/03 ND 3.3 C92-1033 1 11/02 | 11/03 11/03 ND 3.3 C92-1034 111/02 1.11/03 - 1 11/03 | ND 3.3 C92-1035 <u>11/03</u> 111/04 11/04 11.0 3.3 C92-1036 11/03 11/04 11/04 4.30 3.3 C92-1037 | 11<u>/04</u> 1 11/03 11/04 ND <u>3.3</u> 1 Blank 111/02 0/00 11/02 nd 3.3 Blank 0/00 _11/03 11/03 1 nd I 3.3 Blank 0/00 1 11/04 1 11/04 nd 3.3

Notes:

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All results reported on a dry weight basis. ND = not detected

C92-1028 = MW1-S1, 86% Solid C92-1029 = MW1-S2, 78% Solid C92-1030 = MW2-S3, 74% Solid C92-1031 = MW2-S4, 77% Solid

C92-1032 = MW3-S5, 78% Solid C92-1033 = MW3-S6, 79% Solid C92-1034 = MW3-S7, 77% Solid C92-1035 = MW4-ss-5'-7', 81% Solid C92-1036 = MW4-ss-10'-12', 79% Solid C92-1037 = MW4-ss-15'-17', 78% Solid

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Brian K. McKee Laboratory Director

Date: 11-09-92

ENCLOSURE 2 of Attachment E

Tank and Piping Soil Analytical Reports

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. 750

Bldg, 750/UST # 81533-191

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
750-191A-NE End	5008301	Soil	10-Feb-05 14:50	02/10/05
750-191B-NE End + 5 ft	5008302	Soil	10-Feb-05 14:35	02/10/05
750-191C-NE End + 10 ft	5008303	Soil	10-Feb-05 14:15	02/10/05
750-191D-NE End + 15 ft	5008304	Soil	10-Feb-05 13:50	02/10/05
750-191E-NE End + 20 ft	5008305	Soil	10-Feb-05 13:30	02/10/05
750-191F-NE End + 25 ft	5008306	Soil	10-Feb-05 13:10	02/10/05
750-191G-SW End	5008307	Soil	10-Feb-05 11:10	02/10/05
750-191H-Duplicate	5008308	Soil	10-Feb-05 14:50	02/10/05
Trip Blank	5008309	Methanol	10-Feb-05	02/10/05

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

3-7-65 Daniel Wright/Date

Laboratory Director

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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Total Petroleum Hydrocarbons Result Summary Calibration Summary Surrogate Results Summary MS/MSD Results Summary Raw Sample Data	11 12 13-22 23 24-25 26-43
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Laboratory Authentication Statement	45

CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory Bldg. 173, SELFM-PW-EV, Fort Mommouth, NJ 07703

COMPLEXE

- And - And

Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil

Chain of Custody Record

					ľ							
Customer: DOVG GUENTHER		Project No:	05-69-	570			Anal	ysis Par	ameters			Comments:
Phone: $\# X 209\%$		-ocation: \hat{D}	0.5%	(154.0	153	Ř						
()DERA ()OMA ()Other:		UST#	81533-1	19/			5		MJJ	<i>(1)</i>	¥	
Samplers Name / Company: FRANK	KACARS	SAT /		Sample	#	Ηđ	14.0		<i>() (</i>	HLe	¥.	
LIMS/Work Order # Sample Loca	ation	Date	Time	Type	bottles		î٨		11J	1.70	01	Remarks / Preservation Method
JENES 19/ 750-1914 - NE	END :	2-10-05	1450	Seil	R	× ×			7	122	4157	الدير
12-918-31 B- "	.+ 5 H		1435		54			_	:\`×	(5)	1155	
03, 750-191C- " .	" +10FT		1415		2					1 2-3	\$157	
JU 750-1910	+15 FT		1350		2	~ ×				12:5-3	4158	
150-191E	+ 20 FT		1330		66	X			9	123	4159	
() () 750-1915	+25 FT		1310		c 6	× X			7	1257	1160	
01 750-1916 - 5W	DND ,		0111		4	, X			17	(2)	1111	
W 750-1914-00	PLEAR		1450	-B	-4				4	12-51	117.7	
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Relinquished by (signature): Date? Turin Mangrin 2-10-05	Time: A	ecelved by (s	ignature): [AANNA	N	Relinqui	shed by (signature):	Å	tte/Time:	Receive	d by (s	gnature):
Relinquished by (signature): Date/	Time:	kceived by (s	ignature):		Relinqui	shed by (signature):	ñ	tte/Time:	Receive	d by (si	gnature):
Report Type: ()Full, (NReduced, ()Standar. Turnaround time: ()Standard 3 wks. (/)Rush.	d, ()Screen / 2 Dave ()	non-certified ASAP Verha			<u></u>	emarks:	+ 10+	10 51	25 % 21 N V	71	000	PPM TPH , or
			'erru		-							

COC.XLS10/20/2004



U.S. ARMY - FT. MONMOUTH, NJ

BUILDING 750 -USTs #81533-191 & 81533-192 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)
750-191A NE END UST	537852.447	617917.078
750-191B NE END PLUS 5 FT	537843.414	617915.272
750-191C NE END PLUS 10 FT	537840.562	617909.558
750-191D NE END PLUS 15 FT	537836.837	617906.68
750-191E NE END PLUS 20 FT	537834.694	617902.412
750-191F NE END PLUS 25 FT	537833.46	617898.947
750-191G SW END UST	537836.572	617891.013
750-192A NE END UST	537861.048	617909.515
750-192B NE END PLUS 5 FT	537862.824	617904.505
750-192C NE END PLUS 10 FT	537859.937	617901.738
750-192D NE END PLUS 15 FT	537857.879	617898.262
750-192E NE END PLUS 20 FT	537854.437	617893.098
750-192F SW END UST	537848.702	617890.268

REFERENCE POINTS

POSITION/DESCRIPTION

BLDG 753 WEST CORNER BLDG 753 SOUTH CORNER

<u>Y COORDINATE (NORTHING)</u> 537884.494 537850.185

X COORDINATE (EASTING) 617912.494 617930.448



METHOD SUMMARY

Method Summary

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.

CONFORMANCE/ NON-CONFORMANCE SUMMARY

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		Indicate Yes, No, N/A
1.	Method Detection Limits Provided	<u>yes</u>
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)	-yes
4.	Duplicate Results Summary Meet Criteria	<u>Yes</u>
5.	IR Spectra submitted for standards, blanks and samples	Nig
6.	Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	425
7.	Analysis holding time met (If not met, list number of days exceeded for each sample)	yes

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LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 50083		Site: Bldg. 750 UST # 81533-191
	Date	Hold Time
Date Sampled	02/10/05	NA
Receipt/Refrigeration	02/10/05	NA
Extraction 1. TPHC	02/11/05	14 days
Analyses	02/15/05	40 days
1. 11110	V41 ± 31 V3	to days
TPHC

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

Client :	U.S. Army	Project # :	50083
	DPW. SELFM-PW-EV	Location :	Bldg.750
	Bldg. 173	UST Reg. # :	81533-191
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	Date Received :	10-Feb-05
Matrix :	Soil	Date Extracted :	11-Feb-05
Inst. ID. :	GC TPHC INST. #1	Extraction Method :	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	Analysis Complete :	15-Feb-05
Injection Volume :	1uL ·	Analyst :	B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
5008301	750-191A	1.00	15.05	95.48	96	348	ND
5008302	750-191B	1.00	15.09	96.76	94	342	ND
5008303	750-191C	1.00	14.96	96.04	96	348	ND
5008304	750-191D	1.00	15.18	95.55	95	345	ND
5008305	750-191E	1.00	15.19	96.95	93	340	ND
5008306	750-191F	1.00	15.16	93.14	97	354	ND
5008307	750-191G	1.00	15.06	88.88	103	374	ND
5008308	750-191H	1.00	15.18	95.61	95	345	ND
METHOD BLANK	MB-021105-01	1.00	15.00	100.00	92	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.	_ com
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	V
4.	Document paginated and legible.	
5.	Chain of Custody submitted.	V
6.	Samples submitted to lab within 48 hours of sample collection.	\swarrow
7.	Methodology Summary submitted.	2
8.	Laboratory Chronicle and Holding Time Check submitted.	~
9.	Results submitted on a dry weight basis.	
10.	Method Detection Limits submitted.	<u> </u>
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	<u> </u>

Laboratory Certification # 13461

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

Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL

TESTING LABORATORY

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



ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: BLDG, 750

<u>Bldg.</u> 750/UST # 81533-192	
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· · · · · · · · · · · · · · · · · · ·				
Field Sample Location	Laboratory	Matrix	Date and Time	Date Received
	Sample ID#		ofCollection	
750-192A-NE End	5008601	Soil	11-Feb-05 13:13	02/11/05
750-192B-NE End +5 ft	5008602	Soil	11-Feb-05 13:30	02/11/05
750-192C-NE End +10 ft	5008603	Soil	11-Feb-05 13:44	02/11/05
750-192D-NE End +15 ft	5008604	Soil	11-Feb-05 14:08	02/11/05
750-192E-NE End +20 ft	5008605	Soil	11-Feb-05 14:20	02/11/05
750-192F-SW End	5008606	Soil	11-Feb-05 14:45	02/11/05
Trip Blank	5008607	Methanol	11-Feb-05	02/11/05
750-192G-GW	5008608	Aqueous	11-Feb-05 15:00	02/11/05

ANALYSIS:

FORT MONMOUTH ENVIRONMENTAL LAB VOA+15, TPHC, % SOLIDS

ENCLOSURE: CHAIN OF CUSTODY RESULTS

Daniel Wright Date Laboratory Director

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

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

Chain of Custody Record

Tel (732)532-4359	Fax (732)532-6263 EM tion #13461	lail:wrightd	@mail1.	loumour	uth.army.n	lia	0	lain (of Custody Recor	σ
Customer: DOUG GUENTER	Project No: $OS - S'$	3570			Analysi	is Param	eters		Comments:	
Phone: # $\chi_{\mathcal{A}} \mathcal{O} \mathcal{F} \mathcal{S} \mathcal{E}$	Location: 8, 750	(BK, Dies	(S)	5			(i		• स्ट्रा	<u>Cardensia</u>
()DERA ()OMA ()Other:	UST # 8033-	192	51. 	017	1		15/0	4+ 1) 1	-	
Samplers Name / Company: FRANK ACOK	<i>و۶۱/۲</i> ۷S	Sample	<i>†=()</i> #	200	fal-		170	+'(1110		ومع الله والله الله ا
LIMS/Work Order # Sample Location	Date Time	Type bo	ttes/	20]		ı.J.	2.4	Remarks / Preservation Metho	r b
JOD 860 01 750-192A: 45 END	2-11-05 1313	7105	Z Z	8			4	55-64164	125	day ng kata na
12 750 -1926: " 1,57	1330		×	<u>R</u>			5	19147-5		int trainer junct
U3 750-192 C + 1015T	1344		X	8			5	-S-6 4166		1
WU 750-1920:+677	1408		X	X			~ ~	5-6 416		1
US 750-192E: "+20FT	1420		×	×			9	55-64169		<u>ina ante</u> r
ULP 750-197F: 5WEND	1995	-12	×	×			4	5-6416		ni pinta ina
UTTRIP BLANK	•	AQ.	X X				1	- 477		
US 750-1936 - EW	¥ 1500	40.	- 		×		١	(}		
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Relinquished by (signature): Date/Time:	Beceived by (signature):	Ř	slinquishe	d by (sig	nature):	Date/	Time:	Received by	(signature):	
Report Type: ()Full, ()Reduced, ()Standard, ()Screen Turnaround time: ()Standard 3 wise ()ARush Z Dave (1/ non-certified, ()EDD		Rem	arks:						
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U.S. ARMY - FT. MONMOUTH, NJ

BUILDING 750 -USTs #81533-191 & 81533-192 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)
750-191A NE END UST	537852.447	617917.078
750-191B NE END PLUS 5 FT	537843.414	617915.272
750-191C NE END PLUS 10 FT	537840.562	617909.558
750-191D NE END PLUS 15 FT	537836.837	617906.68
750-191E NE END PLUS 20 FT	537834.694	617902.412
750-191F NE END PLUS 25 FT	537833.46	617898.947
750-191G SW END UST	537836.572	617891.013
750-192A NE END UST	537861.048	617909.515
750-192B NE END PLUS 5 FT	537862.824	617904.505
750-192C NE END PLUS 10 FT	537859.937	617901.738
750-192D NE END PLUS 15 FT	537857.879	617898.262
750-192E NE END PLUS 20 FT	537854.437	617893.098
750-192F SW END UST	537848.702	617890.268

REFERENCE POINTS

POSITION/DESCRIPTION	<u>Y COORDINATE (NORTHING)</u>	X COORDINATE (EASTING)
BLDG 753 WEST CORNER	537884.494	617912.494
BLDG 753 SOUTH CORNER	537850.185	617930.448



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 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.

LABORATORY CHRONICLE

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Laboratory Chronicle

Lab ID: 50086		Site: Bldg. 750 UST # 81533-192
	Date	Hold Time
Date Sampled	02/11/05	NA
Receipt/Refrigeration	02/11/05	NA
Extraction		
1. TPHC	02/15/05	7 days
Analyses		
1. VOA 2. TPHC	02/17,18/05 02/16/05	40 days 40 days

CONFORMANCE/ NON-CONFORMANCE SUMMARY

.

			Indicate Yes, No, N/A
1.	Chromatograms lab	eled/Compounds identified	
	(Field samples	and method blanks)	_1:03
2	Detention times for		-1
۷,	Retention times for	chromatograms provided	-yes
3.	GC/MS Tune Speci	fications	,
	8.	BFB Meet Criteria	ees
	. b.	DFTPP Meet Criteria	- NAK
4.	GC/MS Tuning Free	quency – Performed every 24 hours for 600	
	series and 12 hours	for 8000 series	<u>yes</u>
5.	GC/MS Calibration	 Initial Calibration performed before sample 	
	analysis and continu	ing calibration performed within 24 hours of	0
	sample analysis for	500 series and 12 hours for 8000 series	-yes
6.	GC/MS Calibration	requirements	
	a.	Calibration Check Compounds Meet Criteria	US
	b.	System Performance Check Compounds Meet Criteria	yes
7.	Blank Contamination	n – If yes, List compounds and concentrations in each blank:	No
	a.	VOA Fraction	
	b.	B/N FractionNA	
	С.	Acid Fraction NH	
8.	Surrogate Recoveries	s Meet Criteria	-yes
	If not met, list the outside the acce	nose compounds and their recoveries, which fall ptable range:	
	a.	VOA Fraction	
	b.	B/N Fraction NA	
	с.	Acid Fraction NA	
	If not met, were as "estimated"?	the calculations checked and the results qualified	
9.	Matrix Spike/Matrix	Spike Duplicate Recoveries Meet Criteria	(IPS
	(If not met, list those	compounds and their recoveries, which fall	- <u>1</u>
	outside the acceptabl	e range)	
	a.	VOA Fraction	
	b.	B/N Fraction /UA	
	С.	Acid Fraction NA	

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

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· · ·	Indicate Yes, No, N/A
 Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds, which fall outside the acceptable range) 	yes
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: 337-05	

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

A

TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPO	RT
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		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	_ <u>(jes</u> _
5.	IR Spectra submitted for standards, blanks and samples	yes
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)	<u>yes</u>
Addit	tional comments:	
Labo	ratory Manager: Date: ate:Date:	-

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 II	D:
	V	DLATILE ORGANICS ANALYSIS	JATA SHE	ET	MD 1	7Eab05
Lab Name:	FMETL	NJD	EP#: <u>134</u>	61		Trebuo
Project:	05-6957	Case No.: 50086 Lo	cation: B.	.750 SD	G No.: 8	1533-192
Matrix: (soil/v	water)		Lah Sar	nnie ID: M		 v05
Samplo ut/u	, ,	10.0 (a/ml) G	Lab Eile			
Cample w/v					010005	<i>1.</i> D
Level: (low/n	ned)	MED	Date Re	eceived: 2	/11/2005	
% Moisture: r	not dec.)	Date An	alyzed: 2	/17/2005	
GC Column:	RTX50	2. ID: 0.25 (mm)	Dilution	Factor: 1	.0	
Soil Extract V	/olume: 3		Soil Alia	– ulot Volum	o: 125	(ut.)
Con Extract			Oùi Aiq	uot voium	e. <u>12</u> 5	(ur)
		CONCEN	TRATION	UNITS:		
CAS NC).	COMPOUND (ug/Loru	a/Ka)	UG/KG		0
			90197			G.
10702	8	Acrolein			1000	U
10713	1	Acrylonitrile			1000	<u> </u>
		tert-Butyl alcohol			1000	U
163404	44	Methyl-tert-Butyl ether			100	<u> </u>
108203	3	Di-isopropyl ether			100	U
	~	Dichlorodifluoromethane			100	
<u></u>	3	Chloromethane	· ·		100	<u> </u>
75-01-	4	Vinyi Chloride	<u> </u>		100	<u> </u>
74-83-	9	Bromomethane			100	
75-00-	3				100	<u> </u>
75-69-	4	1 1 Dishlarasthana	<u> </u>		100	U
67.64	4 1				100	
75-15-1	^	Carbon Disulfide		-	100	
75-09-	2	Methylene Chloride			100	
156-60	<u>~</u>)-5	trans-1 2-Dichloroethene			100	
75-34-	3	1 1-Dichloroethane			100	
108-05	-4	Vinvl Acetate			100	<u> </u>
78-93-3	3	2-Butanone			100	
156-59	-2	cis-1.2-Dichloroethene	· · · ·		100	<u> </u>
67-66-3	3	Chloroform			100	Ū
71-55-6	6	1,1,1-Trichloroethane			100	U
56-23-5	5	Carbon Tetrachloride			100	U
71-43-2	2	Benzene			100	U
107-06	-2	1,2-Dichloroethane			100	U
79-01-6	6	Trichloroethene			100	U
78-87-5	5	1,2-Dichloropropane			100	U
	4	Bromodichloromethane			100	U
	-8	2-Chloroethyl vinyl ether			100	U
10061-	01-5	cis-1,3-Dichloropropene			100	<u> U </u>
108-10	-1	4-Methyl-2-Pentanone			100	<u> </u>
108-88	-3	Toluene			100	U
10061-	02-6	trans-1,3-Dichloropropene			100	<u> </u>
	<u> </u>	1,1,2-Trichloroethane			100	
127-18	-4	l etrachloroethene	ap		100	<u> </u>
591-78	<u>-bi</u>	2-Hexanone			100	
124-48	-l					
108-90	-/				100	
100-41	-4	Einyidenzene		L _m	100	U

6/99 1000<u>15</u>

	1A							ID:		
	VOL	ATILE ORGANI	CS ANAL	YSIS DATA	SHEET		MB	17Feb0	15	
Lab Name:	FMETL			NJDEP#:	13461					
Project:	05-69570	Case No.:	50086	Location	: B.750	SE	DG No.:	81533-	192	
Matrix: (soil/v	vater) <u>SO</u>		•	Lab	Sample I	D:	MB 17F	eb05		
Sample wt/vc	ol: <u>10.</u>	0 (g/ml)	G	Lab	File ID:		VB0186	69.D		
Level: (low/n	ned) <u>ME</u>	D		Date	e Receive	d:	2/11/200)5		
% Moisture: r	not dec. 0			Date	ə Analyze	d:	2/17/200)5		
GC Column:	RTX502.	ID: <u>0.25</u> (m	m)	Dílu	tion Facto	or:	1.0			
Soil Extract V	/olume: 250	00 (uL)		Soil	Aliquot V	olun	ne: <u>125</u>	5	(uL)	
			NOC	NCENTRATI	ON UNIT	S:				
CAS NO).	COMPOUND	(ug/	L or ug/Kg)	UG/K	G		Q		
1330-2	20-7	m+p-Xylenes					200	U		
95-47-	6	o-Xylene					100	U		
100-42	2-5	Styrene					100	U		

Bromoform

1,1,2,2-Tetrachloroethane

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,2-Dichlorobenzene

75-25-2

79-34-5

541-73-1

106-46-7

95-50-1

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100

100

100

100

			1E						
		VOLATI	LE ORGANICS A	ANALYSIS DA	TA SHEET		FIELD	ID:	
		TEN	TATIVELY IDEN	FIFIED COMP	OUNDS				
Lab Name:	FMETL			NJDEP	#: 13461		MB	17Fe	b05
Project:	05-695	70	Case No.: 5008	B6 Locat	tion: <u>B.750</u>	SI	DG No.:	8153	3-192
Matrix: (soil/w	vater)	SOIL		ł	Lab Sample	D:	<u>MB 17F</u>	eb05	
Sample wt/vo	d:	10.0	(g/ml) <u>G</u>		Lab File ID:		VB0186	69.D	
Level: (low/m	ned)	MED		· .	Date Receiv	/ed:	2/11/200)5	
% Moisture: r	not dec.	0		I	Date Analyz	ed:	2/17/200)5	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	Ĺ	Dilution Fac	tor:	1.0		_
Soil Extract V	'olume:	25000	(uL)	:	Soil Aliquot	Volu	me: <u>125</u>	;	(uL)
				CONCENTR	ATION UNI	TS:			
Number TICs	found:	0		(ug/L or ug/K	ig) UG/	/KG			
CAS NO.		COMI	POUND NAME		RT	ES	T. CONC	.	Q

		1A			FIELD	ID:
	VC	DLATILE ORGANICS ANA	LYSIS DATA SH	EET	MB	18Feb05
_ab Name:	FMETL		NJDEP#:13	461		
Project:	05-69570	Case No.: 50086	Location: E	3.750 SD	G No.:	81533-192
Matrix: (soil/	water) S		 Lab Sa	mnle ID· N		b05
						.000
Sample wt/v	ol: <u>1</u>	0.0 (g/ml) <u>G</u>	Lab Fil	e ID: <u>\</u>	/B01868	32.D
_evel: (low/r	med) <u>N</u>	/ED	Date R	eceived: 2	2/11/200	5
% Moisture:	not dec. 0)	Date A	nalyzed: 2	2/18/200	5
GC Column:	RTX502	. ID: 0.25 (mm)	Dilutior	Factor: 1	.0	
Soil Extract '	Volume: 2	5000 (uL)	Soil Ali	auot Volum	e: 125	
		(/		4		
		CC	DICENTRATION	I UNITS:		•
CAS NO	Э.	COMPOUND (ug	J/L or ug/Kg)	UG/KG		Q
10702	28	Acrolein			1000	U
10713	31	Acrylonitrile			1000	U
75650)	tert-Butyl alcohol			1000	<u> </u>
16340)44	Methyl-tert-Butyl ether			100	U
10820)3	Di-isopropyl ether			100	U
75718		Dichlorodifluoromethal	ne		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	Trichlorofluoromethan	9		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	Ŭ
156-60	 0-5	trans-1.2-Dichloroethe	ne		100	U U
75-34	-3	1.1-Dichloroethane	;		100	<u> </u>
108-0	5-4	Vinvl Acetate	-		100	<u> </u>
78-93	3	2-Butanone			100	<u> </u>
156-59	9-2	cis-1.2-Dichloroethene			100	- ŭ
67-66	.3	Chloroform			100	
71-55	-6	1 1 1-Trichloroethane			100	
56-23-	-5	Carbon Tetrachloride			100	<u> </u>
71-43-	2	Benzene			100	U U
107-06	<u>-</u> 6-2	1 2-Dichloroethane			100	
79.01.	<u>.</u>	Trichloroethene			100	
78-87	5	1 2-Dichloropropane			100	
75.07	- <u></u>	Bromodichloromothan	<u> </u>		100	
110 7	<u>.</u> 4	2 Chloroothyl vinyl oth	<i>3</i>		100	
10061	<u>)-0</u>		<u>71</u>	+	100	
10001	<u>-01-0</u>	4 Mothul 9 Denteness	<u>u</u>	+	100	
108-10	<u>J~1</u>	4-ivieuryi-2-rentanone			100	
108-88	<u>3-3</u>				100	<u>U</u> .
10061	-02-6	trans-1,3-Dichloroprop	ene		100	
/9-00-	5	1,1,2-1 richloroethane			100	
127-18	3-4	I etrachloroethene			100	<u> </u>
591-78	3-6	2-Hexanone			100	U
124-48	3-1	Dibromochloromethan	<u>e</u>		100	U
108-90)-7	Chlorobenzene			100	U
100-41	-4	Ethylbenzene			100	U

FORMIVOA

6/99 100018

				1A					F	IELD	ID:	
	V	OLATILE O	RGANI	ICS A	NALY	SIS DATA	∖ Sŀ	IEET		мв	18Feb()5
Lab Name:	FMETL					NJDEP#:	13	8461				
Project:	05-6957	0 Cas	e No.:	5008	6	Locatio	n: [3.750	SDG	No.:	81533-	192
Matrix: (soil/v	vater)	SOIL				La	b Sa	ample IC): <u>M</u> E	3 18F	eb05	
Sample wt/vo	ol:	10.0	(g/ml)	G		La	b Fi	le ID:	VB	0186	82.D	
Level: (low/n	ned)	MED				Da	ite F	Receivec	: <u>2/</u> 1	1/200)5	_
% Moisture: r	not dec.	0				Da	ite A	Analyzed	: <u>2/1</u>	8/200)5	_
GC Column:	RTX50	2. ID: 0.2	<u>5</u> (n	nm)		Dil	utio	n Factor	: <u>1.0</u>)		_
Soil Extract V	/olume: 2	25000	(uL)			So	ii Al	iquot Vo	lume:	125	5	(uL)
					CON		τιω		·.			
CAS NO).	COMPO	UND		(ug/L	. or ug/Kg)		UG/KC	э. Э	_	Q	
1330-2	20-7	m+p-X	vlenes							200	1 11	
95-47-	6	o-Xyler	10 10							100	Ū	-
100-42	2-5	Styren	ə						-	00	U	
75-25-	2	Bromo	form							00	U	
79-34-	5	1,1,2,2	-Tetrac	chloro	ethan	e				00	U	
<u>541-73</u>	3-1	1,3-Dia	hlorob	enzer	1e	.			1	00	U	
106-46	<u>8-7</u>	1,4-Dic	hlorob	enzer	1e				1	00	·U	
95-50-	1	1,2- Dic	hlorob	enzer	ne				1	00	U	

	1E				
	VOLATILE ORGANICS	ANALYSIS DATA SH	HEET	FIELD ID:	
	TENTATIVELY IDEN	TIFIED COMPOUNE	DS		ah05
Lab Name: FMETL	·	NJDEP#: _13	3461		epus
Project: 05-695	70 Case No.: 500	B6 Location: E	B.750 SI	DG No.: <u>815</u>	33-192
Matrix: (soil/water)	SOIL	Lab Sa	ample ID:	MB 18Feb05	
Sample wt/vol:	10.0 (g/ml) <u>G</u>	Lab Fi	ile ID:	VB018682.D	
Level: (low/med)	MED	Date F	Received:	2/11/2005	
% Moisture: not dec.	0	Date A	Analyzed:	2/18/2005	
GC Column: RTX5	<u>602.</u> ID: <u>0.25</u> (mm)	Dilutio	n Factor:	1.0	
Soil Extract Volume:	<u>25000</u> (uL)	Soil Al	liquot Volu	me: <u>125</u>	(uL)
		CONCENTRATION	N UŅITS:		
Number TICs found:	0	(ug/L or ug/Kg)	UG/KG		
CAS NO.	COMPOUND NAME	R	IT ES	T. CONC.	Q

			17	Ą			FIELD	ID:	
	١	/OLATILE	E ORGANICS	ANAL	SIS DATA	SHEET	70		
Lab Name:	FMETL				NJDEP#:	13461			
Project:	05-6957	'0 (Case No.: 50	086	Locatior	: B.750	SDG No.:	81533-1	192
Matrix: (soil/v	water)	SOIL			- Iat	Sample ID): 5008601	·	
Cample uthe		11.0	 (a/ml)C		Lok			70 0	
Sample w/vc	11.	11.0	(g/m) <u></u>		Lat	File ID:	VB0186	/U.D	
Level: (low/m	ned)	MED			Dat	e Received	l: <u>2/11/200</u>)5	
% Moisture: r	not dec.	5.43			Dat	e Analyzed	: 2/17/200)5	
GC Column:	RTX50	02. ID:	0.25 (mm))	Dilu	ition Factor	: 1.0		
Soil Extract V	/olume:	25000	(nl.)		Sol	L Aliquot Vo	lumo: 125	:	źuí
	olume.	20000	(uc)		001	i Aliquot vo	iume, 120	•	(սե
				CON			<u>.</u>		
CASNO	۱	COM					2	0	
UAD NO	<i>.</i>	COW	FOOND	(ug/i	- or ug/Ng/	00/10	.	Q	
107028	8	Acr	olein				960	U	
10713	1	Acr	ylonitrile				960	Ū	
75650		tert	-Butyl alcohol				960	U	
163404	44	Me	thyl-tert-Butyl	ether			96	U	
108203	3	Di-i	sopropyl ethe	r		-	96	U	
75718		Dic	hlorodifluoron	nethane)		96	U	
74-87-	3	Chl	oromethane				96	Ū	
75-01-4	4	Vin	vl Chloride				96	U U	
74-83-9	9	Bro	momethane				96	U U	
75-00-	3	Chl	oroethane				96	<u> </u>	
75-69-4	4	Tric	hlorofluorom	ethane			96	<u> </u>	-
75-35-4	4	1.1-	Dichloroethe	ne			96		
67-64-	1	Ace	tone		-		96		
75-15-(0	Car	hon Disulfide		,		96	1	
75-09-2	2	Met	hvlene Chlori	de			96	11	
156-60	<u></u> 1-5	tran	s-1 2-Dichlor	oethene	3		96	T ŭ	{
75-34-1	3	11.	Dichloroethau	ne			96	<u> </u>	
108-05	<u>.</u>	Vin				· · · · ·	96		\neg
78-93-4	2	2.B	utanone				96		
156.59	<u>.</u> 2	cis-	1 2-Dichloroe	thene			96		
67-66-1	3	Chi	<u>1,2-Diomioroo</u>	·			96		_
71-55-6	6 6	1 1	1-Trichloroeth	nano			96		
56-23-6	5 5	Car	hon Tetrachic	nido			96		-
71 /2 /	<u>ງ</u> ດ	Bon	2000 Tellaone	nuo			06		-
107-06	<u>ິ</u>	1.2	Dichloroothar	70			90		_
70-01-6	<u>~~</u> 6		bloroothone	10			90		-
79-01-0	<u>ט</u> ה	10	Diablaraprop	000	-		90		-
70-07-0	<u></u>	1,2* Dro	DictionOpropa	ane			90		_
	+ . o		Horoothuluin	ethane			96		
10001	-0	2-0		yi ettier			96		_
10061-	01-5	CIS-	1,3-Dicniorop	ropene			96		
108-10	-1	4-M	emyi-2-Penta	none			96		_
108-88	-3 00 0	<u>1 OIL</u>					96		
10061-	02-6	tran	s-1,3-Dichlord	oproper	18		96	+ <u>U</u>	_
79-00-8	2		2- I richloroeth	nane			96		_
127-18	-4	letr	achioroethen	e	······································	· · ·	96		
591-78	-6	<u>2-H</u>	<u>exanone</u>				96	<u> </u>	_
124-48	-1	Dibi	omochlorome	ethane	···········		96	<u> </u>	
108-90	-7		orobenzene				96		_
100-41	-4	Ethy	/lbenzene				96	U	

FORM I VOA

6/99 100021

			1A			FIELD	ID:	
	VC	DLATILE ORGAN	ICS ANALY	SIS DATA	SHEET	75	0.1028	
Lab Name:	FMETL	•		NJDEP#:	13461			
Project:	05-69570	Case No.:	50086	Location	: <u>B.750</u>	SDG No.:	81533-1	192
Matrix: (soil/v	water)	SOIL		Lat	Sample ID	D: <u>5008601</u>		
Sample wt/vo	ol:	11.0 (g/ml)	G	Lat	File ID:	VB01867	70.D	
Level: (low/n	ned) <u>I</u>	MED		Dat	e Received	t: <u>2/11/200</u>	5	
% Moisture:	not dec. <u>t</u>	5.43		Dat	e Analyzed	: <u>2/17/200</u>	5	
GC Column:	RTX502	<u></u> ID: <u>0.25</u> (n	nm)	Dilu	ition Factor	: 1.0		
Soil Extract \	/olume: 2	5000 (uL)		Soi	l Aliquot Vo	lume: 125		(uL)
			CON	ICENTRAT	ION UNITS	S:		
CAS NC).	COMPOUND	(ug/l	or ug/Kg)	UG/KC	3	Q	
1330-2	20-7	m+p-Xylenes				190	U	
95-47-	6	o-Xylene			· · ·	96	U	
100-42	2-5	Styrene				96	U	
75-25-	2	Bromoform				96	U	
79-34-	5	1,1,2,2-Tetrac	chloroethar	ne		96	U	
541-73	3-1	1,3-Dichlorob	enzene			96	U	
106-46	<u>8-7</u>	1,4-Dichlorob	enzene			96	U	

1,2-Dichlorobenzene

95-50-1

96

U

			1E					
		VOLATI	LE ORGANICS	ANALYSIS DA	TA SHEE	Г	FIELD I	D:
		TEN	TATIVELY IDEN	TIFIED COMP		750	100.4	
Lab Name:	FMETL			NJDEP	#: <u>13461</u>			-192A
Project:	05-695	70	Case No.: 500	86 Locat	tion: <u>B.75</u>	0 S	DG No.: 8	1533-192
Matrix: (soil/	water)	SOIL		4	Lab Samp	le ID:	5008601	
Sample wt/v	ol:	11.0	(g/ml) <u>G</u>		Lab File ID):	VB018670).D
Level: (low/r	med)	MED	X	l	Date Rece	ived:	2/11/2005	
% Moisture:	not dec.	5.43		I	Date Analy	/zed:	2/17/2005	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	ļ	Dilution Fa	ctor:	1.0	
Soil Extract V	/olume:	25000	(uL)	:	Soil Aliquo	t Volu	ime: <u>125</u>	(uL)
			•	CONCENTR (ug/L or ug/K	ATION UI	NITS: G/KG	·	
Number TIC:	s found:	0						
CAS NO.		COM	POUND NAME		RT	ES	ST. CONC.	Q

	1A		FIELD ID:	
V	OLATILE ORGANICS ANALYSIS DATA SHE	ET [· · · · · · · · · · · · · · · · · · ·	
Lab Name: FMETL	NJDEP#: 1344	61	750-192	8
Project: 05-69570) Case No.: 50086 Location: B.	750 SDG	No.: 81533	3-192
Matrix (apil/water)				
Matrix. (SOII/Water)	SOIL Lab San	the in: $\overline{20}$	108602	
Sample wt/vol:	11.1 (g/ml) <u>G</u> Lab File	ID: VI	B018671.D	_
Level: (low/med)	MED Date Re	ceived: <u>2/</u>	11/2005	
% Moisture: not dec.	5.28 Date An	alyzed: 2/	17/2005	
GC Column: RTX50	2. ID: 0.25 (mm) Dilution	Factor: 1.	0	
Soil Extract Volume: 2		uot Voluma		- (13)
			. 120	_ (uL)
	CONCENTRATION	UNITS		
			0	
CAS NO.		UG/KG	Q	
107028	Acrolein		950 U	i l
107131	Acrylonitrile		950 U	
75650	tert-Butyl alcohol		950 U	
1634044	Methyl-tert-Butyl ether		95 U	
108203	Di-isopropyl ether		95 U	1
75718	Dichlorodifluoromethane		95 U	
74-87-3	Chloromethane		<u>95 U</u>	
75-01-4	Vinyl Chloride		<u>95 U</u>	
74-83-9	Bromomethane		<u>95</u> U	
75-00-3	Chloroethane		<u>95</u> U	· ·
75-69-4	I richlorofluoromethane		95 U	
			<u>95 U</u>	
	Carbon Digulfido		95 0	
75-10-0	Methylene Chloride		95 0	
156-60-5	trans-1 2-Dichloroethene		95 U	
75-34-3	1.1-Dichloroethane		95 U	
108-05-4	Vinvl Acetate		95 U	
78-93-3	2-Butanone		95 U	
156-59-2	cis-1,2-Dichloroethene		95 U	
67-66-3	Chloroform		95 U	
71-55-6	1,1,1-Trichloroethane		95 U	
56-23-5	Carbon Tetrachloride		95 U	
71-43-2	Benzene		95 U	
107-06-2	1,2-Dichloroethane		95 U	
79-01-6	Trichloroethene		<u>95 U</u>	
78-87-5	1,2-Dichloropropane		<u>95 U</u>	
75-27-4	Bromodichloromethane		<u>95 U</u>	
110-75-8	2-Chloroethyl vinyl ether	····	<u>95 U</u>	
10061-01-5	cis-1,3-Dichloropropene		95 U	
108-10-1	4-Methyl-2-Pentanone		95 U	
108-88-3	Ioluene		<u>95 U</u>	
10061-02-6	trans-1,3-Dichloropropene		<u>95 U</u>	
/9-00-5	1,1,2-1 richloroethane		<u>95 U</u>	
12/-18-4			<u>95 U</u>	
591-78-6	Z-Mexanone Dibromochlaromothono	<u></u>	95 U	
124-48-1			95 U	
100-90-7	Ethylhonzono		95 0	
100-41-4	циурыдене		90 U	

FORM I VOA

6/99

		1A		FIELD	ID:		
	VOL	ATILE ORGANICS	ANALYSIS DATA S	LYSIS DATA SHEET NJDEP#: 13461			
Lab Name:	FMETL		NJDEP#:				
Project:	05-69570	Case No.: 500	86 Location:	B.750 S	DG No.:	81533-19	2
Matrix: (soil/v	vater) <u>SC</u>	DIL	Lab	Sample ID:	5008602	•	
Sample wt/vo	ol: <u>11</u>	.1(g/ml) <u>G</u>	Lab	File ID:	VB01867	71.D	
Level: (low/n	ned) <u>M</u> I	ED	Date	Received:	2/11/200	5	
% Moisture: r	not dec. <u>5.2</u>	28	Date	Analyzed:	2/17/200	5	
GC Column:	RTX502.	ID: <u>0.25</u> (mm)	Diluti	ion Factor:	1.0		
Soil Extract V	/olume: <u>250</u>	000 (uL)	Soil /	Aliquot Volu	me: <u>125</u>	(uL)
			CONCENTRATIO	ON UNITS:			
CAS NC).	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q	
1330-2	20-7	m+p-Xylenes			190	U	1
95-47-	6	o-Xylene			95	U	1
100-42	?-5	Styrene			95	U	1
75-25-	2	Bromoform			95	U	1
79-34-	5	1,1,2,2-Tetrachlor	oethane		95	U	1
541-73	3-1	1,3-Dichlorobenze	ne		95	U]
	6-7	1,4-Dichlorobenze	ne		95	·U	
95-50-	1	1,2-Dichlorobenze	ne		95	U	

			1	Ξ					
VOLATILE ORGANICS ANALYSIS DATA SHEET								FIELD ID:	
TENTATIVELY IDENTIFIED COMPOUNDS									
Lab Name:	FMETL			NJDEP	#: 13461		750	-192	В
Project:	05-6957	70	Case No.: 50	086 Locat	tion: <u>B.750</u>) SE	DG No.: 8	1533	3-192
Matrix: (soil/v	vater)	SOIL			Lab Sample	ə ID:	5008602		
Sample wt/vo	ol:	11.1	(g/ml) <u>G</u>		Lab File ID:		VB018671	.D	
Level: (low/med) M		MED		I	Date Recei	ved:	2/11/2005		
% Moisture: not dec. 5.28		5.28		I	Date Analy:	zed:	2/17/2005		_
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm))	Dilution Fac	ctor:	1.0		_
Soil Extract V	/olume:	25000	(uL)	:	Soil Aliquot	Volur	ne: <u>125</u>		_ (uL)
			CONCENTR (ug/L or ug/k	ATION UN (g) UG	ITS: /KG	,			
Number TICs	s found:	0							
CAS NO.		СОМ	POUND NAME		RT	ES	T. CONC.		Q

		FIELD ID:		
١	OLATILE ORGANICS ANALYSIS	DATA SHEET	750	1-192C
Lab Name: FMETL	NJD	EP#: <u>13461</u>		
Project: 05-6957	0 Case No.: 50086 Lo	ocation: B.750 S	DG No.: 8	81533-192
Matrix: (soil/water)	SOIL	Lab Sample ID:	5008603	
Sample wt/vol:	11.4 (g/ml) G	Lab File ID:	VB01867	2.D
Level: (low/med)	MED	Date Received:	2/11/2005	5
% Moisture: not dec	7 28	Date Analyzed	2/17/2005	 5
CC Column: DTV5)? ID: 0.25 (mm)	Dilution Easter:	1.0	
			1.0	
Soil Extract Volume:	25000 (uL)	Soil Aliquot Volu	me: <u>125</u>	(uL)
	CONCEN			
CASNO				0
UNDINO.				Q
107028	Acrolein		950	U
107131	Acrylonitrile		950	U
75650	tert-Butyl alcohol		950	U
1634044	Methyl-tert-Butyl ether		95	
108203	Di-Isopropyl etner		95	
7/ 07-2	Chloromothano		95	<u> </u>
75-01-4	Vinyl Chloride		95	
74-83-9	Bromomethane		95	U
75-00-3	Chloroethane		95	U
75-69-4	Trichlorofluoromethane		95	U
75-35-4	1,1-Dichloroethene		95	U
67-64-1	Acetone		95	Ú
75-15-0	Carbon Disulfide		95	U
75-09-2	Methylene Chloride		95	<u> </u>
156-60-5	1 1 Disbloroothono		95	
108-05-4	Vinyl Acetate		90	
78-93-3	2-Butanone		95	
156-59-2	cis-1.2-Dichloroethene		95	- Ŭ
67-66-3	Chloroform		95	U
71-55-6	1,1,1-Trichloroethane		95	U
56-23-5	Carbon Tetrachloride		95	<u> </u>
71-43-2	Benzene		95	U
107-06-2	1,2-Dichloroethane		95	<u> </u>
79-01-6	Trichloroethene	•	95	<u> </u>
78-87-5	1,2-Dicnioropropane		95	<u> </u>
110.75.9	2. Chloroothyl vinyl other		95	
10061-01-5	cis-1 3-Dichloropropane	· · ·	95	
108-10-1	4-Methyl-2-Pentanone		95	<u> </u>
108-88-3	Toluene		95	Ŭ
10061-02-6	trans-1,3-Dichloropropene		95	U
79-00-5	1,1,2-Trichloroethane		95	U
127-18-4	Tetrachloroethene		95	U
591-78-6	2-Hexanone		95	U
124-48-1	Dibromochloromethane		95	<u> </u>
108-90-7	Chlorobenzene		95	<u> </u>
100-41-4	Ethylbenzene		95	U

FORM I VOA

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			1A	FIELD ID:		
	۷	OLATI	750,1990			
Lab Name:	FMETL			NJDEP#: 13461	/30-1920	
Project:	05-6957	0	Case No.: 50086	Location: B.750 S	DG No.: 81533-	192
Matrix: (soil/w	ater)	SOIL		Lab Sample ID:	5008603	
Sample wt/vol: <u>1</u>		11.4	(g/ml) G Lab File ID: VB0186		VB018672.D	
Level: (low/med) MEI		MED		Date Received:	2/11/2005	
% Moisture: not dec. 7.28		7.28		Date Analyzed:	2/17/2005	
GC Column: RTX502. ID:		<u>)2.</u> ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract Volume: 25000		(uL)	Soil Aliquot Volu	me: <u>125</u>	(uL)	
			100	ICENTRATION UNITS:		

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q
1330-20-7	m+p-Xylenes			190	U
95-47-6	o-Xylene			95	U
100-42-5	Styrene	-		95	U
75-25-2	Bromoform			95	U
79-34-5	1,1,2,2-Tetrachlor	roethane		95	U
541-73-1	1,3-Dichlorobenze	ene		95	U
106-46-7	1,4-Dichlorobenze	ene		95	υ
95-50-1	1,2-Dichlorobenze	ene	•	95	U

		VOLATI	LE ORGANICS	ANALYSIS	DATA SHEET	-	FIELD	ID:	
TENTATI			TATIVELY IDEN	TIFIED CC NJI	DMPOUNDS		75	0-1920	>
Project:	05-695	70	Case No.: 500	B6 L	ocation: B.750)SI	DG No.:	81533	-192
Matrix: (soil/v	vater)	SOIL			Lab Sampl	e ID:	5008603	i	
Sample wt/vo	ol:	11.4	(g/ml) <u>G</u>	<u>_</u>	Lab File ID		VB01867	72.D	_
Level: (low/n	ned)	MED	<u></u>		Date Recei	ved:	2/11/200	5	_
% Moisture: I	not dec.	7.28		•	Date Analy	zed:	2/17/200	5	_
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)		Dilution Fac	ctor:	1.0		_
Soil Extract V	/olume:	25000	(uL) ·		Soil Aliquot	Volu	ne: <u>125</u>		_ (uL)
				CONCE		ITS:			
Number TICs	s found:	0		(ug/L or)	ug/Kg) <u>UG</u>	/KG			
CAS NO.		COM			RT	ES	T. CONC		Q

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	1A			FIELD	ID:	
VC	DLATILE ORGANICS ANAL	YSIS DATA SHE	ET	75		
Lab Name: <u>FMETL</u>		NJDEP#: 1340	51	/5	U-192D	
Project: 05-69570	Case No.: 50086	Location: B.	750 S	DG No.:	81533-1	92
Matrix: (soil/water)	SOIL	 Lab San	nple ID:	5008604		
Sample wt/vol:	 11.1 (α/ml) G	l ah File	י. תו	VB01867	3 D	
Lovok /low/mod)		Data Da	a aluadu	0/14/000/	<u>0.0</u>	
Lever, (rownieu)		Dale Re	ceivea:	2/11/200	0	•
% Moisture: not dec.	4.38	Date An	alyzed:	2/17/200	5	
GC Column: RTX502	2. ID: <u>0.25</u> (mm)	Dilution I	Factor:	1.0		
Soil Extract Volume: 2	5000 (uL)	Soil Aliqu	uot Volu	me: 125		(uL)
	CON	NCENTRATION I	JNITS:			
CAS NO.	COMPOUND (ug/	L or ug/Kg)	JG/KG		Q	
107028	Acroloin			040		
107131	Acrylonitrile			940		_
75650	tert-Butyl alcohol			940		
1634044	Methyl-tert-Butyl ether			94		
108203	Di-isopropyl ether		· · · ·	Q_4		
75718	Dichlorodifluoromethane	Э		94	11	
74-87-3	Chloromethane	-		94	- ŭ -	
75-01-4	Vinyl Chloride			94	Ū	
74-83-9	Bromomethane			94	Ū	-1
75-00-3	Chloroethane			94	Ū	
75-69-4	Trichlorofluoromethane			94	U	1
75-35-4	1,1-Dichloroethene			94	U	
67-64-1	Acetone			94	U	
75-15-0	Carbon Disulfide			94	U	
75-09-2	Methylene Chloride			94	U	
156-60-5	trans-1,2-Dichloroethene	e		94	U	
75-34-3	1,1-Dichloroethane			94	U	
108-05-4	Vinyl Acetate			94	U	
78-93-3	2-Butanone			94	U	_
156-59-2	cis-1,2-Dichloroethene			94	U	_
67-66-3	Chloroform		•	94	U	_
71-55-6	1,1,1-Trichloroethane			94	<u> </u>	
56-23-5	Carbon Tetrachloride			94	U	_
	Benzene			94	<u> </u>	
107-06-2	1,2-Dichloroethane			94	<u> </u>	_
<u> </u>				94	<u> </u>	4
<u> </u>	1,2-Dichloropropane			94	<u> </u>	
110 75 0	Bromodicniorometnane			94	<u> </u>	_
110-75-8	2-Chloroethyl Vinyl ether	· · · · · · · · · · · · · · · · · · ·		94	<u> </u>	_
	4 Mothul 2 Dontonono			94	<u> </u>	
	Toluono			94	<u> </u>	-
100-00-0	trans_1.2 Diablerenzes	20			<u> </u>	-
70-00-5	1 1 2-Trichloroothone	10		94	<u>U</u>	_
107-18-1	Tetrachloroethono			94	 	-
501-78-6		·		94 0/	<u> </u>	-
12/-/8-1	Dibromochloromethano			0/	<u> </u>	-
108-90-7	Chlorobenzene			0/	<u> </u>	-
100-41-4	Ethylbenzene			94	<u> </u>	- I · .
				√ `7	<u> </u>	

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FORM I VOA
			1A			F	IELD	ID:	
	VO		750-192						
Lab Name:	FMETL			NJDEP#:	13461		75		
Project:	05-69570	Case No.:	50086	Location	B.750	SDG	No.:	81533-1	92
Matrix: (soil/w	vater) <u>S</u>	OIL		Lab	Sample ID	D: <u>500</u>	08604	ļ	
Sample wt/vo	ol: <u>1</u>	1.1 (g/ml)	G	Lab	File ID:	VB	01867	73.D	
Level: (low/n	ned) <u>N</u>	ED		Date	e Received	d: <u>2/1</u>	1/200)5	
% Moisture: r	not dec. 4	38		Date	e Analyzed	l: <u>2/1</u>	7/200	5	
GC Column:	RTX502.	ID: <u>0.25</u> (m	m)	Dilu	tion Factor	: <u>1.0</u>			
Soil Extract V	/olume: <u>25</u>	000 (uL)		Soil	Aliquot Vo	lume:	125		(uL)
			100	VCENTRATI	ON UNITS	S:			
CAS NC).	COMPOUND	(ug/	L or ug/Kg)	UG/KC	G	_	Q	
1330-2	20-7	m+p-Xylenes				1	90	U	
05-17-	6	o-Xvlene					01	11	

			_
95-47-6	o-Xylene	94	U
100-42-5	Styrene	94	U
75-25-2	Bromoform	94	U
79-34-5	1,1,2,2-Tetrachloroethane	94	U
541-73-1	1,3-Dichlorobenzene	94	U
106-46-7	1,4-Dichlorobenzene	94	U
95-50-1	1,2-Dichlorobenzene	94	Ū

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			1E	· · · · · · · · · · · · · · · · · · ·				ID.	
	,		LE ORGANICS /	ANALYSIS D/			FIELD	ID:	
Lab Name:	FMETL				?#: <u>13461</u>		75	0-1920	>
Project:	05-6957	70	Case No.: 500	86 Loca	tion: <u>B.750</u>)S	DG No.:	81533	-192
Matrix: (soil/w	vater)	SOIL			Lab Sample	ə ID:	5008604		
Sample wt/vo	ol:	11.1	(g/ml) <u>G</u>		Lab File ID:		VB01867	73.D	_
Level: (low/n	ned)	MED			Date Recei	ved:	2/11/200	5	-
% Moisture: 1	not dec.	4.38			Date Analy:	zed:	2/17/200	5	_
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)		Dilution Fac	ctor:	1.0		
Soil Extract V	/olume:	25000	(uL)		Soil Aliquot	Volu	me: <u>125</u>		_ (uL)
Number TICs	s found:	0		CONCENTE (ug/L or ug/l	RATION UN (g) UG	ITS: /KG			
CAS NO.		COMF			RT	ES	ST. CONC		Q

	1A		FIELD	ID:
	VOLATILE ORGANICS ANALYSIS DATA	SHEET		
Lab Name: FMETL	NJDEP#:	13461	75	0-192E
Project: 05-695	70 Case No.: 50086 Location:	B 750	SDG No ·	81533-192
		<u>D.700</u>		01000-102
Matrix: (soil/water)	SOIL Lab	Sample ID:	5008605	
Sample wt/vol:	10.0 (g/ml) <u>G</u> Lab	File ID:	VB01867	4.D
Level: (low/med)	MED Date	Received:	2/11/200	5
% Moisture: not dec.	6.28 Date	Analyzed:	2/17/200	5
GC Column: RTX5		ion Factor:	1.0	
Soil Extract Volume:	25000 (ul) Soil	Aliquot Volu	ime: 125	/ut
Son Exhaut Volumo.			<u></u>	(uL
	CONCENTRATI	ON UNITS:		
CASNO				0
UAU NO.		00/110	<u> </u>	Q
107028	Acrolein		1100	U
107131	Acrylonitrile		1100	Ŭ
75650	tert-Butyl alcohol		1100	U
1634044	Methyl-tert-Butyl ether		110	U
108203	Di-isopropyl ether		110	U
75718	Dichlorodifluoromethane		110	U
74-87-3	Chloromethane		110	U
75-01-4	Vinyl Chloride		110	U
74-83-9	Bromomethane		110	<u> </u>
75-00-3			110	<u> </u>
75-69-4	1 1 Disblorosthono		110	
			110	
75-15-0	Carbon Disulfide		110	
75-13-0	Methylene Chloride		110	
156-60-5	trans-1.2-Dichloroethene		110	
75-34-3	1.1-Dichloroethane		110	U
108-05-4	Vinvi Acetate		110	U
78-93-3	2-Butanone		110	U
156-59-2	cis-1,2-Dichloroethene		110	U
67-66-3	Chloroform		110	U
71-55-6	1,1,1-Trichloroethane		110	U
56-23-5	Carbon Tetrachloride		110	U
71-43-2	Benzene		110	U
107-06-2	1,2-Dichloroethane		110	U
79-01-6	Trichloroethene		110	U
78-87-5	1,2-Dichloropropane		110	U
75-27-4	Bromodichloromethane		110	U
110-75-8	2-Chloroethyl vinyl ether		110	U
10061-01-5	cis-1,3-Dichloropropene		110	<u> </u>
108-10-1	4-Methyl-2-Pentanone		110	<u> </u>
108-88-3			110	<u> </u>
10061-02-6	trans-1,3-Dichloropropene		110	<u> </u>
/9-00-5	1,1,2-1 ricnioroethane		110	
			110	<u> </u>
<u>591-78-6</u>			110	
124-40-1	Chlorobanzana		110	
100-90-7	Ethylbonzone		110	
100-41-4			110	<u> </u>

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		1A			FIELD ID:		
	VOL	ATILE ORGANICS /	NICS ANALYSIS DATA SHEET			0-102F	
Lab Name:	FMETL		NJDEP#:	13461		0-132L	
Project:	05-69570	Case No.: 500	B6 Location:	B.750 S	SDG No.:	81533-1	92
Matrix: (soil/	water) <u>SC</u>	DIL	Lab	Sample ID:	5008605		
Sample wt/ve	ol: <u>10</u>	.0· (g/ml) <u>G</u>	Lab	File ID:	VB01867	74.D	
Level: (low/r	ned) <u>ME</u>	D	Date	Received:	2/11/200	5	
% Moisture:	not dec. <u>6.2</u>	28	Date	Analyzed:	2/17/200	5	
GC Column:	RTX502.	ID: <u>0.25</u> (mm)	Diluti	ion Factor:	1.0		
Soil Extract \	/olume: <u>250</u>	00 (uL)	Soil /	Aliquot Volu	ıme: <u>125</u>	<u></u>	(uL)
			CONCENTRATIO	ON UNITS:			
CAS NC) .	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q	
1330-2	20-7	m+p-Xylenes			210	U	
95-47-	6	o-Xylene			110	U	7

Styrene

Bromoform

1,1,2,2-Tetrachloroethane

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,2-Dichlorobenzene

100-42-5

75-25-2

79-34-5

541-73-1

106-46-7

95-50-1

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110

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	١	/OLATI	LE ORGANI	ICS ANAL	YSIS DA	TA SH	IEET	FIELD) ID:	
		TENT		DENTIFIE	D COMP	OUND	S			1
Lab Name:	FMETL				NJDEP	#: <u>13</u> 4	461	7	50-192	2E
Project:	05-6957	0	Case No.:	50086	Locat	lion: B	3.750	SDG No.:	8153	3-192
Matrix: (soil/w	vater)	SOIL			I	Lab Sa	imple ID	: 500860	5	
Sample wt/vc	ol:	10.0	(g/ml)	G	_ 1	Lab File	e ID:	VB0186	374.D	
Level: (low/m	ned)	MED			I	Date R	eceived	: 2/11/20	05	
% Moisture: r	not dec.	6.28			I	Date Ar	nalyzed:	: 2/17/20	05	
GC Column:	RTX50	<u>)2.</u> ID:	<u>0.25</u> (m	ım)	[Dilution	1 Factor:	: <u>1.0</u>		_
Soil Extract V	olume:	25000	(uL)		Ś	Soil Alic	quot Vol	lume: <u>12</u>	5	(uL)
				CO	NCENTR	ATION		:		
Number TICs	i found:	0		(ug/	'L or ug/K	.g)	UG/KG	i		
CAS NO.		COMF		vie		RT	ГЕ	ST. CON	c.	Q

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1A FIELD ID: VOLATILE ORGANICS ANALYSIS DATA SHEET 750-192F FMETL Lab Name: NJDEP#: 13461 Project: 05-69570 Case No.: 50086 Location: B.750 SDG No.: 81533-192 SOIL Matrix: (soil/water) Lab Sample ID: 5008606 Sample wt/vol: 11.7 (g/ml) G Lab File ID: VB018683.D MED Level: (low/med) Date Received: 2/11/2005 % Moisture: not dec. 4.98 Date Analyzed: 2/18/2005 GC Column: RTX502. ID: 0.25 (mm)Dilution Factor: 1.0 Soil Extract Volume: 25000 (uL)Soil Aliquot Volume: 125 (uL)CONCENTRATION UNITS: COMPOUND CAS NO. (ug/L or ug/Kg) UG/KG Q 107028 Acrolein 900 U 107131 Acrylonitrile 900 U tert-Butyl alcohol 75650 900 U Methyl-tert-Butyl ether U 1634044 90 **Di-isopropyl ether** 108203 90 U 75718 Dichlorodifluoromethane 90 U 74-87-3 Chloromethane 90 U 75-01-4 Vinyl Chloride 90 U Bromomethane 74-83-9 90 U Chloroethane U 75-00-3 90 Trichlorofluoromethane 75-69-4 U 90 1,1-Dichloroethene 75-35-4 90 U 67-64-1 Acetone 90 U Carbon Disulfide U 75-15-0 90 Methylene Chloride 75-09-2 90 U trans-1,2-Dichloroethene 90 U 156-60-5 1,1-Dichloroethane 75-34-3 90 U 108-05-4 Vinyl Acetate 90 U 78-93-3 2-Butanone 90 U cis-1,2-Dichloroethene 156-59-2 90 U Chloroform U 67-66-3 90 1.1.1-Trichloroethane 71-55-6 90 U 56-23-5 Carbon Tetrachloride 90 U 71-43-2 Benzene 90 U 1,2-Dichloroethane U 107-06-2 90 Trichloroethene U 79-01-6 90 1,2-Dichloropropane 78-87-5 90 U 75-27-4 Bromodichloromethane 90 U 2-Chloroethyl vinyl ether 110-75-8 90 U 10061-01-5 cis-1,3-Dichloropropene 90 U 4-Methyl-2-Pentanone 108-10-1 90 U Toluene 108-88-3 90 U 10061-02-6 trans-1,3-Dichloropropene 90 U 1,1,2-Trichloroethane U 79-00-5 90 Tetrachloroethene U 127-18-4 90 2-Hexanone U 591-78-6 90 Dibromochloromethane 124-48-1 90 U Chlorobenzene U 108-90-7 90 100-41-4 Ethylbenzene 90 U

FORM I VOA

			1A		FIELD ID:
	V	OLATIL	750-1025		
Lab Name:	FMETL			NJDEP#: 13461	750-1926
Project:	05-6957	0	Case No.: 50086	Location: B.750 S	DG No.: 81533-192
Matrix: (soil/v	vater)	SOIL		Lab Sample ID:	5008606
Sample wt/vc	ol:	11.7	(g/ml) <u>G</u>	Lab File ID:	VB018683.D
Level: (low/n	ned)	MED	<u>.</u>	Date Received:	2/11/2005
% Moisture: r	not dec.	4.98		Date Analyzed:	2/18/2005
GC Column:	RTX50	<u>)2.</u> ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0
Soil Extract V	/olume:	25000	(uL)	Soil Aliquot Volu	me: <u>125</u> (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q
1330-20-7	m+p-Xylenes			180	U
95-47-6	o-Xylene			90	U
100-42-5	Styrene			90	U
75-25-2	Bromoform			90	U
79-34-5	1,1,2,2-Tetrach	oroethane		90	U .
541-73-1	1,3-Dichloroben	zene		90	U
106-46-7	1,4-Dichloroben	zene		90	U
95-50-1	1,2-Dichloroben	zene		90	U

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		1E		·				
•	VOLATI	LE ORGANICS AN	ALYSIS DA	TA SHEET		FIELD I	D:	
	TEN	TATIVELY IDENTIF	IED COMP	OUNDS				
Lab Name: FN	1ETL		NJDEP	#: 13461		750)-192	F
Project: 05	-69570	Case No.: 50086	Local	ion: <u>B.750</u>	SD	G No.: <u>8</u>	31533	3-192
Matrix: (soil/wate	er) <u>SOIL</u>		l	_ab Sample) ID: _	5008606		
Sample wt/vol:	11.7	(g/ml) <u>G</u>	I	ab File ID:	<u>\</u>	VB01868;	3.D	
Level: (low/med) <u>MED</u>		ſ	Date Receiv	/ed: _2	2/11/2005	5	_
% Moisture: not	dec. <u>4.98</u>		I	Date Analyz	ed: 2	2/18/2005	;	<u> </u>
GC Column: F	RTX502. ID:	<u>0.25</u> (mm)	I	Dilution Fac	tor:	1.0		
Soil Extract Volu	me: <u>25000</u>	(uL)		Soil Aliquot	Volum	ne: <u>125</u>		_ (uL)
		C	ONCENTR	ATION UNI	TS:			
Number TICs for	und: 0	(u	ig/L or ug/K	g) <u>UG</u> /	/KG	· ·		
CAS NO.	COMI	POUND NAME		RT	EST	. CONC.		Q

		1A			FIELD II	D:	
	VO	LATILE ORGANICS ANA	LYSIS DATA SHE	ET	Trin	Plank	
Lab Name:	FMETL		NJDEP#:134(61		DIALIK	
Project:	05-69570	Case No.: 50086	Location: B.	750 SD(G No.: 8	81533-19	92
Matrix: (soil/	water) S	 0II	Lab San	nole ID: 5	008607		
0 t+ t-							
Sample w/v	01: 1	<u>0.0 (g/mi) G</u>	Lab File	ID: <u>v</u>	B018686	5.U	
Level: (low/r	med) <u>N</u>	ED	Date Re	ceived: 2	/11/2005		
% Moisture:	not dec. 0		Date An	alyzed: 2	/18/2005		
CC Column		ID: 0.25 (mm)	Dilution	Factor: 1	0		
GC Column.		<u>. 10. 0.20</u> (mm)	Dilution	1 autor. 1	.0		
Soil Extract	Volume: <u>25</u>	000 (uL)	Soil Aliq	uot Volum	e: <u>125</u>		(uL)
		C	UNCENTRATION	UNITS:			
CAS NO	Э,	COMPOUND (u	g/L or ug/Kg)	UG/KG		Q	
10700	00	Aarolain		[1000	11	
10702	20	Acrolent			1000	<u> </u>	_
75650)	tert-Butyl alcohol			1000	<u> </u>	
16340)44	Methyl-tert-Butyl ethe	r	· · · · · · · · · · · · · · · · · · ·	100	Ū	
10820)3	Di-isopropyl ether	•		100	Ŭ	
75718	3	Dichlorodifluorometha	ine		100	U	
74-87	-3	Chloromethane			100	U	
75-01	-4	Vinyl Chloride			_100	U	
74-83	-9	Bromomethane			100	<u> </u>	
75-00	-3	Chloroethane			100	<u> </u>	_
75-69	-4	Trichlorofluoromethar	10	<u> </u>	100	<u> </u>	
75-35	-4	1,1-Dichloroethene			100	<u> </u>	_
67-64	-1	Acelone Carbon Digulfido			100	<u> </u>	
75-10	-0	Mothylene Chloride			100	<u> </u>	_
156-6	<u></u>	trans-1 2-Dichloroethe	ene		100	<u> </u>	
75-34	<u>-3</u>	1.1-Dichloroethane	5/10		100	<u> </u>	
108-0	5-4	Vinvl Acetate			100	U	
78-93	-3	2-Butanone			100	U	
156-5	9-2	cis-1,2-Dichloroethen	e		100	U	
67-66	-3	Chloroform	·		100	U	
71-55	-6	1,1,1-Trichloroethane		· · · · · · · · · · · · · · · · · · ·	100	<u> </u>	_
<u> </u>	-5	Carbon Tetrachloride			100		-
71-43	-2	Benzene			100	<u> </u>	_
	6-2	Triphleroothono			100	<u> </u>	
79-01	-0	1.2-Dichloropropage			100	<u> </u>	
75.07	-0	Bromodichloromethar	 10		100	<u> </u>	
110-7		2-Chloroethyl vinvl eth	ier	· · · · · · · · · · · · · · · · · · ·	100	- ŭ	-
10061	-01-5	cis-1.3-Dichloroprope	ne		100	Ŭ	
108-1	0-1	4-Methyl-2-Pentanon	3		100	U	
108-8	8-3	Toluene			100	U	
10061	-02-6	trans-1,3-Dichloropro	pene		100	U	
79-00	-5	1,1,2-Trichloroethane	•		100	U	
127-1	8-4	Tetrachloroethene	<u></u>		100	U	
591-7	8-6	2-Hexanone		ļ	100	<u> </u>	
124-4	8-1	Dibromochloromethar	10		100	<u>U</u>	4
	0-/	Chlorobenzene			100	U	-
100-4	1-4	EINVIDENZENE		1	100	0	1

FORM I VOA

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			1A			FIELD	ID:	
	V	OLATILE ORGANIC	S ANALY	NALYSIS DATA SHEET				٦
Lab Name:	FMETL			NJDEP#:	13461		рыанк	
Project:	05-69570	0 Case No.: 5	60086	Location	B.750 S	SDG No.:	81533-19	2
Matrix: (soil/w	water)	SOIL		Lab	Sample ID:	5008607	7	
Sample wt/vo	ol:	10.0 (g/ml)	G	Lab	File ID:	VB0186	86.D	_
Level: (low/n	ned)	MED		Date	e Received:	2/11/200)5	
% Moisture: I	not dec.	0		Date	e Analyzed:	2/18/200)5	
GC Column:	RTX50	2, ID: 0.25 (mr	n)	Dilu	tion Factor:	1.0		
Soil Extract V	/olume: 2	25000 (uL)		Soil	Aliquot Vol	ume: <u>125</u>	<u>;</u> (1	uL)
			CON	ICENTRATI	ON UNITS:			
CAS NC).	COMPOUND	(ug/L	. or ug/Kg)	UG/KG		Q	
1330-2	20-7	m+p-Xylenes				200	U	1
95-47-	6	o-Xylene				100	U	
100-42	2-5	Styrene				100	U	
75-25-	2	Bromoform				100	U	
79-34-	5	1,1,2,2-Tetrach	nloroethar	10		100	U	
541-73	3- 1	1,3-Dichlorobe	nzene			100	U	
106-46	<u>5-7</u>	1,4-Dichlorobe	nzene			100	U	1
95-50-	1	1,2-Dichlorobe	nzene			100	U	}

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				1E						
		VOLATI	LE ORGANI	CS ANAL	YSIS DA	TA SHEET	-	FIELD	ID:	
		TENT	ATIVELY IE	DENTIFIE	D COMP	OUNDS		Tr	in Bla	ank
Lab Name:	FMETL				NJDEP	#: 13461		_		
Project:	05-695	70	Case No.:	50086	Locat	tion: <u>B.75</u>) s	DG No.:	8153	3-192
Matrix: (soil/v	water)	SOIL			l	Lab Sampl	e ID:	5008607	7	
Sample wt/vo	ol:	10.0	(g/ml)	G	_ I	Lab File ID	:	VB0186	86.D	
Level: (low/n	ned)	MED	<u></u>		I	Date Recei	ved:	2/11/200)5	
% Moisture:	not dec.	0	······································		í	Date Analy	zed:	2/18/200)5	
GC Column:	RTX5	02. ID:	<u>0.25</u> (m	m)	l	Dilution Fa	ctor:	1.0		
Soil Extract \	/olume:	25000	(uL)		ę	Soil Aliquot	Volu	me: <u>125</u>	5	(uL)
Number TICs	found	0		COI (ug/	NCENTR L or ug/K	ATION UN (g) <u>UG</u>	ITS: KG			
						-		•		
CAS NO.		COM		ЛЕ		RT	ES	T. CONC).	Q

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TPHC

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

Client :	US Army	Project # :	50086
	DPW.SELFM-PW-EV	Location :	Bidg.750
	Bldg173	UST Reg. # :	81533-192
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	Date Received :	11-Feb-05
Matrix :	Aqueous	Date Extracted :	15-Feb-05
Inst. ID. :	GC TPHC INST. #1	Extraction Method :	Sep.Funnel
Column Type :	RTX-5, 0.32mm ID, 30M	Analysis Complete :	16-Feb-05
Injection Volume :	1uL	Analyst :	B. Patel

Lab ID	Field ID	Dilution Factor	Initial Volume (ml)	Final Volume (ml)	MDL (mg/L)	RL.	TPHC Result (mg/L)
5008608	750-192G-GW	1.00	1000	5.0	0.14	0.50	9.62
				-,			
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							·
			· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	
· · · · · · · · · · · · · · · · · · ·							
METHOD BLANK	MB-021505-01	1.00	1000.00	5.00	0.14	0.5	ND

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

* =Values between the MDL and RL(Reporting Limits) are 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.	V
2.	Table of Contents submitted.	
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	<u> </u>
4.	Document paginated and legible.	·
5.	Chain of Custody submitted.	<u> </u>
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.	<u></u>

Laboratory Manager or Environmental Consultant's Signature Date: ろノフノとう

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Laboratory Certification # 13461

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

Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

FORT MONMOUTH ENVIRONMENTAL

TESTING LABORATORY

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



ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: BLDG. 750

Bldg. 750/UST #'s 191 & 192

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
750-P1, Piping + 10 ft	5012801	Soil	03-Mar-05 13:35	03/03/05
750-P2, Piping + 25 ft	5012802	Soil	03-Mar-05 13:50	03/03/05
750-P3, Piping + 40 ft	5012803	Soil	03-Mar-05 14:12	03/03/05
750-P4, Duplicate	5012804	Soil	03-Mar-05 13:35	03/03/05
750-P5, Piping + 55 ft	5012805	Soil	03-Mar-05 14:30	03/03/05
Trip Blank	5012806	Methanol	03-Mar+05	03/03/05

A.NALLYSIS: FORT MONMOUTH ENVIRONMENTAL LAB VOA+15, TPHC, % SOLIDS

ENCLOSURE: CHAIN OF CUSTODY RESULTS

05 Daniel Wright/Date Laboratory Director

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY

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Fort Monmouth Environmental Testing Laboratory Bidg. 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

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Chain of Custody Record

	-						
CUSTOMET: JOUG GETEN THER	Project No: 05-6	4570	Ana	Ivsis Parameter	S	Comments for the first of the f	خصع
Phone: # X.2 098-6	Location: B. 750						-
()DERA ()OMA (AOther:	157 # 141,142		۶1 h		+ DH_		5 <u></u>
Samplers Name / Company: FPANK ACWR	5/ /TVS	Sample #	+ 0 J -	<i>(</i>)	44 i 1.15		<u>halarintenin</u> tek
LLMS/Work Order # Sample Location	Date Time	Type bottles	Л 1-	0	n A Da	Remarks / Preservation Method	and and a set
JUAS al 750-PI PIPING+10m	13.3-05 1335	5011 2	X X		2-254/66	1.05	ang dan part
67 76 6 - P3, PIPING + 35 FA	1 1350		X	0	274500		<u>interna</u> n
623 753 - 93', PIPINE +40 TT	1 1412		X		252621		a dia manda
RA 750 Port Departice	1335		XX	<i>w</i>	5-25/112		-
05 750-P5 PIPINI +5517	1 1430		X X		51253 4165		de la company
Q- OG TRIP BUANK	-	Aq. 1	X		1- 1304	*	things war
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Dolinovichod Tr. (11.000						-
Keimquisteed by (signature): Date/Time:	Received by (signatury):	Reling	uished by (signature)	Date/Time	Received by (:	ignature):	
Report Type: ()Full. (MReduced ()Standard ()Screen							
Turnaround time: ()Standard 3 wks ()Revet 7			Remarks:				
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U.S. ARMY - FT. MONMOUTH, NJ

BUILDING 750 -USTs #81533-191 & 81533-192 PIPING, DISPENSER 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) 750P1 PIPING PLUS 10 FT 750P2 PIPING PLUS 25 FT

750P3 PIPING PLUS 40 FT 750P5 PIPING PLUS 55 FT 750P6 PIPING PLUS 70 FT 750P7 PIPING AT NE ISLAND 750P9 NE DISPEN. GASOLINE 750P10 NE DISPEN, DIESEL 750P11 SW DISPEN, GASOLINE 750P12 SW DISPEN. DIESEL

537866.6 537879.28 537891.992 537905.926 537911.548 537918.083 537943.46 537930.474 537920.615 537907.343 X COORDINATE (EASTING) 617884.918 617877.845 617871.095 617863.942 617845.715 617865.355 617868.054 617863.755 617825.932

REFERENCE POINT

POSITION/DESCRIPTION **BLDG753 WEST CORNER** Y COORDINATE (NORTHING) 537883,749

X COORDINATE (EASTING) 617911.846

617821.917

100000

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: 50128		Site: Bldg. 750 UST # 191 & 192
	Date	Hold Time
Date Sampled	03/03/05	NA
Receipt/Refrigeration	03/03/05	NA
Extraction 1. TPHC	03/04/05	14 days
Analyses		
1. VOA 2. TPHC	03/08,10/05 03/08/05	14 days 40 days

CONFORMANCE/ NON-CONFORMANCE SUMMARY

			Indicate Yes, No, N/A
1.	Chromatograms labele	d/Compounds identified	
	(Field samples and	l method blanks)	yes
2.	Retention times for chi	omatograms provided	-Lies
3.	GC/MS Tune Specific	itions	
	a.	3FB Meet Criteria	Ves
	b. 1	DFTPP Meet Criteria	AIL
4.	GC/MS Tuning Freque	ncy – Performed every 24 hours for 600	
	series and 12 hours for	8000 series	yes
5.	GC/MS Calibration – I	nitial Calibration performed before sample	
	sample analysis for 600	series and 12 hours for 8000 series	yes
6.	GC/MS Calibration req	uirements	
	a. (Calibration Check Compounds Meet Criteria	\sqrt{e}
	b. 5	system Performance Check Compounds Meet Criteria	<u>405</u>
7.	Blank Contamination -	If yes, List compounds and concentrations in each blank:	NO
	a. V	/OA Fraction	
	b. E	B/N Fraction	
	c. A	acid Fraction BJA	
8.	Surrogate Recoveries N	leet Criteria	yes
	If not met, list thos outside the accepta	e compounds and their recoveries, which fall ble range:	,
	a. V	OA Fraction	
	b. E	/N Fraction	
	c. A	cid Fraction NA	
	If not met, were the as "estimated"?	calculations checked and the results qualified	
9.	Matrix Spike/Matrix Sp	ike Duplicate Recoveries Meet Criteria	Nes
	(If not met, list those co	mpounds and their recoveries, which fall	
	outside the acceptable ra	nge)	
	a. V	OA Fraction	
	b. B	/N Fraction I'JA	
	c, A	cid Fraction NA	

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
10. Inter (If n	nal Standard 10t met, list th	Area/Retention Time Shift Meet Criteria nose compounds, which fall outside the acceptable range)	405
	a.	VOA Fraction	
	b.	B/N Fraction NA	
	c.	Acid Fraction NP	
11. Extr	action Holdin	ng Time Met	<u>ACI</u>
Ifnc	ot met, list the	e number of days exceeded for each sample:	
12. Anal	ysis Holding	Time Met	yes
If not	t met, list the	number of days exceeded for each sample:	
Additional	l Comments:		
		· · ·	
		S not	
Laboratory	y Manager:	Date: 5-3-05	
		÷	

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

		Indicate Yes, No, N/A
1.	Method Detection Limits Provided	<u>_4es_</u>
2.	Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	<u> </u>
3.	Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	40.5
4.	Duplicate Results Summary Meet Criteria	1/es
5.	IR Spectra submitted for standards, blanks and samples	NA
6.	Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	<u> </u>
7.	Analysis holding time met (If not met, list number of days exceeded for each sample)	<u> 4e.5</u>

TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

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.

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			1A				FIELD	ID:	
		VOLATILE ORG	NICS AI	VALYSIS	DATAS	SHEET	MB 08Mar05		5
Lab Name:	FMETL	•		NJE)EP#:	13461			
Project:	05-695	70 Case No	b.: <u>5</u> 0128	3 L	ocation:	B.750 S	DG No.:	191,192	2
Matrix: (soil/	water)	SOIL			Lab	Sample ID:	MB 08M	 ar05	
Sample wt/w	ol:	10.0 (a/r	nl) G		Lab				
		<u>10.0</u> (g/	ui) <u>a</u>		Lau	LIIG ID'	VB01883	38.D	
Level: (low/r	ned)	MED			Date	Received:	3/3/2005		
% Moisture:	not dec.	0	_		Date	Analyzed:	3/8/2005		
GC Column:	RTX5	02. ID: 0.25	(mm)		Dilut	ion Factor:	1.0		
Soil Extract \	/olume:	25000 (ul)		Soil	Aliquot Volu	me: 125		(111)
		(at	-)		0011	anguot voiu	120		(ur)
				CONCEN	ITRATIC	ON UNITS:			
CAS NO).	COMPOUND)	(ua/L or ι	ia/Ka)	UG/KG		Ο	
					.99/			ů.	
10702	8	Acrolein					1000	U	_
10713	1	Acrylonitrile)				1000	U	
75650		tert-Butyl a	cohol				1000	Ü	
	44	Methyl-tert-	Butyl eth	er	<u></u>		100	<u> </u>	
	3	Di-isopropy	lether				100	U	
		Dichlorodifi	uorometi	nane			100	<u> </u>	
	3	Chlorometh	iane	<u>.</u> .			100	U	
75-01-	4		ae				100	U	
74-83-	9	Chloroothou	ane				100		_
75-00-	<u>3</u>	Trichloroflu	10 oromothe				100		4
75-25-	<u>4</u> Л	1 f-Dioblor		ine			100		4
67-64-	1	Acetono	bemene				100		
75-15-0	n n	Carbon Die	ulfido				100		
75-09-	2	Methylene (Chloride			····	100		-
156-60	-5	trans-1 2-D	chloroetl	iene			100		-
75-34-3	3	1.1-Dichloro	ethane				100	<u> </u>	
108-05	-4	Vinvl Acetat	e				100		-
78-93-3	3	2-Butanone	· · · -	· · · ·			100		-
156-59	-2	cis-1.2-Dich	loroethei	ne			100	<u> </u>	-{
67-66-3	3	Chloroform					100	<u> </u>	
71-55-6	3	1,1,1-Trichle	proethan	Э			100	<u> </u>	-
56-23-5	5	Carbon Tetr	achloride)			100	Ū	1
71-43-2	2	Benzene					100	Ŭ	-
107-06	-2	1,2-Dichloro	ethane				100	Ū	~1
79-01-6	3	Trichloroeth	ene				100	Ū	
	5	1,2-Dichloro	propane				100	U	-
75-27-4	ł	Bromodichlo	prometha	ne			100	U]
<u>110-75</u>	-8	2-Chloroeth	<u>yl vinyl et</u>	her			100	U	
10061-(01-5	cis-1,3-Dich	loroprope	ene			100	U	
108-10-	-1	4-Methyl-2-F	Pentanon	е			100	U	
108-88-	<u>.3</u>	Toluene	· · ·				100	U	
	J2-6	trans-1,3-Di	chloropro	pene			100	U	4
)	<u>1,1,2-Trichlo</u>	roethane)			100	U	1
127-18-	4	I etrachloroe	ethene	<u> </u>			100	U	-
<u> </u>	•bi	2-Hexanone					100	U	4
124-48-	· フ	Ubromochic	prometha	ne			100	<u> </u>	4
100-90-	<u>·1</u>		911 0				100	<u>U</u>	4
100-41-	4	<u>eunyipenzen</u>	e				100	U	

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			1A			FIELD ID:	
	V	OLATII	-E ORGANICS ANAL	YSIS DATA	SHEET	MB 08Mar05	
Lab Name:	FMETL			NJDEP#:	13461		
Project:	05-69570		Case No.: 50128	Location	: <u>B.750</u> S	DG No.: 191,192	
Matrix: (soil/w	vater)	SOIL		Lab	Sample ID:	MB 08Mar05	
Sample wt/vol: 10.		10.0	(g/ml) <u>G</u>	Lab File ID:		VB018838.D	
Level: (low/m	ned)	MED		Dat	e Received:	3/3/2005	
% Moisture: r	not dec.	0		Dat	e Analyzed:	3/8/2005	
GC Column:	<u>RTX50</u>	2. ID:	<u>0.25</u> (mm)	Dilu	tion Factor:	1.0	
Soil Extract V	olume: 2	25000	(uL)	Soil	Aliquot Volu	me: <u>125</u>	(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	Ū
75-25-2	Bromoform	Bromoform			
79-34-5	1,1,2,2-Tetrachlor		100	Ū	
<u>541-73-1</u>	1,3-Dichlorobenze		100	Ű	
106-46-7	1,4-Dichlorobenze	ne		100	U
<u>95-50-1</u>	1,2-Dichlorobenze	ne		100	U

				1E					
	,	VOLATI	LE ORGANI	CS ANAL	YSIS DATA	SHEET	FIELI	D ID:	
Lab Name:	FMETL	TEN	ratively ic	ENTIFIE	D COMPOU NJDEP#:	JNDS 13461	м	B 08Mar0	15
Project:	05-6957	70	Case No.:	50128	Location	n: B.750	SDG No.:	: 191,192	2
Matrix: (soil/w	vater)	SOIL			Lat	o Sample ID	: MB 08	Mar05	
Sample wt/vo	ol:	10.0	(g/ml)	G	Lat	o File ID:	VB018	838.D	
Level: (low/m	ned)	MED			Dat	te Received:	: 3/3/200)5	
% Moisture: n	not dec.	0			Dat	te Analyzed:	3/8/200)5	
GC Column:	RTX5	02. ID:	<u>0.25</u> (m	m)	Dik	ution Factor:	1.0		
Soil Extract V	'olume:	25000	(uL)		Soi	l Aliquot Vol	ume: <u>1</u> 2	5	(uL)
Number TICs	found:	0		COI (ug/	NCENTRAT ′L or ug/Kg)	ION UNITS: UG/KG			

			·	
CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-TIC

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			1A				FIELD ID:	
	V	'OLA I II	LE ORGANICS A	NALYSIS D	ATA SHEET		MB 10Mar0	15
Lab Name:	FMETL			NJDE	P#: <u>13461</u>			
Project:	05-6957	0	Case No.: 5012	8 Loc	ation: B.750	SD	G No.: <u>191,19</u>	2
Matrix: (soil/w	vater)	SOIL			Lab Sample	ID: <u> </u>	MB 10Mar05	
Sample wt/vo	ol:	10.0	(g/ml) <u>G</u>	<u> </u>	Lab File ID:	1	VB018868.D	
Level: (low/m	ned)	MED			Date Receive	əd: 🔮	3/3/2005	
% Moisture: r	not dec.	0			Date Analyze	d: 3	3/10/2005	
GC Column:	RTX50	2. ID:	0.25 (mm)		Dilution Facto	or: _	1.0	
Soil Extract V	olume:	25000	(uL)		Soil Aliquot V	'olum	ne: <u>125</u>	(uL)

CONCENTRATION UNITS:

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CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
107028	Acrolein	1000	I U
107131	Acrylonitrile	1000	U U
75650	tert-Butyl alcohol	1000	T U
1634044	Methyl-tert-Butyl ether	100	T U
108203	Di-isopropyl ether	100	Ŭ
75718	Dichlorodifluoromethane	100	U U
74-87-3	Chloromethane	100	U
75-01-4	Vinyl Chloride	100	Ū
74-83-9	Bromomethane	100	Ū
75-00-3	Chloroethane	100	Ū
75-69-4	Trichlorofluoromethane	100	U
75-35-4	1,1-Dichloroethene	100	Ū
67-64-1	Acetone	100	Ū
75-15-0	Carbon Disulfide	100	Ū
75-09-2	Methylene Chloride	100	U
156-60-5	trans-1,2-Dichloroethene	100	Ū
75-34-3	1,1-Dichloroethane	100	Ū
108-05-4	Vinyl Acetate	100	Ū
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	100	Ū
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	Ū
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	Ŭ
127-18-4	Tetrachloroethene	100	U
591-78-6	2-Hexanone	100	Ū
124-48-1	Dibromochloromethane	100	Ū
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U

FORM I VOA

			1A		FIELD ID:
	١	/OLATI	LE ORGANICS ANAL	YSIS DATA SHEET	
Lab Name:	FMETL			NJDEP#: <u>13461</u>	
Project:	05-6957	'0	Case No.: 50128	Location: <u>B.750</u> SE	OG No.: 191,192
Matrix: (soil/v	vater)	SOIL		Lab Sample ID:	MB 10Mar05
Sample wt/vo	ol:	10.0	(g/ml) G	Lab File ID:	VB018868.D
Level: (low/n	ned)	MED		Date Received:	3/3/2005
% Moisture: r	not dec.	0		Date Analyzed:	3/10/2005
GC Column:	RTX50	02. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0
Soil Extract V	/olume:	25000	(uL)	Soil Aliquot Volum	ne: <u>125</u> (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-Tetrachl	oroethane	100) U
541-73-1	1,3-Dichloroben	zene	100	0 0
106-46-7	1,4-Dichloroben	zene	100	
95-50-1	1,2-Dichloroben	zene	100	Ū

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		1E		
	VOL	ATILE ORGANICS AN	IALYSIS DATA SHEET	FIELD ID:
	TE	ENTATIVELY IDENTIF	FIED COMPOUNDS	
Lab Name:	FMETL	······	NJDEP#: 13461	MB 10Mar05
Project:	05-69570	Case No.: 50128	Location: B.750 SD	G No.: 191,192
Matrix: (soil/v	vater) <u>SO</u>	L	Lab Sample ID:	MB_10Mar05
Sample wt/vo	ol: <u>10.</u> () (g/ml) <u>G</u>	Lab File ID:	VB018868.D
Level: (low/n	ned) <u>ME</u>	D	Date Received:	3/3/2005
% Moisture: r	not dec. <u>0</u>	.	Date Analyzed:	3/10/2005
GC Column:	RTX502.	D: <u>0.25</u> (mm)	Dilution Factor:	1.0
Soil Extract V	/olume: 2500	00 (uL)	Soil Aliquot Volum	ne: <u>125</u> (uL
		C	ONCENTRATION UNITS:	

Number TICs found: 0

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

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

			1A		FIELD ID:	
	N N	VOLATI	LE ORGANICS ANAL	E ORGANICS ANALYSIS DATA SHEET		
Lab Name:	FMETL			NJDEP#: <u>13461</u>		
Project: 05-69570		Case No.: 50128	Location: B.750 S	DG No.: <u>191,192</u>		
Matrix: (soil/water) SOIL		SOIL		Lab Sample ID:	5012801	
Sample wt/vo	ol:	11.5	(g/ml) <u>G</u>	Lab File ID:	VB018845.D	
Level: (low/n	ned)	MED		Date Received:	3/3/2005	
% Moisture: r	not dec.	3.96		Date Analyzed:	3/8/2005	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	'olume:	25000	(uL)	Soil Aliquot Volu	ime: 125	(uL)

CAS NO.	COMPOUND (ug/L or ug/Kg)	UG/KG	Q
107028	Acrolein	910	
107131	Acrylonitrile	910	<u> </u>
75650	tert-Butyl alcohol	910	
1634044	Methyl-tert-Butyl ether	91	
108203	Di-isopropyl ether	91	U U
75718	Dichlorodifluoromethane	91	<u> </u>
74-87-3	Chloromethane	91	U
75-01-4	Vinyl Chloride	91	Ū
74-83-9	Bromomethane	91	Ū
75-00-3	Chloroethane	91	Ū
75-69-4	Trichlorofluoromethane	91	ι.
75-35-4	1,1-Dichloroethene	91	Ū
67-64-1	Acetone	91	Ū
75-15-0	Carbon Disulfide	91	Ū
75-09-2	Methylene Chloride	91	U
156-60-5	trans-1,2-Dichloroethene	91	U
75-34-3	1,1-Dichloroethane	91	U
108-05-4	Vinyl Acetate	91	U
78-93-3	2-Butanone	91	U
156-59-2	cis-1,2-Dichloroethene	91	U
67-66-3	Chloroform	91	U
71-55-6	1,1,1-Trichloroethane	91	U
56-23-5	Carbon Tetrachloride	91	U
71-43-2	Benzene	91	U
107-06-2	1,2-Dichloroethane	91	U
79-01-6	Trichloroethene	91	U
78-87-5	1,2-Dichloropropane	91	U
75-27-4	Bromodichloromethane	91	U
110-75-8	2-Chloroethyl vinyl ether	91	U
10061-01-5	cis-1,3-Dichloropropene	91	U
108-10-1	4-Methyl-2-Pentanone	91	U
108-88-3	Toluene	. 91	U
10061-02-6	trans-1,3-Dichloropropene	91	U
79-00-5	1,1,2-Trichloroethane	91	U
127-18-4	Tetrachloroethene	91	U
591-78-6	2-Hexanone	91	U
124-48-1	Dibromochloromethane	91	U
108-90-7	Chlorobenzene	91	U
100-41-4	Ethylbenzene	91	U

FORM I VOA

			1A		FIELD ID:	
	۱	VOLATI	750 D1	_		
Lab Name:	FMETL		· · · · · · · · · · · · · · · · · · ·	NJDEP#: <u>13461</u>	750-P1	
Project: 05-69570 Case No.: 50128 Loc				Location: B.750 SE	DG No.: 191,192	
Matrix: (soil/w	water)	SOIL		Lab Sample ID:	5012801	
Sample wt/vo	ol:	11.5	(g/ml) <u>G</u>	Lab File ID:	VB018845.D	
Level: (low/n	ned)	MED		Date Received:	3/3/2005	
% Moisture: r	not dec.	3.96		Date Analyzed:	3/8/2005	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	/olume:	25000	(uL)	Soil Aliquot Volun	ne: 125	(uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
1330-20-7	m+p-Xylenes		180	U
95-47-6	o-Xylene		91	U
100-42-5	Styrene		91	U
75-25-2	Bromoform		91	U
79-34-5	1,1,2,2-Tetrachl	oroethane	91	U
541-73-1	1,3-Dichloroben	zene	91	U
106-46-7	1,4-Dichloroben	zene	91	U
95-50-1	1,2-Dichloroben	zene	91	Ū

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		1E						
	VOLAT	ILE ORGANICS	ANALYSIS DAT	A SHEET	T	FIELD	ID:	
	TEN	ITATIVELY IDEN	TIFIED COMPC	UNDS				
Lab Name: F	METL		NJDEP#	13461		/	50-P1	
Project: 0	5-69570	Case No.: 501	28 Locatio	on: <u>B.75</u> () SI	DG No.:	191,19	2
Matrix: (soil/wa	ter) <u>SOIL</u>		La	ab Sampl	e ID:	5012801		
Sample wt/vol:	11.5	(g/ml) <u>G</u>	La	ab File ID	:	VB01884	45.D	
Level: (low/me	d) <u>MED</u>		D	ate Recei	ved:	3/3/2005		
% Moisture: no	t dec. <u>3.96</u>		D	ate Analy	zed:	3/8/2005		
GC Column:	RTX502. ID	: <u>0.25</u> (mm)	Di	lution Fac	ctor:	1.0		
Soil Extract Vol	ume: 25000	(uL)	So	oil Aliquot	Volur	me: <u>125</u>		(uL)
			CONCENTRA (ug/L or ug/Kg	TION UN	ITS: /KG			
Number TICs fo	ound:()						
CAS NO.	СОМ	POUND NAME		RT	ES	T. CONC	. -	Q

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			14	ł				FIELD	ID:	
	١	VOLATILE	ORGANICS	ANAL	YSIS DAT.	A SHE	ET	-	50 00	
Lab Name:	FMETL				NJDEP#:	134	31		50-PZ	
Project:	05-6957	7 <u>0</u> C	ase No.: 50	128	Locatio	on: B.:	750 S	DG No.:	191,192	2
Matrix: (soil/v	water)	SOIL			La	ab San	nple ID:	5012802	2	<u> </u>
Sample wt/vo	ol:	12.4	 (g/ml) G		La	ab File	ID:	VB0188	46.D	
Level: '(low/n	ned)	MED			- D:	ate Re	ceived:	3/3/2005		
% Moisturo: r	not doo	<u> </u>			-	ato An	aluzadi	2/0/0005		
		<u>4,14</u>					aiyzeu:	3/9/2000	•	
GC Column:	HIX5	<u>. 10: (</u>	<u>).25 (mm)</u>		Di	lution	-actor:	1.0		
Soil Extract V	/olume:	25000	(uL)		So	oil Aliqu	uloV tou	me: <u>125</u>		(uL)
				001		TION	INUTO.			
CARNO	`	COM		CON (via/l			JNHS:		~	
CAS NO).	COM	POUND	(ug/L	. or ug/Kg) _	JG/KG		Q	
107028	8	Acro	olein					840	U	
10713	1	Acry	/lonitrile					840	U	1
75650		tert-	Butyl alcohol					840	Ū	-
163404	44	Met	nyl-tert-Butyl e	ether				84	U	
108203	3	Di-ìs	sopropyl ether	•				84	Ū	
75718		Dich	lorodifluorom	ethane				84	t ŭ	
74-87-3	3	Chlo	promethane					84	U U	
75-01-4	4	Vinv	l Chloride					84		-
74-83-9	9	Bror	nomethane				<u> </u>	84		_
75-00-3	3	Chic	roethane					8/		-
75-69-4	4	Trick	lorofluorome	thane				81		_
75-35-4	4	1 1-1	Dichloroethen	A				84		
67-64-1	<u></u> 1	Acet	one	<u> </u>				8/		_
75-15-0	<u>.</u>	Carl	on Disulfide			· · · ·		8/		-
75-09-2	22	Moth	Wene Chloric	ام				04		_
156-60	-5	trans	-1 2-Dichloro	athana				<u>04</u>		-
75-34-9	2	111	<u>Jichloroethan</u>					04		-
108-05		Vinv	Acotato	<u> </u>				04	U	4
78-93-5	<u>-++</u> J	2.Bu	tanono		-			04	U U	-
156.50	ຸ 		2 Diablaraati	hono				<u> </u>	<u> </u>	
67.66.2	2		<u></u>	liene						-
71 55 6	2		Triphlarooth	000				84	0	_
) =	, 1, 1, 1	- Inchioroetha	ane dec				84		_
	<u>)</u>		on Tetrachior	lae				84	<u> </u>	-
	<u>:</u>	Benz		-				84	<u> U</u>	_
107-06-	-2	1,2-L	Jichioroethan	е				84	<u> </u>	4
<u></u>) -		loroetnene					84	<u> </u>	_
/8-87-5	<u>)</u>	1,2-L	Jichloropropa	ne				84	U	_
	•	Bron	iodichlorome	thane				84	U	_
110-75-	<u>-8</u>	2-Ch	loroethyl vinyl	lether				84	U	_
10061-0	01-5		<u>,3-Dichloropro</u>	opene	7/14/1			84	U	_
108-10-	<u>·1</u>	<u>4-Me</u>	thyl-2-Pentan	one				84	U	-
108-88-	<u>·3</u>		ene					84	U	1
10061-0	02-6	trans	-1,3-Dichloro	propen	θ			84	U	_
	;	1,1,2	-Trichloroetha	ane	***			84	U	
127-18-	<u>.4</u>	Tetra	chloroethene	! 				84	U	
<u> </u>	6	2-He	xanone					84	U	
	·1	Dibro	mochloromet	hane				84	U	
108-90-	.7	Chlo	robenzene					84	U]
100-41-	-4	Ethyl	benzene				,	84	U	1

FORMIVOA

				FIELD ID:	
	V	OLATI	750-02		
Lab Name:	FMETL			NJDEP#: 13461	730-72
Project:	05-6957	0	Case No.: 50128	Location: B.750 SE	OG No.: 191,192
Matrix: (soil/w	vater)	SOIL		Lab Sample ID:	5012802
Sample wt/vc	ol:	12.4	(g/ml) <u>G</u>	Lab File ID:	VB018846.D
Level: (low/m	ned)	MED		Date Received:	3/3/2005
% Moisture: r	not dec.	4.14		Date Analyzed:	3/9/2005
GC Column:	RTX50	2. ID:	0.25 (mm)	Dilution Factor:	1.0
Soil Extract V	olume:	25000	(uL)	Soil Aliquot Volum	ne: <u>125</u> (uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q
1330-20-7	m+p-Xylenes			170	U
95-47-6	o-Xylene			84	U
100-42-5	Styrene			84	U
75-25-2	Bromoform			84	
79-34-5	1,1,2,2-Tetrachloro	ethane		84	U
<u>541-73-1</u>	1,3-Dichlorobenzen	10		84	U
106-46-7	1,4-Dichlorobenzen	e		84	U
95-50-1	1,2-Dichlorobenzen	e		84	U

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		VOLATI	LE ORGANIC	S ANAL	YSIS DA	TA SHEE	Г	FIELD	ID:	
		IEN	I A I IVELY IDE	=NTIFIEL	COMP	OUNDS	•			
Lab Name:	FMETL	•			NJDEP	#: 13461		7	/50-P2	
Project:	05-695	70	Case No.: 5	0128	Locat	ion: <u>B.75</u>	<u>)</u> s	DG No.:	191,19	2
Matrix: (soil/v	water)	SOIL			l	.ab Sampl	e ID:	5012802)	
Sample wt/vo	ol:	12.4	(g/ml) (G	L	ab File ID	:	VB01884	46.D	
Level: (low/n	ned)	MED			Ε	Date Rece	ived:	3/3/2005	5	-
% Moisture: r	not dec.	4.14			[Date Analy	zed:	3/9/2005		-
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm	ו)	[Dilution Fa	ctor:	1.0		-
Soil Extract V	/olume:	25000	(uL)		S	Soil Aliquot	: Volu	me: <u>125</u>		- (uL)
				CON	ICENTR.	ATION UN	IITS:			
Number TICs	found:	0		(ug/L	. or ug/K	g) <u>UG</u>	i/KG			
CAS NO.		COMF				RT	ES	T. CONC		Q

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		1A	ELD ID:	
	١	VOLATILE ORGANICS ANALYSIS DATA SHEET	750 01	,
Lab Name:	FMETL	NJDEP#: 13461	750-P3	<u> </u>
Project:	05-6957	Case No.: 50128 Location: B.750 SDG I	No.: 191,1	92
Matrix: (soil/	water)	SOIL Lab Sample ID: 501	2803	
O			2000	
Sample wt/v	01:	$10.6 \qquad (g/ml) G \qquad Lab File ID: VBC$	18847.D	.
Level: (low/r	med)	MED Date Received: 3/3/	2005	
% Moisture:	not dec.	4.68 Date Analyzed: 3/9/	2005	
GC Column	DTYE	22 ID: 0.25 (mm) Dilution Eastern 1.0		
		$\frac{10}{22}$ D. $\frac{10}{223}$ (mm) Dilution Pactor: 1.0		_
Soil Extract V	Volume:	25000 (uL) Soil Aliquot Volume:	125	(uL)
	_	CONCENTRATION UNITS:		
CAS NO).	COMPOUND (ug/L or ug/Kg) UG/KG	Q	1
10702	8	Acrolein		
10713	1	Acrylonitrile	<u>, 1</u> 20 1	/ 1
75650		tert-Butyl alcohol		, ,
16340	44	Methyl-tert-Butyl ether	99 U	,]
10820	3	Di-isopropyl ether	9 U	j
75718		Dichlorodifluoromethane	99 U	,
74-87-	3	Chloromethane	99 U	J
75-01-	4	Vinyl Chloride g	99 <u>U</u>	1
<u></u>	9	Bromomethane	19 U	l
/5-00-	3	Chloroethane g	19 U	
75-69-	4	I richiorotiuoromethane 9	<u>19</u> U	
67-64-	.1			
75-15-	0	Carbon Disulfide		
75-09-	2	Methylene Chloride		
156-60)-5	trans-1.2-Dichloroethene	9 1	
75-34-	3	1,1-Dichloroethane	9 U	
108-05	5-4	Vinyl Acetate g	9 U	
78-93-	3	, 2-Butanone 9	9 U	
156-59)-2	cis-1,2-Dichloroethene 9	9 U	
67-66-	3	Chloroform 9	<u>9 U</u>	
	6 7	1,1,1-1 richloroethane 9	<u>9 U</u>	
	5 0	Carbon Tetrachloride 9	<u>9 U</u>	
107-06	2 	1 2 Dieblereetbane	9 0	
79-01-0	<u>6</u>	Trichloroothono 0	9 0	
78-87-	5 5	1 2-Dichloropropage		
75-27-4	4	Bromodichloromethane		
110-75	-8	2-Chloroethyl vinyl ether 9	9 U	
10061-	01-5	cis-1,3-Dichloropropene 9	9 0	
108-10	-1	4-Methyl-2-Pentanone 9	9 U	
108-88	-3	Toluene 9	9 U	
10061-	02-6	trans-1,3-Dichloropropene 9	<u>9</u> U	
79-00-5	5	1,1,2-Trichloroethane 9	9 U]
127-18	-4	Tetrachloroethene 9	<u>9 U</u>	
591-78	-6	2-Hexanone 9	<u>)</u> U	
124-48	- <u> </u> 7	Dipromochloromethane 99	<u>) U</u>	
100.44	-1	Ethylbonzono ov		
100-41	-4	ситурание 99	9 I U	

FORMIVOA

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			FIELD ID:			
	١	OLATI	750 02			
Lab Name:	FMETL			NJDEP#: <u>13461</u>	750-P3	
Project: 05-69570 Case No		Case No.: 50128	Location: B.750 S	G No.: <u>191,19</u> 2		
Matrix: (soil/w	vater)	SOIL		Lab Sample ID:	5012803	
Sample wt/vc	ol:	10.6	(g/ml) G	Lab File ID:	VB018847.D	
Level: (low/m	ned)	MED		Date Received:	3/3/2005	
% Moisture: r	not dec.	4.68		Date Analyzed:	3/9/2005	
GC Column:	RTX50	<u>)2.</u> ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	'olume:	25000	(uL)	Soil Aliquot Volu	me: <u>125</u>	(uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
1330-20-7	m+p-Xylenes		200	U
95-47-6	o-Xylene		99	U
100-42-5	Styrene		99	U
75-25-2	Bromoform		99	U
79-34-5	1,1,2,2-Tetrachl	oroethane	99	U
541-73-1	1,3-Dichloroben	zene	99	U
106-46-7	1,4-Dichloroben	zene	99	U
<u>95-50-1</u>	1,2-Dichloroben	zene	99	U

			1E							
VOLATILE ORGANICS ANALYSIS DATA SHEET								FIELD	FIELD ID:	
		IEN	IATIVELY IDEN	TIFIED COMPOUNDS				750 00		
Lab Name:	FMETL	- -	· · · · · · · · · · · · · · · · · · ·	NJDEP#: 13461			750-P3		·	
Project:	05-695	70	Case No.: 501	28 Loca	tion: <u>B</u> ,	750	SD	G No.:	191,1	92
Matrix: (soil/	water)	SOIL			Lab Sar	nple II	D: <u>5</u>	5012803	\$	
Sample wt/vo	ol:	10.6	(g/ml) <u>G</u>		Lab File	D:	1	/B01884	47.D	
Level: (low/n	ned)	MED	<u>.</u>	:	Date Re	eceive	d: 3	3/3/2005	•	
% Moisture: I	not dec.	4.68	<u>.</u>	l	Date An	nalyzeo	d: <u>3</u>	3/9/2005)	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	I	Dilution	Facto	r: <u>1</u>	.0		
Soil Extract V	/olume:	25000	(uL)	:	Soil Aliq	uot Vo	olum	e: <u>12</u> 5		(uL)
				CONCENTR (ug/L or ug/K	ATION (a)	UNITS UG/K	5: G			
Number TICs	s found:	0		(- <u>3</u> , 0) «g/r,	.9/				-	
CAS NO.		COM	POUND NAME		RT		EST	. CONC	;	Q

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		1A		FIELD	ID:
	V	OLATILE ORGANICS ANALYSIS DATA SH	HEET	7	50-P4
Lab Name:	FMETL	NJDEP#: <u>1</u> :	3461		
Project:	05-6957	Case No.: 50128 Location:	B.750 SD	G No.:	191,192
Matrix: (soil/w	vater)	SOIL Lab S	ample ID: 1	5012804	
Samplewitho	` ما•	11.1 (g/ml) G Lab E		1001004	0 D
	ль 			1001004	0.0
Level: (low/m	ned)	MED Date F	Received:	3/3/2005	
% Moisture: r	not dec.	4.19 Date A	Analyzed: 3	3/9/2005	
GC Column:	RTX50	2. ID: 0.25 (mm) Dilutio	n Factor: 1	.0	
Soil Extract V	/olume: 2		liquot Volum		(
				ie: 120	(UL,
		CONCENTRATIO			
	}				0
043 110	· •		UG/KG		Q
107028	3	Acrolein		940	U
107131	1	Acrylonitrile		940	Ŭ
75650		tert-Butyl alcohol		940	U
	14	Methyl-tert-Butyl ether		94	U
	3 '	Di-isopropyl ether		94	U
75718		Dichlorodifluoromethane		94	U
74-87-3	3	Chloromethane		94	U
75-01-4	4	Vinyl Chloride		94	U
74-83-9	Э	Bromomethane		94	U
	3	Chloroethane		94	U
75-69-4	4	Trichlorofluoromethane		94	U
75-35-4	<u> </u>	1,1-Dichloroethene		94	U
67-64-1	<u> </u>	Acetone		94	<u> </u>
/5-15-0	<u>)</u>	Carbon Disulfide		94	<u> </u>
<u></u>	<u> </u>	trans 1.0 Dishlarastharas		94	U
75 24 2	- <u>0</u>	1 1 Dichlorosthano		94	<u>U</u>
108-05-	<u>)</u>	Vinyl Acetate		94	<u> </u>
78-93-3	2	2-Butanono		94	<u> </u>
156-59-	, -2	cis-1 2-Dichloroethene		94	<u> </u>
67-66-3	}	Chloroform		94 Q/	
71-55-6	<u>.</u>	1.1.1-Trichloroethane		94	<u> </u>
56-23-5	5	Carbon Tetrachloride		94	
71-43-2	2	Benzene		94	
107-06-	-2	1.2-Dichloroethane		94	<u> </u>
79-01-6	;	Trichloroethene		94	Ŭ
78-87-5	; ;	1,2-Dichloropropane		94	Ū
75-27-4	•	Bromodichloromethane		94	Ū
110-75-	·8	2-Chloroethyl vinyl ether		94	U
10061-0)1-5	cis-1,3-Dichloropropene	£	94	U
	·1	4-Methyl-2-Pentanone		94	U
	3	Toluene		94	U
10061-0)2-6	trans-1,3-Dichloropropene		94	U
79-00-5)	1,1,2-Trichloroethane		94	U
127-18-	4	Tetrachloroethene		94	
591-78-0	6	2-Hexanone		94	<u> U </u>
124-48-	1	Ulbromochloromethane		94	U
108-90-	1			94	U
100-41-4	4	⊨ tnylbenzene		94	U

			FIELD ID:					
	١	VOLATI	750.04					
Lab Name:	FMETL			NJDEP#: <u>13461</u>	/ 50-P4			
Project:	Project: 05-69570 Case No.: 50128		Location: B.750 SDG No.: 191,19					
Matrix: (soil/v	vater)	SOIL		Lab Sample ID:	5012804			
Sample wt/vol: 11.1		11.1	(g/ml) <u>G</u>	Lab File ID:	VB018848.D			
Level: (low/n	ned)	MED		Date Received:	3/3/2005			
% Moisture: I	not dec.	4.19		Date Analyzed:	3/9/2005			
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0			
Soil Extract V	/olume:	25000	(uL)	Soil Aliquot Volu	me: <u>125</u> (uL)			

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
1330-20-7	m+p-Xylenes		190	U
95-47-6	o-Xylene		94	U
100-42-5	Styrene		94	U
75-25-2	Bromoform		94	U
79-34-5	1,1,2,2-Tetrachle	proethane	94	Ų
<u>541-73-1</u>	1,3-Dichlorobenz	zene	94	U
106-46-7	1,4-Dichlorobenz	zene	94	U
95-50-1	1,2-Dichlorobenz	zene	94	U

		1E						
	· Fl	FIELD ID:						
	TENTATIVELY ID	ENTIFIED COMF	OUNDS					
Lab Name: FME	TL	NJDEP	#: 13461		750-P4	1		
Project: 05-69	570 Case No.:	50128 Loca	tion: <u>B.750</u>		No.: <u>191,1</u>	92		
Matrix: (soil/water)	SOIL		Lab Sample	• ID: <u>501</u>	2804			
Sample wt/vol:	<u>11.1 (g/ml)</u>	G	Lab File ID:	VBC	018848.D	_		
Level: (low/med)	MED		Date Receiv	ved: <u>3/3/</u>	2005			
% Moisture: not de	c. <u>4.19</u>		Date Analyz		2005			
GC Column: RT	<u>(502.</u> ID: <u>0.25</u> (m	m)	Dilution Fac	tor: <u>1.0</u>				
Soil Extract Volume	e: <u>25000</u> (uL)	:	Soil Aliquot	Volume:	125	(uL)		
	CONCENTRATION UNITS:							
Number TICs found	l: <u> </u>	(ug/c of ug/n	·y) <u></u>					
CAS NO.	COMPOUND NAM	E	RT	EST. C	ONC.	Q		

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		1A	FIELD I	D:
	V	DLATILE ORGANICS ANALYSIS DATA SHEET		
Lab Name:	FMETL	NJDEP#: 13461		ou-P5
Project:	05-69570	Case No.: 50128 Location: B.750 S	DG No.:	191,192
Matrix: (soil/	water)	SOIL Lab Sample ID:	5012805	
Sample wt/ve	ol:	1.7 (a/ml) G Lab File ID	VB01887	0.0
Lovali /low/r			0/0/0007	0.0
Level: (low/r	neu)	Date Received:	3/3/2005	
% Moisture:	not dec.	3.57 Date Analyzed:	3/10/2005	5
GC Column:	RTX502	. ID: 0.25 (mm) Dilution Factor:	1.0	
Soil Extract \	Volume: 2	5000 (uL) Soil Alíauot Volu	me: 12.5	 /u
		() =		(u
		CONCENTRATION UNITS:	·	
CAS NO).	COMPOUND (ug/L or ug/Kg) UG/KG		Q
				_
_10702	8	Acrolein	8900	U
10713	1	Acrylonitrile	8900	U
75650		tert-Butyl alcohol	8900	U
16340	44	Methyl-tert-Butyl ether	1500	
108203	3	Di-isopropyl ether	890	U
75718		Dichlorodifluoromethane	890	U
/4-8/-	3		890	U
75-01-	4	Vinyi Chioride	890	<u> </u>
	9 0	Bromomemane	890	U
75-00-	3 4	Trippleroflueromethene	890	<u> </u>
75-09-	4 1	1 1 Dichloroothono	890	<u> </u>
67-64-	<u>4</u>		890	<u> </u>
75-15-0	0	Carbon Disulfide	090	
75-09-	2	Methylene Chloride	090	U
156-60		trans-1 2-Dichloroethene	800	
75-34-	3	1 1-Dichloroethane	800	
108-05	5-4	Vinvl Acetate	890	<u> </u>
78-93-3	3	2-Butanone	890	
156-59)-2	cis-1,2-Dichloroethene	890	<u> </u>
67-66-3	3	Chloroform	890	Ŭ
71-55-6	6	1,1,1-Trichloroethane	890	U
56-23-	5	Carbon Tetrachloride	890	Ū
71-43-2	2	Benzene	1600	
107-06	-2	1,2-Dichloroethane	890	U
	6	Trichloroethene	890	U
78-87-5	5	1,2-Dichloropropane	890	U
75-27-4	4	Bromodichloromethane	890	U
110-75	-8	2-Chloroethyl vinyl ether	890	U
10061-	01-5	cis-1,3-Dichloropropene	890	U
	-1	4-Methyl-2-Pentanone	890	U
108-88	-3	Toluene	39000	
10061-	02-6	trans-1,3-Dichloropropene	890	U
79-00-5	ō	1,1,2-Trichloroethane	890	U
127-18	-4	Ietrachloroethene	890	U
<u> </u>	-6	2-Hexanone	890	U
124-48	-1	Dibromochloromethane	890	U
108-90	-/	Chlorobenzene	890	U
100-41	-4	Ethylbenzene 2	5000	

FORM I VOA

		1A					FIELD ID:	
	V	OLATII	LE ORGANICS	SIS DATA SHEET		750 05		
Lab Name:	FMETL				NJDEP#: 13461	730-F5		
Project:	05-6957	0	Case No.: 50	0128	Location: B.750	SDC	G No.: <u>191,19</u> 2	2
Matrix: (soil/w	vater)	SOIL			Lab Sample II	D: <u>5</u>	012805	
Sample wt/vc	ol:	11.7	(g/ml) <u>G</u>	3	Lab File ID:	V	B018870.D	
Level: (low/m	1ed)	MED			Date Received	d: <u>3</u> /	/3/2005	
% Moisture: r	not dec.	3.57			Date Analyzed	l: <u>3</u> /	(10/2005	
GC Column:	RTX50	<u>2.</u> ID:	<u>0.25</u> (mm	ı)	Dilution Factor	r: <u>1</u> .	0	
Soil Extract V	olume:	25000	(uL)		Soil Aliquot Vo	olume): 12.5	(uL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
1330-20-7	m+p-Xylenes		130000	E
95-47-6	o-Xylene		65000	E
100-42-5	Styrene		890	U
75-25-2	Bromoform		890	U
79-34-5	1,1,2,2-Tetrachl	oroethane	890	U
541-73-1	1,3-Dichloroben	zene	890	U
106-46-7	1,4-Dichloroben	zene	890	U
95-50-1	1,2-Dichloroben	zene	890	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

750-P5 Lab Name: FMETL NJDEP#: 13461 Project: 05-69570 Location: B.750 SDG No.: 191,192 Case No.: 50128 Matrix: (soil/water) SOIL Lab Sample ID: 5012805 Sample wt/vol: 11.7 (g/ml) G Lab File ID: VB018870.D Level: (low/med) MED Date Received: 3/3/2005 % Moisture: not dec. 3.57 Date Analyzed: 3/10/2005 GC Column: RTX502. ID: 0.25 (mm)Dilution Factor: 1.0 Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 12.5 (uL)

CONCENTRATION UNITS:

Number TICs found: 10

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

FIELD ID:

				,	
CAS	S NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	000611-14-3	Benzene, 1-ethyl-2-methyl-	28.40	170000	JN
2.	000108-67-8	Benzene, 1,3,5-trimethyl-	28.59	73000	JN
3.	000108-67-8	Benzene, 1,3,5-trimethyl-	29.36	260000	JN
4	000095-36-3	1,2,4-Trimethylbenzene	30.22	63000	JN
5.	·····	unknown	30.48	100000	J
<u>6</u> .	001758-88-9	Benzene, 2-ethyl-1,4-dimethyl-	30.56	90000	JN
7.	000535-77-3	Benzene, 1-methyl-3-(1-methylet	31.32	78000	JN
8.	000527-84-4	Benzene, 1-methyl-2-(1-methylet	32.24	100000	JN
9.	000767-58-8	Indan, 1-methyl-	32.69	61000	JN
10.	027133-93-3	2,3-Dihydro-1-methylindene	33.08	93000	JN

1A								FIELD ID:		
VOLATILE ORGANICS ANALYSIS DATA SHEET									750 05 0	
Lab Name:	FMETL				NJDEP#:	134	61		750-P5 D	
Project:	05-6957	<u>′</u> 0	Case No.: 501	28	Location	: В.	750 S	DG No	.: 191,19	2
Matrix: (soil/w	vater)	SOIL			Lab	Sar	nple ID:	50128	05	
Sample wt/vc	, 1'	117	(r/ml) G		Loh	Filo				
			(g/m) <u>u</u>		Lau		ID.	VDUIC	5071.D	_ ·
Level: (low/m	1ed)	MED	_		Dat	e Re	ceived:	3/3/20	05	-
% Moisture: r	10t dec.	3.57	·		Dat	e An	alyzed:	3/10/2	005	
GC Column:	RTX50	02. ID:	<u>0.25</u> (mm)		Dilu	tion	Factor:	1.0		
Soil Extract V	'olume:	25000	(uL)		Soil	Alia	uot Volu	me: 1.	.25	- (uL)
	-		、 /							. (41)
				CONC	CENTRAT	ION	UNITS:			
CAS NO	+.	CO	MPOUND	(ug/L	or ug/Kg)		UG/KG		Q	
				-		-				
107028	3	Ac	prolein					89000	<u> </u>	
75650	<u>}</u>	AC	Sryionitrile					89000		
163404	11		nt-Butyl alconol	thor	· · · ·			89000	<u> </u>	
108203	<u>}4</u>		icopropul other					8900		
75718	2		chlorodifluorom	othana				8900		
74.87-9	3		loromothano	emane				8900		
75-01-4	<u>,</u> 1	Vi	nvl Chloride					8000		
74-83-9	<u>,</u>	Br	omomethane		··			8000		
75-00-3	3	Cł	loroethane			•••		8900		
75-69-4	1	Tr	ichlorofluoromet	hane				8900		
75-35-4	1	1.	1-Dichloroethen	9				8900		
67-64-1		Ac	etone					8900		
75-15-0)	Ca	arbon Disulfide					8900	<u> </u>	
75-09-2	2	Me	thylene Chlorid	e				8900	Ŭ	
	-5	tra	ns-1,2-Dichloro	ethene				8900	U	
75-34-3	}	1,1	I-Dichloroethane	Э				8900	U	
108-05-	-4	Vir	nyl Acetate					8900	U	
	}	2-8	<u> 3utanone</u>				_	8900	U	
	-2	cis	-1,2-Dichloroeth	nene				8900	U	
<u> 67-66-3</u>	<u>ا</u>	Ch	loroform					8900	U	
71-55-6	j	1,1	,1-Trichloroetha	ane				8900	U	
56-23-5	<u>،</u>	Ca	rbon Tetrachlori	ide				8900	U	
		Be	nzene		· · · · · · · · · · · · · · · · · · ·			2000	J	
107-06-	2	1,2	2-Dichloroethane)				8900	<u> </u>	
	<u>.</u>	Tri	chloroethene					8900	<u> </u>	
78-87-5		1,2	-Dichloropropar	10				8900	<u> </u>	
		Bro	omodichlorometi	hane				8900	<u> </u>	
110-75-	8	2-(<u>Chloroethyl vinyl</u>	ether	·····			8900	U	_
10061-0	<u>л-5</u>	cis	-1,3-Dichloropro	pene	- <u>-</u>			8900		
108-10-	<u> </u>	4-1	netnyi-2-Pentan	one			·	8900	U	_
108-88-	<u>ວ</u> ນາ ຂ	10						38000		
	12-0		15-1, J-DICHIOP	propene		-+		8900	<u> </u>	_
107 10	<u>A</u>		<u>, 2- i nunioroethana</u>	пе				8900		_
<u> </u>	4 6		achioroethene					8900		_
10/-/0-	<u>u</u> 1	2-F	romochloromet	hano				8900	<u> </u>	_
108-00-	<u>-</u> 7		orohenzene	ane				8000		
100-00-	4	- Cill Fth	vlhenzene					0900	U	_
100 111	•	, c u	1.0012.0110					-+000		

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FORM I VOA

			1A		FIELD ID:	
	```	VOLATI	LE ORGANICS ANAL	YSIS DATA SHEET	750-P5 DI	٦
Lab Name:	FMETL			NJDEP#: 13461		
Project:	ject: 05-69570 Case No.: 50128 Location: B.750 SI		DG No.: 191,192			
Matrix: (soil/v	water)	SOIL		Lab Sample ID:	5012805	
Sample wt/vo	ol:	11.7	(g/ml) <u>G</u>	Lab File ID:	VB018871.D	
Level: (low/n	ned)	MED		Date Received:	3/3/2005	
% Moisture: I	not dec.	3.57		Date Analyzed:	3/10/2005	
GC Column:	RTX50	02. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	/olume:	25000	(uL)	Soil Aliquot Volu	me: <u>1.25</u> (u	ıL)

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
1330-20-7	m+p-Xylenes		110000	
95-47-6	o-Xylene		57000	
100-42-5	Styrene		8900	U
75-25-2	Bromoform	+	8900	Ū
79-34-5	1,1,2,2-Tetrachloro	ethane	8900	Ū
541-73-1	1,3-Dichlorobenzen	0	8900	Ū
106-46-7	1,4-Dichlorobenzen	е	8900	Ū
95-50-1	1,2-Dichlorobenzen	е	8900	Ū

			1E							
		VOLATI	LE ORGANICS	ANALYSIS DA	TA S	SHEET		FIELD	ID:	
		TEN	FATIVELY IDEN	TIFIED COMP	OUN	IDS				
Lab Name:	FMETL			NJDEP	#: 1	3461		/5	0-P5 L	ท
Project:	05-695	70	Case No.: 501	28 Loca	tion:	B.750	SI	DG No.:	191,19	92
Matrix: (soil/v	water)	SOIL		l	Lab S	Sample	ID:	5012805	;	
Sample wt/vo	ol:	11.7	(g/ml) <u>G</u>		_ab F	File ID:		VB01887	71.D	
Level: (low/n	ned)	MED			Date	Receiv	ed:	3/3/2005	j	-
% Moisture: r	not dec.	3.57		l	Date	Analyz	ed:	3/10/200	15	-
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	I	Diluti	on Fac	tor:	1.0		
Soil Extract V	/olume:	25000	(uL)	S	Soil A	Aliquot '	Volur	ne: <u>1.25</u>	5	- _ (uL)
Number TICs	s found:	0		CONCENTR (ug/L or ug/K	ATIC g)	DN UNI UG/	TS: KG			-
CAS NO.	-	COMF	OUND NAME		F	ат	ES	T. CONC		Q

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## FORM I VOA-TIC

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	a		1A			FIELD	ID:	
	VO	LATILE ORGANIC	S ANALY	SIS DATA S	SHEET	- T1	n Blank	, ]
Lab Name:	FMETL			NJDEP#:	13461		р Біанк ———	<u> </u>
Project:	05-69570	Case No.: 5	0128	Location:	B.750 S	DG No.:	191,192	2
Matrix: (soil/wa	ater) S			Lah	Sample ID:	5012806		
			~			0012000	· · · · · · · · · · · · · · · · · · ·	
Sample wt/vol	: <u>1</u>	<u>J.0</u> (g/ml) (	j	Lab I	File ID:	VB01886	59.D	
Level: (low/me	ed) <u>M</u>	ED		Date	Received:	3/3/2005		
% Moisture: no	ot dec. 0			Date	Analyzed:	3/10/200	5	
CC Column	 DTV500	ID: 0.25 /mm	-)	[]]		4.0	<u> </u>	
GC Column.	<u>ni Aguz,</u>	_ ID. <u>0.25</u> (IIII	i)	Diluti	on Factor:	1.0	<b></b>	
Soil Extract Vo	lume: 25	000 (uL)		Soil /	Aliquot Volu	me: <u>125</u>		(uL)
			CON	CENTRATIC	ON UNITS:			
CAS NO.		COMPOUND	(ug/L	or ug/Kg)	UG/KG		Q	
107000		Aavalain				1000		
107028		Acrolein				1000		
75650		tort-Butylalcohr	N.			1000		
1634044	1	Methyl-tert-Buty	l ether			100		_
108203		Di-isopropyl eth	er			100		
75718		Dichlorodifluoro	methane	<del>.</del>		100		
74-87-3		Chloromethane				100	Ŭ	
75-01-4		Vinyl Chloride				100	Ū	-1
74-83-9		Bromomethane				100	U	
75-00-3		Chloroethane				100	U	
		Trichlorofluorom	tethane			100	U	
75-35-4		1,1-Dichloroethe	ene			100	U	
75-15-0		Carbon Disulfide	<u> </u>			100		_
75-09-2		Methylene Chlor	-ido			100	<u>U,</u>	_
156-60-5	5	trans-1.2-Dichlo	roethene			100	<u> </u>	-
75-34-3	<u> </u>	1,1-Dichloroetha	ine			100	<u> </u>	
108-05-4	1	Vinyl Acetate				100	Ū	
78-93-3		2-Butanone				100	U	
156-59-2	2	cis-1,2-Dichloroe	othene			100	U	
67-66-3		Chloroform				100	U	_
<u></u>	· · · · ·	1,1,1- richloroet	hane			100	<u> </u>	
56-23-5		Carbon Tetrachi	oride			100	<u> </u>	_
107-06-2	)	1 2-Dichlorootha	no			100	<u> </u>	
79-01-6	•	Trichloroethene				100	<u> </u>	
78-87-5		1.2-Dichloropror	ane			100	<u> </u>	_
75-27-4		Bromodichlorom	ethane			100	<u> </u>	
110-75-8	}	2-Chloroethyl vir	yl ether			100	<u> </u>	-
10061-01	1-5	cis-1,3-Dichlorop	propene			100	Ū	-
108-10-1		4-Methyl-2-Penta	anone			100	U	
108-88-3		Toluene				100	U	
10061-02	2-6	trans-1,3-Dichlor	opropene			100	U	_
79-00-5		1,1,2-Trichloroet	hane	<del>.</del>		100	<u>U</u>	_
<u>12/-18-4</u>	• • • • • • • • • • • • • • • •	1 etrachioroether	10			100	<u> </u>	
	1	∠-⊓exanone Dibromochlorom	ofbano			100	<u> </u>	-
108-90-7		Chlorohenzene	GUIANU			100	<u> </u>	-
100-41-4		Ethylbenzene				100		-

	_		1A		FIELD ID:
	١	/OLATI	LE ORGANICS ANAL	YSIS DATA SHEET	Trin Blank
Lab Name:	FMETL			NJDEP#: 13461	
Project:	05-6957	<u>′0</u>	Case No.: 50128	Location: B.750 SI	DG No.: <u>191,192</u>
Matrix: (soil/w	vater)	SOIL	· ·	Lab Sample ID:	5012806
Sample wt/vo	ol:	10.0	(g/ml) <u>G</u>	Lab File ID:	VB018869.D
Level: (low/n	ned)	MED		Date Received:	3/3/2005
% Moisture: r	not dec.	0		Date Analyzed:	3/10/2005
GC Column:	RTX50	02. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0
Soil Extract V	olume:	25000	(uL)	Soil Aliquot Volur	me: <u>125</u> (uL)

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-Tetrachic	proethane	100	U
541-73-1	1,3-Dichlorobenz	zene	100	U
106-46-7	1,4-Dichlorobenz	zene	100	U
95-50-1	1,2-Dichlorobenz	zene	100	U

	16				
	VOLATILE ORGANICS	ANALYSIS DATA S	SHEET	FIELD ID:	
	TENTATIVELY IDEN	ITIFIED COMPOUN	1DS		I
Lab Name: FMET	L	NJDEP#:	13461		lank
Project: 05-695	570 Case No.: 50	28 Location:	B.750	SDG No.: <u>19</u>	1,192
Matrix: (soil/water)	SOIL	Lab	Sample ID:	5012806	
Sample wt/vol:	<u>10.0 (g/ml) G</u>	Lab I	File ID:	VB018869.0	)
Level: (low/med)	MED	Date	Received:	3/3/2005	
% Moisture: not dec.	0	Date	Analyzed:	3/10/2005	
GC Column: RTX	502. ID: <u>0.25</u> (mm)	Diluti	ion Factor:	1.0	
Soil Extract Volume:	25000 (uL)	Soil /	Aliquot Vol	ume: <u>125</u>	(uL)
Number TICs found:	0	CONCENTRATIC (ug/L or ug/Kg)	ON UNITS: UG/KG		
CAS NO.	COMPOUND NAME	-	RT E	ST. CONC.	Q

# TPHC

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

Client :	U.S. Army	Project # :	50128
	DPW. SELFM-PW-EV	Location :	Bldg.750
	Bldg. 173	UST Reg. # :	
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	Date Received :	03-Mar-05
Matrix :	Soil	Date Extracted :	04-Mar-05
inst. ID. :	GC TPHC INST. #1	Extraction Method :	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	Analysis Complete :	08-Mar-05
Injection Volume :	1uL	Analyst :	<b>B</b> .Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
5012801	750-P1	1.00	15.07	96.04	95	345	ND
5012802	750-P2	1.00	15.06	95.86	95	346	ND
5012803	750-P3	1.00	15.05	95.32	96	349	ND
5012804	750-P4	1.00	15.07	95.81	95	346	ND
5012805	750-P5	1.00	15.06	96.43	95	344	240.11
:							
						-	
METHOD BLANK	MB-030405-01	1.00	15.00	100.00	92	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

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#### 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.	$\sim$
5.	Chain of Custody submitted.	
6.	Samples submitted to lab within 48 hours of sample collection.	
7.	Methodology Summary submitted.	<u> </u>
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.

ł

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: Bldg, 750

# Bldg.750/UST#81533-191,192

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
750-P6/Piping+70 Ft.	5013401	Soil	07-Mar-05 13:30	03/07/05
750-P7/Piping NE Island	5013402	Soil	07-Mar-05 13:48	03/07/05
750-P8/Duplicate	5013403	Soil	07-Mar-05 13:30	03/07/05
Trip Blank	5013404	Methanol	07-Mar-05	03/07/05

#### ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB VOA+15, TPHC, %SOLIDS

ENCLOSURE: CHAIN OF CUSTODY RESULTS

05 Daniel Wright/Date Laboratory Director

# **Table of Contents**

Section	Page No
Chain of Custody	1-4
Method Summary	5-6
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Volatile Organics Qualifier Codes Results Summary Calibration Summary Method Blank Summary Surrogate Results Summary MS/MSD Results Summary Internal Standard Summary Raw Sample Data	13 14 15-29 30-32 33 34 35 36 37-46
Total Petroleum Hydrocarbons Result Summary Calibration Summary Surrogate Results Summary MS/MSD Results Summary Raw Sample Data	47 48 49-55 56 57-58 59-66
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# CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703 Tel (732)532-4359 Fax (732)532-6263 EMail: wrightd@mail1.monmouth.army.mil Chain of Custody F

Chain of Custody Roomd

ustomer: 1006 EVENTHER	Project No: 05-69	570		Analy	sis Parame	sters		Comments:
one: $\# \times \mathcal{ZOPS6}$	Location: 8206, 7.	ň,						
DERA ( )OMA ( %Other: (	USTS# 81537 - 19	11,192	7	<u>51</u> -			-) 	1.1
amplers Name / Company: FR# NK ACOR	{\$//TVS	Sample #	HJ.	10		Ø	EH (	
MS/Work Order # Sample Location	Date Time	Type bottle	'	р <u>Л</u>		id.	QN	Remarks / Preservation Meth
E134 01 750-PC, PIDINIL+ POPM	3-7-05 1370	2 7/05	X			8	219 7.7	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
and 750 -P7, PIRINGO WED	1348	-	X				2192-7	
(13, 750 - PS, 0 0PL1017E	1330	C A	×	X		5	220 2-9	
CI BUY TRIP BLANK.	۹ ۹	AØ 1				1	215	
		•						
	-							
							-	
inquished by signature): Date/Time:/ R	deceived by (signature):	Reli	Iquished b	y (signature):	Date/1	ime: R	eceived by	(signature):
inquished by (signature): Date/Time: WR	Received by (stantre):	Reli	iquished b	y (signature):	Date/T	ime: R	eceived by	(signature):
ort Type: ()Full, ("Reduced, ( )Styndard, ()Screen / jaround time: ( )Standard 3 wks. (/)Rush ( )	/ non-certified, (_)EDD		Remark	:2				



#### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 -USTs #81533-191 & 81533-192 PIPING, DISPENSER 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)

750P1 PIPING PLUS 10 FT 750P2 PIPING PLUS 25 FT 750P3 PIPING PLUS 40 FT 750P5 PIPING PLUS 55 FT 750P6 PIPING PLUS 70 FT 750P7 PIPING AT NE ISLAND 750P9 NE DISPEN. GASOLINE 750P10 NE DISPEN. DIESEL 750P11 SW DISPEN. DIESEL 537866.6 537879.28 537891.992 537905.926 537911.548 537918.083 537943.46 537930.474 537920.615 537907.343 <u>X COORDINATE (EASTING)</u> 617884.918 617877.845 617871.095 617863.942 617865.355 617865.355 617868.054 617863.755 617825.932 617821.917

#### REFERENCE POINT

POSITION/DESCRIPTION BLDG753 WEST CORNER Y COORDINATE (NORTHING) 537883.749

#### X COORDINATE (EASTING) 617911.846

017911.040

# 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: 50134

Site: Bldg. 750 UST # 191 & 192

	Date	Hold Time
. Date Sampled	03/07/05	NA
<b>Receipt/Refrigeration</b>	03/07/05	NA
Extraction		
1. TPHC	03/10/05	14 days
Á n a lugas		
Analyses		
1. VOA	03/11/05	14 days
2. TPHC	03/11/05	40 days
# CONFORMANCE/ NON-CONFORMANCE SUMMARY

		Indicate Yes, No, N/A
1.	1. Chromatograms labeled/Compounds identified	
	(Field samples and method blanks)	- Yes
2.	2. Retention times for chromatograms provided	<u>-468</u>
3.	3. GC/MS Tune Specifications	
	a. BFB Meet Criteria	_Ye3
	b. DFTPP Meet Criteria	
4.	GC/MS Tuning Frequency – Performed every 24 hours for 600	
	series and 12 hours for 8000 series	<u> </u>
5.	6. 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	<u>yes</u>
6.	6. GC/MS Calibration requirements	
	a. Calibration Check Compounds Meet Criteria	403
	b. System Performance Check Compounds Meet	Criteria <u>yes</u>
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	<u></u>
	c. Acid Fraction	
	If not met, were the calculations checked and the results qualified as "estimated"?	d
9.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria	1105
	(If not met, list those compounds and their recoveries, which fall	-95
	outside the acceptable range)	
	a. VOA Fraction	
	b. B/N Fraction /JA	
	c. Acid Fraction N14	· · · —

# GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		Indicate Yes, No, N
10.	Internal Standard Area/Retention Time Shift Meet Criteria (If not met, list those compounds, which fall outside the acceptable range)	405
	a. VOA Fraction	
	b. B/N Fraction NA	
	c. Acid Freetien NTA	
11.	Extraction Holding Time Met	NA
	If not met, list the number of days exceeded in a Steple:	
12.	Analysis Holding Time Met	Lles
	If not met, list the number of days exceeded for each sample:	l
Addi	tional Comments:	
Add	tional Comments:	
Add	tional Comments:	
Add	tional Comments:	
Addi	tional Comments:	

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

AUUUIJ

# TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

		Indicate Yes, No, N/A
Method Detection Limits Provided		40.3
Method Blank Contamination – If y corresponding concentrations in eac	es, list the sample and the h blank	
Matrix Spike Results Summary Mee (If not met, list the sample and corre falls outside the acceptable range)	et Criteria sponding recovery which	<u> </u>
Duplicate Results Summary Meet C	riteria	<u>yes</u>
IR Spectra submitted for standards, t	planks and samples	NA
Chromatograms submitted for standa if GC fingerprinting was conducted	ards, blanks and samples	yes
Analysis holding time met (If not met, list number of days exce	eded for each sample)	yes_

Additional comments:

aboratory Manager: Date: 5-3-0.5	5

# 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	FIELD ID:		
	VOLATILE ORGANICS ANALYSI	S DATA SHEET	MB	11Mar05		
Lab Name: FME	<u>TL N.</u>	JDEP#: <u>13461</u>		TIMATOO		
Project: 05-6	9570 Case No.: 50134	Location: B.75	0 SDG No.:	191,192		
Matrix: (soil/water)	SOIL	Lab Sampl	eID: MB11M	ar05		
Sample wt/vol:	10.0 (a/ml) G	l ab File ID		)4 D		
Lough (low/mod)				<u></u>		
Level: (low/mea)	MED	Date Hece	ived: <u>3/7/2005</u>			
% Moisture: not de	c. <u>0</u>	Date Analy	zed: <u>3/11/200</u>	5		
GC Column: RT	K502. ID: 0.25 (mm)	Dilution Fa	ctor: 1.0			
Soil Extract Volume	ə: 25000 (uL)	Soil Aliquo	Volume: 125	(uL)		
	CONCE	ENTRATION UN	IITS:			
CAS NO.	COMPOUND (ug/L or	rug/Kg) <u>UG</u>	i/KG	Q		
107028	Acrolein		1000			
107131	Acrylonitrile		1000			
75650	tert-Butyl alcohol		1000			
1634044	Methyl-tert-Butyl ether		100			
108203	Di-isopropyl ether		100	Ū		
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	I richlorofluoromethane		100	<u> </u>		
67.64.1			100			
75-15-0	Carbon Disulfide		100			
75-09-2	Methylene Chloride		100			
156-60-5	trans-1.2-Dichloroethene		100			
75-34-3	1,1-Dichloroethane		100	<u> </u>		
108-05-4	Vinyl Acetate		100	Ū		
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			
79-01-6			100	U		
75-87-3			100			
110-75-8	2-Chloroothyl vipyl othor		100			
10061-01-5	cis-1 3-Dichloropropopo		100			
108-10-1	4-Methyl-2-Pentanone		100			
108-88-3	Toluene		100			
10061-02-6	trans-1.3-Dichloronropene		100			
79-00-5	1.1.2-Trichloroethane		100			
127-18-4	Tetrachloroethene		100			
591-78-6	2-Hexanone		100			
124-48-1	Dibromochloromethane		100			
108-90-7	Chlorobenzene		100	U		
100-41-4	Ethylbenzene		100	U		

FORM I VOA

			1A		FIELD ID:	
	١	/OLATII	_E ORGANICS ANAL	YSIS DATA SHEET	MR 11Mayor	
Lab Name:	FMETL			NJDEP#: <u>13461</u>		)
Project:	05-6957	0	Case No.: 50134	Location: B.750 SI	DG No.: 191,192	
Matrix: (soil/v	vater)	SOIL		Lab Sample ID:	MB 11Mar05	
Sample wt/vo	ol:	10.0	(g/ml) <u>G</u>	Lab File ID:	VB018904.D	
Level: (low/n	ned)	MED	<u></u>	Date Received:	3/7/2005	
% Moisture: r	not dec.	0		Date Analyzed:	3/11/2005	
GC Column:	RTX50	02. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	/olume:	25000	(uL)	Soil Aliquot Volur	ne: <u>125</u>	(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-Tetrachl	oroethane	100	U
541-73-1	1,3-Dichloroben	zene	100	U
106-46-7	1,4-Dichloroben	zene	100	U
95-50-1	1,2-Dichloroben	zene	100	U

			1E				
		VOLATI	LE ORGANICS /	ANALYSIS DAT	A SHEET	FIELD IC	);
		TEN	FATIVELY IDEN	TIFIED COMPO	UNDS		
Lab Name:	FMETL			NJDEP#:	13461	MB1	1Mar05
Project:	05-6957	70	Case No.: 501:	34 Locatio	n: <u>B.750</u> S	3DG No.: 1	91,192
Matrix: (soil/w	vater)	SOIL		La	b Sample ID:	MB 11Mar	05
Sample wt/vo	ol:	10.0	(g/ml) <u>G</u>	La	b File ID:	VB018904	.D
Level: (low/m	ned)	MED	<u> </u>	Da	te Received:	3/7/2005	
% Moisture: r	not dec.	0		Da	te Analyzed:	3/11/2005	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	Dil	ution Factor:	1.0	<u>.</u>
Soil Extract V	olume:	25000	(uL)	So	il Aliquot Volu	ime: <u>125</u>	(uL)
					TION UNITS:		
Number TICs	found:	0		(ug/L or ug/Ng)			

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
				····

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		17	4		FIELD I	ID:	
	١	VOLATILE ORGANICS	ANALYSIS DATA S	SHEET	7	50-P6	
Lab Name:	FMETL		NJDEP#:	3461			
Project:	05-6957	70 Case No.: 50	134 Location:	B.750 S	DG No.:	191,192	
Matrix: (soil/w	(ater)	SOII	lah !	Sample ID:	5013401	·	
	L.		Lub		10010401	<u> </u>	
Sample wt/vo	C	<u>11.9</u> (g/ml) <u>G</u>	Labi	-ile ID:	VB01890	8.D	
Level: (low/m	ied)	MED	Date	Received:	3/7/2005		
% Moisture: n	ot dec.	2.65	Date	Analvzed:	3/11/2005	5	
CC Column	DTVE	02 ID: 0.25 (mm)	Dibati	on Footow	1.0		
	<u>nixo</u>	$\underline{02.}$ 10. $\underline{0.25}$ (1111)	Diuli	on Factor.	1.0		
Soil Extract V	olume:	<u>25000</u> (uL)	Soil /	Aliquot Volui	me: <u>125</u>		(uL
			CONCENTRATIO	ON UNITS:			
CAS NO	•	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q	
107000		Agralata			070		_
107028	5	Acrolein	· · · · · · · · · · · · · · · · · · ·		8/0		
75650		tert-Butvl alcohol			870		
163404	4	Methyl-tert-Butyl	ether		87		
108203	}	Di-isopropyl ethe			87	Ŭ	
75718		Dichlorodifluorom	lethane		87	Ū	
74-87-3	}	Chloromethane		-	87	U	
75-01-4	l .	Vinyl Chloride			87	U	
74-83-9	}	Bromomethane			87	U	
	<u>}</u>	Chloroethane	tt		87	<u> </u>	_
75-69-4	•	1 1 Dichleresther	anane		87	<u> </u>	_
67-64-1	-				220	U	
75-15-0	)	Carbon Disulfide			87		
75-09-2	<u>,</u>	Methylene Chlorid	de		87	<u> </u>	
156-60-	-5	trans-1,2-Dichloro	pethene		87	U	
75-34-3	}	1,1-Dichloroethar	IÐ		87	U	1
	4	Vinyl Acetate			87	<u> </u>	
	<u> </u>	2-Butanone			87	U	_
156-59-	2	CIS-1,2-Dichloroel	nene		87	<u> </u>	
21.55.6	} !		200		87	<u> </u>	4
56-23-5		Carbon Tetrachlo	ride		<u> </u>	<u> </u>	-
71-43-2		Benzene			87	<u> </u>	
107-06-	2	1,2-Dichloroethan	0		87	<u> </u>	
79-01-6		Trichloroethene			87	Ū	1
78-87-5		1,2-Dichloropropa	ine		87	U	
		Bromodichlorome	thane		87	U	
110-75-	8	2-Chloroethyl viny	l ether		87	<u> </u>	
	)1-5	cis-1,3-Dichloropr	opene		87	<u> </u>	_
108-10-	<u> </u>	4-ivietnyi-2-Pentai	ione		87	<u> </u>	-
100-00-	5 12-6	trans-1 3-Dichloro	nronene	w	<u>ა</u> კ	J	-
79-00-5	/ <u>_</u> -0	1.1 2-Trichloroeth	ane		87	<u> </u>	-
127-18-	4	Tetrachloroethene	<u>, , , , , , , , , , , , , , , , , , , </u>		87	<u> </u>	-
591-78-	6	2-Hexanone			87	Ŭ	1
124-48-	1	Dibromochlorome	thane		87	Ū	1
108-90-	7	Chlorobenzene			87	U	]
100-41-4	4	Ethylbenzene			87	U	1

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			1A		FIELD ID:
	V	OLATI	E ORGANICS ANAL	YSIS DATA SHEET	750 50
Lab Name:	FMETL			NJDEP#: <u>13461</u>	/50-P6
Project:	05-6957	0	Case No.: 50134	Location: B.750 S	DG No.: 191,192
Matrix: (soil/w	/ater)	SOIL		Lab Sample ID:	5013401
Sample wt/vo	l:	11.9	(g/ml) <u>G</u>	Lab File ID:	VB018908.D
Level: (low/m	ned)	MED		Date Received:	3/7/2005
% Moisture: n	iot dec.	2.65		Date Analyzed:	3/11/2005
GC Column:	RTX50	2. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0
Soil Extract V	olume:	25000	(uL)	Soil Aliquot Volu	ne: <u>125</u> (uL)
			COI	NCENTRATION UNITS:	

CAS NO.	COMPOUND (ug/l	L or ug/Kg)	UG/KG		Q
1330-20-7	m+p-Xylenes			170	U
95-47-6	o-Xylene			87	Ū
100-42-5	Styrene			87	U
75-25-2	Bromoform			87	Ū
79-34-5	1,1,2,2-Tetrachloroethar	10		87	U
541-73-1	1,3-Dichlorobenzene	· · · · · · · · · · · · · · · · · · ·		87	Ū
106-46-7	1,4-Dichlorobenzene			31	J

31 87

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1,4-Dichlorobenzene

1,2-Dichlorobenzene

95-50-1

			1E						
		VOLAT	LE ORGANICS	ANALYSIS DA	TA SHE	ET	FIELD	ID:	
		TEN	TATIVELY IDEN	TIFIED COMF	OUNDS				
Lab Name:	FMETI			NJDEP	#: 1346	61		′50-P6	
Project:	05-695	70	Case No.: 501	<u>34                                    </u>	tion: B.7	750 \$	SDG No.:	191,1	92
Matrix: (soil/\	water)	SOIL	<u></u>		Lab Sam	nple ID:	5013401	]	
Sample wt/vo	ol:	11.9	(g/ml) <u>G</u>		Lab File	ID:	VB0189	08.D	
Level: (low/r	ned)	MED			Date Re	ceived:	3/7/2005	5	_
% Moisture:	not dec.	2.65			Date Ana	alyzed:	3/11/200	)5	
GC Column:	RTX5	502. ID:	<u>0.25</u> (mm)		Dilution I	-actor:	1.0		
Soil Extract \	/olume:	25000	(uL)	:	Soil Aliqu	uot Volu	ume: 125	·	(uL)
Number TICs	s found:	0		CONCENTR (ug/L or ug/k	(g) <u>(</u>	JNITS: JG/KG			
CAS NO.		COM	POUND NAME		RT	E	ST. CONC		Q

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			.1	А			FIELD	) ID:	
	VOLATILE ORGANICS ANALYSIS DATA SHEET							 750-P7	
Lab Name:	FMETL				NJDEP#: 1	3461			
Project:	05-695	70	Case No.: 50	0134	Location:	B.750 SE	G No.:	191,192	
Matrix: (soil/	water)	SOIL			- Lab S	Sample ID:	501340;	2	
Sample wt/vo	ol:	10.5	(g/ml) G	ì	Lab F	ile ID:	VB0189	09.D	
Level: (low/r	ned)	MED			- Date	- Received: 1	1/7/2001	5	
% Moistura:	not dec	3.01			Data	Analumadu (	2/11/00	<u>,                                    </u>	
		<u>0.01</u>	0.05	<b>、</b>	Dale	Analyzeu.	5/11/200		
GC Column:	HIX5	<u>.</u> 10:	<u>0.25</u> (mm	)	Dilutio	on Factor:	0.1		
Soil Extract V	/olume:	25000	(uL)		Soil A	liquot Volum	ie: <u>125</u>	5	(uL)
				~~					
		00		CON		N UNITS:			
CASINC	).	CC	MPOUND	(ug/i	L or ug/Kg)	UG/KG		Q	
107028	8	A	crolein				990	1 11	٦
10713	1	A	crvionitrile				990		-
75650		te	ert-Butyl alcoho	1			990		-
163404	44	Ň	lethyl-tert-Butyl	ether			<u> </u>		-
108203	3	D	i-isopropyl ethe	r			<u> </u>		-
75718		ם	ichlorodifluoror	nethane	<u> </u>				-
74-87-	3	- Ē	hloromethane	nothand					-
75-01-4	4	T V	invl Chloride			-	00		-
74-83-9	9	B	romomethane			·	00		-
75-00-	3		hloroethane						-
75-69-4	4	Ť	richlorofluorom	ethane			00		-
75-35-4	4	1	1-Dichloroethe	ne			99		-
67-64-*	 1		cetone				270		-
75-15-0	ງ		arbon Disulfide				2/0		-
75-09-2	2	M	ethylene Chlori	de			<u>99</u>		-
156-60	- -5	tr	ans-1 2-Dichlor	<u>oothone</u>	<u> </u>		<u> </u>		-
75-34-3	2		1-Dichlorootha				99		-
108-05	-4		nvl Acotato	10	· · · · · · · · · · · · · · · · · · ·		99		-
78-93-9	2	2	Butanono				- 99		-
156-59	-?		e-1.2-Dichlaroo	thong		· · · · · · · · · · · · · · · · · · ·	99		-
67-66-5	- <u>~</u> {		aloroform				99		-
71-55-6	, ;		1 1-Trichlorootk	1000			99	<u>⊢                                     </u>	-
56.23.5	; ;		arbon Totrachic	ide			<u>99</u>		-
71-49-2	, )		and reliacing	nue			99		-
107-06	.?	1	2-Dichloroothor	10			99	U	-
79-01-6	<u>-</u>		ichloroothono					<u> </u>	-
79-97-5	, :	- 1	Diabloroprop				99		
76-07-0	) 	,	2-Dichlorom	thene			99	U	ļ
110.75	r 0		Chloroothyl vin	unane			99		
10061 (	יט אוב	2-						<u> </u>	ļ
10001-0	.1 .1		Mothul 9 Dest-	opene			99		
100-10-	.u .a		weinyi-2-renta	none			99	<u> </u>	
100-00-	. <u>ບ</u> ນາ ເຊ	10	nuelle	nrona	~		100		
	12-0		1 0 Triable	propen	e		99		
19-00-5	A	- <u>t</u> ,		ane			99	·U	
127-18-	-4 C		trachioroethene	€			99		1
591-78-	b 4	2-1	Texanone	11	·		99	<u> </u>	
124-48-	1		<u>promochlorome</u>	thane			99	U	
108-90-	<u>/</u>		lorobenzene		· · · · · · · · · · · · · · · · · · ·		99	U	
100-41-	4	<u> </u>	nyibenzene			61	J		

FORM I VOA

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			1A		FIELD ID:
	۷	/OLATII	E ORGANICS ANAL	YSIS DATA SHEET	750 07
Lab Name:	FMETL			NJDEP#: <u>13461</u>	750-P7
Project:	05-6957	0	Case No.: 50134	Location: B.750 S	DG No.: 191,192
Matrix: (soil/w	vater)	SOIL		Lab Sample ID:	5013402
Sample wt/vc	ol:	10.5	(g/ml) <u>G</u>	Lab File ID:	VB018909.D
Level: (low/m	ned)	MED		Date Received:	3/7/2005
% Moisture: r	not dec.	3.01	<u>.</u>	Date Analyzed:	3/11/2005
GC Column:	RTX50	02. ID:	0.25 (mm)	Dilution Factor:	1.0
Soil Extract V	/olume: <u>;</u>	25000	(uL)	Soil Aliquot Volu	ime: <u>125</u> (uL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q
1330-20-7	m+p-Xylenes			270	
95-47-6	o-Xylene			130	
100-42-5	Styrene			99	U
75-25-2	Bromoform			99	U
79-34-5	1,1,2,2-Tetrachlor		99	U	
541-73-1	1,3-Dichlorobenze	ene		99	U
106-46-7	1,4-Dichlorobenze	ene		40	J
95-50-1	1,2-Dichlorobenze	ne		99	U

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### 1E

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

750-P7 Lab Name: FMETL NJDEP#: 13461 Location: B.750 Project: 05-69570 Case No.: 50134 SDG No.: 191,192 Matrix: (soil/water) SOIL Lab Sample ID: 5013402 Sample wt/vol: 10.5 (g/ml) G Lab File ID: VB018909.D Level: (low/med) MED Date Received: 3/7/2005 % Moisture: not dec. 3.01 Date Analyzed: 3/11/2005 GC Column: RTX502. ID: 0.25 (mm)Dilution Factor: 1.0 Soil Extract Volume: 25000 (uL)Soil Aliquot Volume: 125 (uL)

### CONCENTRATION UNITS:

FIELD ID:

Number TICs found:

2

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

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000611-14-3	Benzene, 1-ethyl-2-methyl-	28.40	300	JN
2. 000526-73-8	Benzene, 1,2,3-trimethyl-	29.36	420	JN

### FORM I VOA-TIC

		1A		FIELD	ID:	
	-	SHEET	7	50-28		
Lab Name:	FMETL	NJDEP#:	13461			
Project:	05-695	O Case No.: 50134 Location	n: <b>B.750</b> S	SDG No.:	191,192	2
Matrix: (soil/	water)	SOIL La	b Sample ID:	5013403		
Sample wt/vo	ol:	11.9 (g/ml) G Lat	b File ID:	VB01891	0.D	
Lovob (low/r	mod)	MED Do	to Doppined:	2/7/0005		
	neu)	MED Da	le neceiveu.	3/7/2005		
% Moisture:	not dec.	<u>2.24</u> Da	te Analyzed:	3/11/200	5	
GC Column:	RTX5	02. ID: 0.25 (mm) Dilu	ution Factor:	1.0		
Soil Extract \	Volume:	<u>25000 (uL) Soi</u>	il Aliquot Volu	ume: <u>125</u>		(uL)
		CONCENTRAT	ION UNITS:			
CAS NC	).	COMPOUND (ug/L or ug/Kg)	UG/KG		Q	
10702	8	Acrolein		860	11	
10713	1	Acrylonitrile		000		_
75650	• ·	tert-Butyl alcohol		860		
16340	44	Methyl-tert-Butyl ether		86		
10820	3	Di-isopropyl ether		86		
75718		Dichlorodifluoromethane		86	Ū	
74-87-	.3	Chloromethane	·····	86	U	_
75-01-	4	Vinyl Chloride		86	Ŭ	
74-83-	.9	Bromomethane		86	Ŭ	
75-00-	3	Chloroethane		86	Ū	
75-69-	4	Trichlorofluoromethane		86	U	
75-35-	4	1,1-Dichloroethene		86	U	
67-64-	1	Acetone	•	220		
75-15-	0	Carbon Disulfide		86	U	
75-09-	2	Methylene Chloride		86	U	
	)-5	trans-1,2-Dichloroethene		86	U	
	3	1,1-Dichloroethane		86	U	
108-05	5-4	Vinyl Acetate		86	U	
78-93-	3	2-Butanone		86	U	_
	)-2	cis-1,2-Dichloroethene		86	U	
_ 67-66-	3	Chloroform		86	<u> </u>	
	<u>6</u>	1,1,1-I richloroethane		86	<u> </u>	_
56-23-0	<u>5</u>	Carbon Tetrachloride		86	<u> </u>	
/1-43-2	2	Benzene		29	<u>J</u>	_
107-06	<u>i-2</u>	1,2-Dichloroethane		86	<u> </u>	_
79-01-0	<u> </u>			86	<u> </u>	_
78-87-3	<u>5</u>	I,2-Dichloropropane		86	<u> </u>	
110.75	4 . o	Diomodichioromethane	<u>.</u>	86	<u> </u>	_
10061	01 5			86	<u> </u>	
10001-	01-0	4 Motbul 2 Pontonono		00	<u> </u>	_
100-10	<u>- 1</u> L-9			120	U	
100-00	- <u>-</u>	trans-1 3-Dichloronronono		100	11	_
70_00.4	5	1 1 2-Trichloroethane		20	<u> </u>	
107.19		Totrachloroothono		00 92	<u> </u>	-
<u>    127°10</u> 501_79	-+			00	<u> </u>	
12/1-/19		Dibromochloromethane		88	<u> </u>	-
108-90	-7	Chlorohenzene		86		-
100-41	-4	Ethylbenzene		28		
			L	<u> </u>	<u> </u>	

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		1A					FIELD ID:			
	VOL	ATILE O	RGANICS A	ANALY	SIS DATA S	HEET		750-	—— D9	
Lab Name:	FMETL				NJDEP#: 1	3461		750-	F0	
Project:	05-69570	Cas	e No.: <u>501</u> ;	34	Location:	B.750 S	SDG No	.: 191	,192	<u>}</u>
Matrix: (soil/v	vater) <u>S</u> (	JIL			Lab S	Sample ID:	50134	03		
Sample wt/vo	ol: <u>11</u>	.9	(g/ml) G		Lab F	File ID:	VB018	3910.D	)	
Level: (low/n	ned) <u>M</u>	ED			Date	Received:	3/7/20	05		
% Moisture: r	not dec. <u>2.</u>	24			Date	Analyzed:	3/11/2	005		
GC Column:	RTX502.	ID: 0.2	5(mm)		Diluti	on Factor:	1.0			
Soil Extract V	/olume: <u>25(</u>	000	(uL)		Soil A	liquot Volu	ıme: <u>1</u>	25		(uL)
				CON	CENTRATIC	N UNITS:				
CAS NO	).	COMPO	UND	(ug/L	or ug/Kg)	UG/KG			Q	
1330-2	0-7	m+p-X	ylenes				95		J	

46

86

86

86

86

34

86

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J

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95-47-6

100-42-5

75-25-2

79-34-5

541-73-1

106-46-7

95-50-1

o-Xylene

Bromoform.

1,1,2,2-Tetrachloroethane

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,2-Dichlorobenzene

Styrene

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:

					CONDS			
Lab Name:	FMETL			NJDEP	#: 13461		750-1	P8
Project:	05-6957	70	Case No.: 50134	Loca	tion: B.750	) SD	G No.: 191	,192
Matrix: (soil/v	vater)	SOIL			Lab Sample	e ID: {	5013403	······
Sample wt/vo	ol:	11.9	(g/ml) G	<u></u>	Lab File ID:	N	VB018910.D	
Level: (low/n	ned)	MED			Date Receiv	ved: 3	3/7/2005	
% Moisture: r	not dec.	2.24			Date Analyz	zed: 3	3/11/2005	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	ļ	Dilution Fac	tor: 1	1.0	
Soil Extract V	olume:	25000	(uL)	:	Soil Aliquot	- Volum	ie: <u>125</u>	(uL)
			CON			ITS:		
Number TICs	found:	0		- or ug/N	y) <u>UG</u>			,
CAS NO.		COMF			RT	EST	CONC.	Q

			1A				FIELD	ID:	
	VOLATILE ORGANICS ANALYSIS D/					HEET	Tri	p Blank	
Lab Name:	FMETL			N.	JDEP#: 1	3461		p =	
Project:	05-69570	Case No.	: 5013	4	Location:	B.750 S	- DG No.:	191.192	
Matrix: (soil/v	water) S				Lab S	Sample ID:	5013404		_
Sample wt/w	^ _ ∩!' 1		n G		l ah i	-ilo ID•	VP01901		
		<u></u> (g/m	", <u>"</u>	<u>-</u>			VD01091	U.U	
Levei: (low/n	nea) <u>I</u> V	<u>AED</u>			Date	Received:	3/7/2005	·	
% Moisture: r	not dec. 0	)			Date	Analyzed:	3/11/200	5	
GC Column:	RTX502.	. ID: 0.25 (	mm)		Diluti	on Factor:	1.0		
Soil Extract V	/olume: 25	 5000 (ul.)			Soil 4	Minuot Volu			ыA
		<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			00117	inquor voiu	16. 120	(	u)
				CONCE	NTRATIC	N UNITS:			
CAS NO	>	COMPOUND			ua/Ka)			0	
one ne				(ag/r o	ug/Ng/	Jana		Ū.	
107028	8	Acrolein					1000	U	]
10713	1	Acrylonitrile					1000	Ū	1
75650		tert-Butyl alc	ohol				1000	U	1
163404	44	Methyl-tert-E	Butyl etl	ner			100	U	
108203	3	Di-isopropyl	ether				100	U	
75718		Dichlorodiflu	oromet	hane			100	U	
74-87-3	3	Chlorometha	ine				100	U	
75-01-4	4	Vinyl Chlorid	Vinyl Chloride					U	l
74-83-9	<u>9 ·</u>	Bromometha	Bromomethane					U	Ì
	3	Chloroethane					100	U	
	4	Trichlorofluoromethane					100	U	
75-35-4	4	1,1-Dichloro	ethene	·			100	<u> </u>	
<u> </u>	1	Acetone	Acetone						
75-15-0	J	Carbon Disu	ITIQE Interviete	renet.			100	U	
156.60	<u> </u>		hlorool	hana			100	<u> </u>	
75.34-9	-0 2	1 1 Dichlorov	athono	nene			100	U	
109-05	<u>,</u>	Vinvi Acotate	anane				100	0	
78-93-9	3	2-Butanone	,		······		100		
156-59	, -2	cis-1 2-Dichl	proethe				100		
67-66-3	3	Chloroform	01001110				100		
71-55-6	3	1.1.1-Trichlo	roethar	ne –			100		
56-23-5	5	Carbon Tetra	chlorid	е			100	<del>- ŭ -</del>	
71-43-2	2	Benzene					100	Ū	
107-06	-2	1,2-Dichloroe	thane				100	U	
79-01-6	3	Trichloroethe	ne				100	Ū	
78-87-5	)	1,2-Dichlorop	propane	э			100	U	
75-27-4	ł	Bromodichlo	Bromodichloromethane				100	U	
	-8 -	2-Chloroethy	l vinyl e	ther			100	U	
	<u>01-5</u>	cis-1,3-Dichle	proprop	ene			100	U	
108-10-	<u>.1</u>	4-Methyl-2-P	entano	ne		_	100	U	
108-88-	<u>·3</u>	Toluene					100	U	
	<u>J2-6</u>	trans-1,3-Dic	hloropr	opene			100	U	
79-00-5	1	<u>1,1,2-Trichlor</u>	oethan	e			100	<u> </u>	
127-18-	4	I etrachloroel	nene				100	U	
591-78-	<u>b</u>	2-Hexanone					100		
124-48-	7	Chloroborno	ometna	ane			100	<u> </u>	
100-90-	<u>1</u>		IU		arrent to the Albert Annual A		100		
100-41-	4			100	U				

		1		FIELD ID:					
	VOL	ATILE ORGANICS	S ANALYSIS DATA	SHEET	Tri	n Plank			
Lab Name:	FMETL		NJDEP#:	13461		Прылк			
Project:	05-69570	Case No.: 50	0134 Location	n: <u>B.750</u> S	DG No.:	191,192	2		
Matrix: (soil/w	vater) <u>SC</u>	DIL	Lat	Sample ID;	5013404				
Sample wt/vo	ol: <u>10</u>	.0(g/ml) <u>G</u>	a Lat	File ID;	VB0189	11.D			
Level: (low/n	ned) <u>ME</u>	ED	Dat	e Received:	3/7/2005	i			
% Moisture:	not dec. <u>0</u>		Dat	e Analyzed:	3/11/200	5			
GC Column:	RTX502.	ID: <u>0.25</u> (mm	) Dilu	ution Factor:	1.0				
Soil Extract V	/olume: <u>250</u>	000 (uL)	Soi	l Aliquot Volu	me: <u>125</u>		(uL)		
			CONCENTRAT	ION UNITS:					
CAS NC	).	COMPOUND	(ug/L or ug/Kg)	UG/KG		Q			
1330-2	20-7	m+p-Xylenes			200	U	]		

95-47-6

75-25-2

79-34-5

541-73-1

106-46-7

95-50-1

100-42-5

o-Xylene

Styrene

Bromoform

1,1,2,2-Tetrachloroethane

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,2-Dichlorobenzene

100

100

100

100

100

38

100

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### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:

					UUND5			
Lab Name:	FMETL			NJDEP	#: 13461		Trip Bl	ank
Project:	05-6957	'0	Case No.: 50134	Loca	tion: <u>B.750</u>	SE	OG No.: 191	,192
Matrix: (soil/v	vater)	SOIL		1	Lab Sample	e ID:	5013404	
Sample wt/vc	ol:	10.0	(g/ml) <u>G</u>		Lab File ID:		VB018911.D	·
Level: (low/n	ned)	MED		I	Date Recei	ved:	3/7/2005	· ·
% Moisture: r	not dec.	0	<u> </u>	·	Date Analyz	zed:	3/11/2005	
GC Column:	RTX50	<u>)2.</u> ID:	0.25 (mm)	I	Dilution Fac	tor:	1.0	-
Soil Extract V	olume:	25000	(uL)	ę	Soil Aliquot	Volun	ne: <u>125</u>	(uL)
			CC	NCENTR	ATION UN	ITS:		
Number TICs	found:	0	(ug	/L or ug/K	ig) <u>UG</u>	/KG	<del></del>	
CAS NO.		COM	OUND NAME		RT	EST	L. CONC.	Q

EST. CONC.

Q

# TPHC

.

.

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

Client :	U.S. Army	Project # :	50134
	DPW. SELFM-PW-EV	Location :	Bldg.750
	Bldg. 173	UST Reg. # :	
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	Date Received :	07-Mar-05
Matrix :	Soil	Date Extracted :	10-Mar-05
Inst. ID. :	GC TPHC INST. #1	Extraction Method :	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	Analysis Complete :	11-Mar-05
Injection Volume :	1uL	Analyst :	B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
5013401	750-P6	1.00	15.00	97.35	94	342	ND
5013402	750-P7	1.00	15.09	96.99	94	342	ND
5013403	750-P8	1.00	15.00	97.76	94	341	ND
METHOD BLANK	MB-031005-01	1.00	15.00	100.00	92	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.	<u> </u>
4.	Document paginated and legible.	$\checkmark$
5.	Chain of Custody submitted.	~
6.	Samples submitted to lab within 48 hours of sample collection.	<u> </u>
7.	Methodology Summary submitted.	$\checkmark$
8.	Laboratory Chronicle and Holding Time Check submitted.	<u> </u>
9.	Results submitted on a dry weight basis.	<u>~</u>
10.	Method Detection Limits submitted.	~
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	$\checkmark$
	Laboratory Manager or Environmental Consultant's Signature	$\rightarrow$

Laboratory Certification # 13461

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

# Laboratory Authentication Statement

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

Daniel K. Wright Laboratory Manager

# FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

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



# ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: Bldg. 750

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
750-P9-NE Dispenser Gasoline	5015301	Soil	14-Mar-05 13:30	03/14/05
750-P10-NE Dispenser Diesel	5015302	Soil	14-Mar-05 14:00	03/14/05
750-P11-SW Dispenser Gasoline	5015303	Soil	14-Mar-05 14:20	03/14/05
750-P12-SW Dispenser Diesel	5015304	Soil	14-Mar-05 15:00	03/14/05
Trip Blank	5015305	Methanol	14-Mar-05	03/14/05

# Bldg. 750/Pump Island Dispensers

## ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB VOA+15, TPHC, % SOLIDS

:3-05 Daniel Wright/Date

Laboratory Director

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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# CHAIN OF CUSTODY

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Fort Monmouth Environmental Testing Laboratory

Strates and strates

Bldg. 173, SELFM-PW-EV, Fort Mommouth, 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	Project No: 05-6957	0	Analys	is Parameters		Townsbeam and the second s	
Phone: $\# \times 20986$	Location: B. 750				(		
()DERA ()OMA (MOther:	PUMP ISLAND DIS!	ב האשצעיים	بر پر 12_پر 1	511	IJ		
Samplers Name / Company: FRANK AC	ORSY ITVS Sa	mple #	14 ( 14 ( 14 (	705	#1 ДЦ		
LIMS/Work Order # Sample Location	Date Time T	ype bottles	20 71 71	ø1.	јол 870	Remarks / Preservation Method	
561/53 01 750-PG-NE 018Pervia	13-14-05 -34385 SI	2 710	×		3-3.5 4721	701	
12 750 - PID - NE INPENSE	14-00	3	X X X		7-35-6722	1 1	
02,750 FII - 5W DISPENSEN	1420	3	~ 		3-2.5 4.23		
NU 750 P12 - 240 Pick - 240 Pick - 240 Pick - 2016 Pick - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 - 2016 -	1500	6	X X X		3-25 12.2.9		
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Report Type: UFull. (XReduced, ( )Standard, UScree	en / non-certified, ( )EDD		Remarks V/0 +15-	CONTRUGENT	1 = 1	-1H >1000 /PH	
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Page ____ of ___



#### U.S. ARMY - FT. MONMOUTH, NJ

### BUILDING 750 -USTs #81533-191 & 81533-192 PIPING, DISPENSER 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)

750P1 PIPING PLUS 10 FT 750P2 PIPING PLUS 25 FT 750P3 PIPING PLUS 40 FT 750P5 PIPING PLUS 55 FT 750P6 PIPING PLUS 70 FT 750P7 PIPING AT NE ISLAND 750P9 NE DISPEN. GASOLINE 750P10 NE DISPEN. DIESEL 750P11 SW DISPEN. DIESEL 537866.6 537879.28 537891.992 537905.926 537911.548 537918.083 537943.46 537930.474 537920.615 537907.343 X COORDINATE (EASTING) 617884.918 617877.845 617871.095 617863.942 617845.715 617865.355 617868.054 617863.755 617825.932 617821.917

#### REFERENCE POINT

POSITION/DESCRIPTION BLDG753 WEST CORNER Y COORDINATE (NORTHING) 537883.749

X COORDINATE (EASTING)

617911.846

# 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: 50153

Site: Bldg. 750 Pump Island Dispensers

	Date	Hold Time
Date Sampled	03/14/05	NA
Receipt/Refrigeration	03/14/05	NA
Extraction		
1. TPHC	03/15/05	14 days
Analyses		
1. VOA	03/18/05	14 days
2. TPHC	03/16/05	40 days

# CONFORMANCE/ NON-CONFORMANCE SUMMARY

100008
		· · ·	Indicate Yes, No, N/A
1.	Chromatograms labeled/ (Field samples and r	Compounds identified nethod blanks)	<u> 465</u>
2.	Retention times for chron	natograms provided	1125
3.	GC/MS Tune Specificati	ons	,
	a. BI b. DI	B Meet Criteria TPP Meet Criteria	<u>405</u>
4.	GC/MS Tuning Frequence series and 12 hours for 80	ey – Performed every 24 hours for 600 000 series	yes
5.	GC/MS Calibration – Ini analysis and continuing c sample analysis for 600 s	tial Calibration performed before sample alibration performed within 24 hours of eries and 12 hours for 8000 series	yes
6.	GC/MS Calibration requi	rements	l.
	a. Ca b. Sy	libration Check Compounds Meet Criteria stem Performance Check Compounds Meet Criteria	yes yes
7.	Blank Contamination – If	yes, List compounds and concentrations in each blank:	NO
	a V(	A Fraction	
	b. B/	N Fraction I b4	
	c. Ac	id Fraction NA	
8.	Surrogate Recoveries Me	et Criteria	yes_
	If not met, list those outside the acceptabl	compounds and their recoveries, which fall e range:	ţ
	a VC	A Fraction	
	b. B/I	V Fraction A N4	
	c. Ac	d Fraction NA	
	If not met, were the c as "estimated"?	alculations checked and the results qualified	
.9.	Matrix Spike/Matrix Spik (If not met, list those com outside the acceptable ran	e Duplicate Recoveries Meet Criteria pounds and their recoveries, which fall ge)	yes_
	a VC	A Fraction	
	a. vC h R/ħ	V Fraction	
	<b>D</b> , D/1		

NA

Acid Fraction

c.

### GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

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

		Indicate Yes, No,
<ol> <li>Internal Standa (If not met, lis</li> </ol>	rd Area/Retention Time Shift Meet Criteria t those compounds, which fall outside the acceptable range)	yes
a.	VOA Fraction	
b.	B/N Fraction NA	
c.	Acid Fraction	
11. Extraction Hol	lding Time Met	_IJA
If not met, list	the number of days exceeded for each sample:	
12. Analysis Holdin	ng Time Met	yes_
If not met, list t	he number of days exceeded for each sample:	·
Additional Commen	ts:	
Laboratory Manager	: Date: 5-3-05	

te lo, N/A .

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### TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

		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	-ye>
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: 5-3-05	

Indicate

# 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:	
	V	OLATILE ORGANICS ANA	LYSIS DATA SI	HEET	MB 18M	lar05
Lab Name: A	FMETL		NJDEP#: _1:	3461		laioo
Project: (	05-6957	0 Case No.: 50153	Location:	B.750 SD	G No.: PID	
Matrix: (soil/wa	ater)	SOIL	 Lab S	amnlo ID: N	/R 18Mar05	
	1017					I
Sample wt/vol:	r.	<u>10.0</u> (g/ml) <u>G</u>	Lab F	ile ID: V	'B018982.D	
Level: (low/me	əd)	MED	Date I	Received: 3	/14/2005	
% Moisture: no	ot dec.	0	Date	Analvzed: 3	/18/2005	
GC Column:	BTX50	2 ID: 0.25 (mm)	Dilutic	n Factor: 1	0	
	1117.00		Dilutio			
Soil Extract Vo	lume: 2	25000 (uL)	Soil A	liquot Volum	e: <u>125</u>	(uL)
		CC	NCENTRATIO	N UNITS:		
CAS NO.		COMPOUND (uç	J/L or ug/Kg)	UG/KG		Q
107000		Acroloin	·		1000	* 1
107028					1000	
75650		tert-Butyl atcohol			1000	
1634044	1	Methyl-tert-Butyl ether			100	
108203	•	Di-isopropyl ether			100	$\frac{\partial}{\partial}$
75718		Dichlorodifluoromethar	10		100	<del>U</del>
74-87-3		Chloromethane			100	<del>U</del>
75-01-4		Vinyl Chloride			100	<del>U</del>
74-83-9		Bromomethane			100	Ŭ
75-00-3		Chloroethane			100	Ŭ
75-69-4		Trichlorofluoromethane	Э		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	5	trans-1,2-Dichloroether	10		100	U
		1,1-Dichloroethane			100	U
108-05-4	<u>ا</u>	Vinyl Acetate			100	<u>U</u>
<u></u>		2-Butanone			100	U
100-09-2	<u>-</u>	Cls-1,2-Dichloroethene			100	U
71 55 6			· ·		100	
<u> </u>		Carbon Totrachlorida			100	
71-43-2		Benzene			100	
107-06-2	<b>,</b>	1.2-Dichloroethane			100	
79-01-6	<u> </u>	Trichloroethene			100	
78-87-5		1 2-Dichloropropane			100	
75-27-4		Bromodichloromethane	 }		100	
110-75-8	}	2-Chloroethyl vinyl ethe			100 1	<u> </u>
10061-01	1-5	cis-1.3-Dichloropropene	3		100 1	
108-10-1		4-Methyl-2-Pentanone			100 1	<u> </u>
108-88-3	;	Toluene			100 1	
10061-02	2-6	trans-1,3-Dichloroprope	ene		100 (	J
79-00-5		1,1,2-Trichloroethane			100 (	J
127-18-4	·	Tetrachloroethene			100 1	J · J
591-78-6		2-Hexanone			100 (	J
124-48-1		Dibromochloromethane	-		100 l	J
108-90-7		Chlorobenzene			100 l	J
100-41-4		Ethylbenzene			100   l	J ]

FORM I VOA

			1A				FIELD	ID:	
	VOL	ATILE ORGANI	CS ANAL	YSIS DATA S	SHEET		мв	18Mar0	5
Lab Name:	1A       FIELD ID:         VOLATILE ORGANICS ANALYSIS DATA SHEET       MB 18Mar05         me:       FMETL       NJDEP#: 13461         05-69570       Case No.: 50153       Location: B.750       SDG No.: PID         (soil/water)       SOIL       Lab Sample ID:       MB 18Mar05         wt/vol:       10.0       (g/ml) G       Lab File ID:       VB018982.D         (low/med)       MED       Date Received:       3/14/2005         ture: not dec.       0       Date Analyzed:       3/18/2005         umn:       RTX502. ID:       0.25       (mm)       Dilution Factor:       1.0         ract Volume:       25000       (uL)       Soil Aliquot Volume:       125       (uL)         CONCENTRATION UNITS:         AS NO.       COMPOUND       (ug/L or ug/Kg)       UG/KG       Q         300-20-7         mtp-Xylenes       200       U         5-47-6       o-Xylene       100       U         00-42-5       Styrene       100       U								
Project:	05-69570	Case No.:	50153	Location:	B.750	SDG	3 No.:	PID	
Matrix: (soil/w	water) <u>SC</u>	DIL		Lab	Sample II	D: <u>M</u>	B 18M	ar05	
Sample wt/vo	ol: <u>10</u>	.0(g/ml)	G	Lab	File ID:	V	B01898	32.D	
Level: (low/n	ned) <u>M</u> E	ED		Date	Receive	d: 3/	14/200	5	
% Moisture: r	not dec. 0			Date	Analyzed	d: 3/	18/200	5	
GC Column:	RTX502.	ID: <u>0.25</u> (m	ım)	Dilut	ion Facto	r: 1.	0		
Soil Extract V	/olume: <u>250</u>	00 (uL)		Soil	Aliquot Vo	olume	e: <u>125</u>		(uL)
			со	NCENTRATI		S:			
CAS NO	).	COMPOUND	(ug,	/L or ug/Kg)	UG/K	G		Q	
1330-2	20-7	m+p-Xylenes			[		200	Ü	
95-47-	6	o-Xylene		-			100	U	
100-42	2-5	Styrene					100	U	

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Bromoform

*

1,1,2,2-Tetrachloroethane

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,2-Dichlorobenzene

75-25-2

79-34-5

541-73-1

106-46-7

95-50-1

100

100

100

100

100

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			1E						
	N	<b>VOLATIL</b>	.E ORGANICS AN/	ALYSIS DA	TA SHEET		FIELD	ID:	
		TENT.	ATIVELY IDENTIF	IED COMP	OUNDS				2.11
Lab Name:	FMETL				#: <u>13461</u>		MB	18Ma	r05
Project:	05-6957	<u>′0</u>	Case No.: 50153	Locat	ion: <u>B.750</u>	S	DG No.:	PID	<u>.</u>
Matrix: (soil/v	water)	SOIL		l	_ab Sample	) ID:	MB 18M	ar05	
Sample wt/vo	ol:	10.0	(g/ml) <u>G</u>	[	_ab File ID:		VB01898	32.D	
Level: (low/n	ned)	MED	<del></del>	I	Date Receiv	/ed:	3/14/200	15	
% Moisture:	not dec.	0		ſ	Date Analyz	:ed:	3/18/200	15	
GC Column:	RTX50	)2. ID:	0.25 (mm)	[	<b>Dilution Fac</b>	tor:	1.0		
Soil Extract V	/olume:	25000	(uL)	5	Soil Aliquot	Volu	me: <u>125</u>	F	(uL)
			С	ONCENTR	ATION UNI	TS:			
Number TICs	s found:	0	(u	ıg/L or ug/K	g) <u>UG</u> /	'KG			
CAS NO.		COMP	OUND NAME		RT	ES	T. CONC	).	Q

		1A	•		FIELD IC	):
	VOL	ATILE ORGANICS	ANALYSIS DATA S	SHEET	75	0-P9
Lab Name: F	METL		NJDEP#:	13461		
Project: 0	5-69570	Case No.: 501	53 Location:	B.750 SD	G No.: P	١D
Matrix: (soil/wa	ter) S(	 วแ	lah.	Sample ID: 5	015301	
		<u> </u>	Lub			
Sample wt/vol:	<u>11</u>	<u>.9</u> (g/mi) <u>G</u>	Lab		B018990	I.D
Level: (low/me	d) <u>M</u>	ED	Date	Received: 3	/14/2005	
% Moisture: not	t dec. 12	1.7	Date	Analyzed: 3	/18/2005	
GC Column:	BTX502	ID: 0.25 (mm)	Dibut	ion Factor: 1	0	
			Ditta		.0	
Soil Extract Vol	ume: $250$	<u>100</u> (uL)	Soil	Aliquot Volum	ə: <u>125</u>	(u
			00100120420			
			CONCENTRATIO	ON UNITS:		
CAS NO.		COMPOUND	(ug/L or ug/Kg)	UG/KG		Q
107022		Acroloin			070	
107020		Acrylonitrile			970	
75650		tert-Butyl alcohol	·····		970	
1634044		Methyl-tert-Butyl e	other		07	
108203		Di-isopropyl ether			07	
75718		Dichlorodifluorom	ethane		97	<u> </u>
74-87-3		Chloromethane	omano		97	<u> </u>
75-01-4		Vinvl Chloride			07	
74-83-9		Bromomethane			97	
75-00-3		Chloroethane			97	<u> </u>
75-69-4		Trichlorofluoromet	thane		97	
75-35-4		1,1-Dichloroethen	e		97	Ŭ
67-64-1		Acetone			380	
75-15-0		Carbon Disulfide			97	U
75-09-2		Methylene Chlorid	e		97	Ū
156-60-5		trans-1,2-Dichloro	ethene		97	U
75-34-3		1,1-Dichloroethan	e		97	U
108-05-4		Vinyl Acetate			97	U
78-93-3		2-Butanone			97	U
156-59-2		cis-1,2-Dichloroeth	nene		97	U
67-66-3		Chloroform			97	U
71-55-6		1,1,1-Trichloroetha	ane		97	U
56-23-5		Carbon Tetrachlor	ide		97	U
71-43-2		Benzene			97	U
107-06-2		1,2-Dichloroethane	9		_97	<u> </u>
79-01-6		Trichloroethene			97	U
		1,2-Dichloropropar	<u>ne</u>	· · · · · · · · · · · · · · · · · · ·	97	<u> </u>
<u> </u>		Bromodichloromet	hane		97	<u> </u>
10001.01		2-Chioroethyl Vinyl	ether		97	<u> </u>
	-5	CIS-1,3-DICITIOTOPIC	ppene		97	
100-10-1		4-memyi-z-reman	UIIB		9/	
100-00-3	6	trans_1.2 Diablarar	ropono		9/	U
70_00 5	-0	1 1 2 Trichloroothe			9/	
107-10-0					97	
501-78 6		2-Hovenono			9/	
12/1-/18-1		Dibromochloromot	hano		07	
108-00-7		Chlorohenzene			07	
100-41-4		Ethylhenzene			97	
100 11 7					<u></u>	<u> </u>

FORM I VOA

			1A		FIELD ID:	
	V	OLATI	LE ORGANICS ANAL	YSIS DATA SHEET	750 00	
Lab Name:	FMETL			NJDEP#: <u>13461</u>		
Project:	05-6957	0	Case No.: 50153	Location: <u>B.750</u> S	DG No.: PID	
Matrix: (soil/w	vater)	SOIL		Lab Sample ID:	5015301	
Sample wt/vo	ol:	11.9	(g/ml) <u>G</u>	Lab File ID:	VB018990.D	
Level: (low/m	ned)	MED		Date Received:	3/14/2005	
% Moisture: r	not dec.	12.7		Date Analyzed:	3/18/2005	
GC Column:	RTX50	2. ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	olume: <u>/</u>	25000	(uL)	Soil Aliquot Volu	ime: <u>125</u>	(uL)

### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
1330-20-7	m+p-Xylenes		190	U
95-47-6	o-Xylene		97	U
100-42-5	Styrene		97	U
75-25-2	Bromoform		97	U
79-34-5	1,1,2,2-Tetrachlo	roethane	97	U
541-73-1	1,3-Dichlorobenz	ene	. 97	U
_106-46-7	1,4-Dichlorobenz	ene	97	U
95-50-1	1,2-Dichlorobenz	ene	97	U

		VOLATI	LE ORGANICS	ANALYSIS DA	TA SHEET	-	FIELD ID:	·····
		IENI	ATIVELY IDEN	TIFIED COMP	OUNDS		750-1	20
Lab Name:	FMETL			NJDEP	#: <u>13461</u>		/ 304	
Project:	05-695	70	Case No.: 501	53 Loca	tion: B.750	)SI	DG No.: PID	1
Matrix: (soil/w	vater)	SOIL			Lab Sample	e ID:	5015301	
Sample wt/vo	ol:	11.9	(g/ml) <u>G</u>		Lab File ID:	;	VB018990.D	I
Level: (low/m	ned)	MED		i	Date Recei	ved:	3/14/2005	
% Moisture: r	not dec.	12.7		I	Date Analy	zed:	3/18/2005	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm)	ļ	Dilution Fac	ctor:	1.0	
Soil Extract V	olume:	25000	(uL)	:	Soil Aliquot	Volur	ne: <u>125</u>	(uL)
				CONCENTR	ATION UN	ITS:		
Number TICs	found:	0		(ug/L or ug/K	g) UG	/KG		
CAS NO.		COMF			RT	ES	T. CONC.	Q

RT

EST. CONC.

Q

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		1A	FIELD	ID:	
	١	OLATILE ORGANICS ANALYSIS DATA SHEET	75	0-P11	
Lab Name:	FMETL	NJDEP#: 13461			
Project:	05-6957	'0 Case No.: 50153 Location: B.750 SD	G No.:	PID	
Matrix: (soil/	water)	SOIL I ab Sample ID: 1	- 5015303		
Somolo ut/w	ol:		10000		
Sample w/vo	71		<u>AR01888</u>	1.D	
Level: (low/r	ned)	MED Date Received:	3/14/200	5	
% Moisture:	not dec.	13.25 Date Analyzed: 3	3/18/200	5	
GC Column:	RTX50	D2. ID: 0.25 (mm) Dilution Factor:	1.0		
Soil Extract \	/olume:	25000 (ul.) Soil Aliquot Volum	<u>125</u>		/of Y
oon Enddor 1	· oranio.		10, 120	····	(uL)
CAS NO	۱			0	
		COMPOSINE (dg/L of dg/Kg) OG/KG	<del></del>	Q	
10702	8	Acrolein	1000	U	
10713	1	Acrylonitrile	1000	U	
75650		tert-Butyl alcohol	1000	U	
	44	Methyl-tert-Butyl ether	100	U	7
10820	3	Di-isopropyl ether	100	U	
75718		Dichlorodifluoromethane	100	U	
	3	Chloromethane	100	υ	
75-01-	4	Vinyl Chloride	100	U	
74-83-	9	Bromomethane	100	U	
	3	Chloroethane	100	U	
75-69-	4	Trichlorofluoromethane	100	U	
75-35-	4	1,1-Dichloroethene	100	U	_
67-64-	1	Acetone	380		_
75-15-	0	Carbon Disulfide	100	<u> </u>	_
	2	Methylene Chloride	100	<u> </u>	_
156-60	1-5	trans-1,2-Dichloroethene	100	<u> </u>	4
	3		100	<u> </u>	
108-05	<u>-4</u>		100	<u> </u>	4
150 50	3	2-Butanone	100	<u> </u>	_
 	<u>-2</u>		100	<u>U</u>	_
71 55 (	<u> </u>	1 1 1 Trichlereethene	100	<u> </u>	-
<u> </u>	<u>5</u> 5	Carban Totrachlarida	100	<u> </u>	-
71_43_4	<u>,</u>	Bonzono	100	<u> </u>	_
107.06	<u>د.</u> د.9	1 2-Dichloroothano	100		-
79-01-6	6	Trichloroethene	100	<u> </u>	-
78-87-	5 5	1 2-Dichloronronane	100	<u> </u>	-
75-27-0	4	Bromodichloromethane	100	<u> </u>	-1
110-75	-8	2-Chloroethyl vinyl ether	100	<u> </u>	-
10061-	01-5	cis-1.3-Dichloropropene	100	<u> </u>	
108-10	-1	4-Methyl-2-Pentanone	100	<u> </u>	-
108-88	-3	Toluene	100	<u> </u>	-
10061-	02-6	trans-1.3-Dichloropropene	100	<u> </u>	7
79-00-5	5	1,1,2-Trichloroethane	100	<u> </u>	1
127-18	-4	Tetrachloroethene	100	Ű	1
591-78	-6	2-Hexanone	100	Ū	1
124-48	-1	Dibromochloromethane	100	Ū	1
108-90	-7	Chlorobenzene	100	Ū	1
100-41	-4	Ethylbenzene	100	Ū	1

			1A		FIELD ID:	
	١	/OLATIL	E ORGANICS ANAL	YSIS DATA SHEET	750 811	
Lab Name:	FMETL			NJDEP#: 13461	/50-P11	
Project:	05-6957	<u>′0</u>	Case No.: 50153	Location: B.750 SI	DG Nò.: PID	
Matrix: (soil/v	vater)	SOIL		Lab Sample ID:	5015303	
Sample wt/vc	ol:	11.4	(g/ml) <u>G</u>	Lab File ID:	VB018991.D	
Level: (low/n	ned)	MED		Date Received:	3/14/2005	
% Moisture: r	not dec.	13.25		Date Analyzed:	3/18/2005	
GC Column:	RTX50	<u>02.</u> ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	olume:	25000	(uL)	Soil Aliquot Volur	ne: <u>125</u>	(uL)

### CONCENTRATION UNITS:

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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-Tetrachl	oroethane	100	U
541-73-1	1,3-Dichloroben	zene	100	U
106-46-7	1,4-Dichloroben	zene	100	U
95-50-1	1,2-Dichloroben	zene	100	υ

	,	VOLATI	LE ORGANICS	ANALYSIS D	ATA SI	HEET		FIELD I	D:	
		TEN	FATIVELY IDEN	ITIFIED COM	POUNI	DS		75	0.011	
Lab Name:	FMETL			NJDEI	₽#: <u>1</u> (	3461		/5		
Project:	05-6957	70	Case No.: 501	53 Loc	ation:	B.750	SD	G No.: <u>I</u>	PID	
Matrix: (soil/v	vater)	SOIL			Lab S	ample	ID: <u></u>	5015303		
Sample wt/vc	ol:	11.4	(g/ml) <u>G</u>		Lab F	ile ID:	١	VB01899	1.D	
Level: (low/m	ned)	MED			Date I	Receive	əd: <u>3</u>	3/14/2005	5	
% Moisture: r	not dec.	13.25			Date /	Analyze	ed: <u>3</u>	3/18/2005	5	
GC Column:	RTX5	02. ID:	0.25 (mm)		Dilutio	n Facto	or: _1	0.1		
Soil Extract V	/olume:	25000	(uL)		Soil A	liquot V	'olum	ie: <u>125</u>		(uL)
				CONCENT	RATIO	N UNIT	S:			
Number TICs	s found:	0		(ug/L or ug/	Kg)	UG/ŀ	G			
CAS NO.		COMF	OUND NAME		R	r	EST	. CONC.		Q

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		1A			FIELD	ID:	
	VOL	ATILE ORGANICS ANAL	YSIS DATA SHE	ET			
Lab Name:	FMETL		NJDEP#: 134	61		D Blank	
Project:	05-69570	Case No.: 50153	Location: B.	750 S	DG No.:	PID	
Matrix: (soil/w	ater) S	DIL	- Lab Sar	nple ID:	5015305		
Sample wt/vo	l: 10		Lab File	ID:	VB01899	2.D	
Level: (low/m	ned) M	ED	 Date Re	ceived:	3/14/200	5	
% Moisturo: n	not dec Ó		Dato An	aluzadi	2/19/200		
			Date An	aiyzeu.	0/10/200		
GC Column:	RTX502.	ID: <u>0.25</u> (mm)	Dilution	Factor:	1.0		
Soil Extract V	olume: 250	000 (uL)	Soil Aliq	uot Volu	me: <u>125</u>		(uL)
				UNITS:		~	
CAS NO.	•		L or ug/Kg)	UG/KG		Q	
107028	}	Acrolein			1000	U	
107131	· · · · ·	Acrylonitrile			1000	Ŭ	
75650		tert-Butyl alcohol			1000	Ŭ	
163404	4	Methyl-tert-Butyl ether			100	U	
108203	\$	Di-isopropyl ether			100	U	
75718		Dichlorodifluoromethane	Э		100	U	
74-87-3	3	Chloromethane			100	U	
7,5-01-4	ł	Vinyl Chloride			100	U	
74-83-9	}	Bromomethane			100	U	7
75-00-3	}	Chloroethane			100	U	
75-69-4	ł	Trichlorofluoromethane			100	U	
75-35-4	ŀ	1,1-Dichloroethene			100	U	Τ.
67-64-1		Acetone			370		
75-15-0	)	Carbon Disulfide			100	U	
75-09-2	• -	Methylene Chloride			100	U	
	5	trans-1,2-Dichloroethene	э		100	U	
75-34-3	;	1,1-Dichloroethane			100	U	
	4	Vinyl Acetate			100	<u> </u>	
78-93-3	<u>}</u>	2-Butanone			100	U	_
	2	cis-1,2-Dichloroethene			100	<u> </u>	
67-66-3	1	Chloroform			100	<u> </u>	
71-55-6	<u>i</u>	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> </u>	_
		Trichloroethene			100	<u> </u>	_
78-87-5	1	1,2-Dichloropropane			100	<u> </u>	
75-27-4		Bromodichloromethane			100	<u> </u>	
110-75-	8	2-Chloroethyl vinyl ether			100	<u> </u>	
10061-0	)1-5	cis-1,3-Dichloropropene			100	U	
108-10-	1	4-Methyl-2-Pentanone			100	<u> </u>	_
108-88-	3	Toluene				<u> </u>	_
10061-0	)2-6	trans-1,3-Dichloroproper	ne		100	U	_
		1,1,2-1 richloroethane		· · · · · ·	100	U	_
127-18-	4	Ietrachloroethene			100	<u> </u>	-
591-78-	<u>6</u> .	2-Hexanone			100	U	_
124-48-	1	Dibromochloromethane			100	<u> </u>	4
108-90-	<u>/</u>	Chlorobenzene			100	U	_
100-41-4	4	Ethylbenzene			100	U	1

FORM I VOA

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			1A		FIELD ID:	
	V	/OLATII	E ORGANICS ANAL	YSIS DATA SHEET	Trin Blank	
Lab Name:	FMETL			NJDEP#: 13461		
Project:	05-6957	0	Case No.: 50153	Location: B.750 S	DG No.: PID	
Matrix: (soil/v	vater)	SOIL		Lab Sample ID:	5015305	
Sample wt/vo	ol:	10.0	(g/ml) <u>G</u>	Lab File ID:	VB018992.D	
Level: (low/n	ned)	MED		Date Received:	3/14/2005	
% Moisture: r	not dec.	0		Date Analyzed:	3/18/2005	
GC Column:	RTX50	<u>)2.</u> ID:	<u>0.25</u> (mm)	Dilution Factor:	1.0	
Soil Extract V	/olume:	25000	(uL)	Soil Aliquot Volu	me: <u>125</u>	(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			00	U
75-25-2	Bromoform		-	100	U
79-34-5	1,1,2,2-Tetrachic	proethane	-	100	U
541-73-1	1,3-Dichlorobenz	ene	-	00	U
106-46-7	1,4-Dichlorobenz	ene	-	00	U
95-50-1	1,2-Dichlorobenz	ene	-	00	υ

			1	E				
		VOLATI	E ORGANIC	S ANALYSIS DA	TA SHEET		FIELD ID	);
		TENT	ATIVELY IDE	NTIFIED COMP	OUNDS		Trip	Blank
Lab Name:	FMETL			NJDEP	#: <u>13461</u>		mp	
Project:	05-695	70	Case No.: 50	0153 Loca	tion: <u>B.750</u>	SD	G No.: P	ID
Matrix: (soil/w	water)	SOIL			Lab Sample	ID: <u></u>	5015305	
Sample wt/vo	ol:	10.0	(g/ml) <u>G</u>	à	Lab File ID:	1	VB018992.	.D
Level: (low/n	ned)	MED		:	Date Receiv	ved: [	3/14/2005	
% Moisture: r	not dec.	0			Date Analyz	ed: [	3/18/2005	
GC Column:	RTX5	02. ID:	<u>0.25</u> (mm	)	Dilution Fac	tor: 1	1.0	
Soil Extract V	/olume:	25000	(uL)	:	Soil Aliquot '	Volum	ne: <u>125</u>	(uL
						TS:		·
Number TICs	s found:	0		(ug/L of ug/K	.g) <u></u>	nu .		
CAS NO.		COMF	OUND NAME	Ē	RT	EST	CONC.	Q

# TPHC

100041

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

Client :	U.S. Army	Project # :	50153
	DPW. SELFM-PW-EV	Location :	Bldg.750
	Bldg. 173	UST Reg. # :	
	Ft. Monmouth, NJ 07703		
Analysis :	OQA-QAM-025	Date Received :	14-Mar-05
Matrix :	Soil	Date Extracted :	15-Mar-05
Inst. ID. :	GC TPHC INST. #1	Extraction Method :	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	Analysis Complete :	16-Mar-05
Injection Volume :	1uL ·	Analyst :	B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
5015302	750-P10	1.00	15.05	86.06	106	386	ND
5015304	750-P12	1.00	15.00	90.07	102	370	ND
,							
	· ·						
	· · · · · · · · · · · · · · · · · · ·						
· · · · · · · · · · · · · · · · · · ·							
METHOD BLANK	MB-031505-01	1.00	15.00	100.00	92	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.

- 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: 5/3/05

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

### ENCLOSURE 3 of Attachment E

Benzene in Well 750MW01 Graph, and Tabulated Groundwater Monitoring Data from 1997 to 2009



# Table 5-4Groundwater Sampling ResultsSite 750 MW01 (Apr97-Nov05)Fort Monmouth, New Jersey

Round No.         ** NJDEP         1         2         3         4         5         6         7         8         9         10         10           WELL ID         ** NJDEP         Criteria         750MW01	11 750MW01 02/08/01 667.03 <b>14.63</b> ND 1.14
WELL ID         ** NJDEP Criteria         Units         750MW01	750MW01 02/08/01 667.03 <b>14.63</b> ND 1.14
Date Collected         Criteria         OH/10/97         12/09/97         03/17/98         05/26/98         03/24/99         06/17/99         07/28/99         10/27/99         09/15/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00         11/21/00	02/08/01 667.03 14.63 ND 1.14
ANALYTE / Lab ID         2445.06         3205.05         3415.03         3592.06         4369.06         4555.06         4659.07         4889.07         5690.04         5872.06         5872.03           VOCs           Benzene         1         μg/L         13.91         6.59         25.34         4.20         4.05         17.42         7.24         1.74         10.04         7.30         7.46           Carbon tetrachloride         2         μg/L         ND	667.03 14.63 ND 1.14
VOCs         Benzene         1         μg/L         13.91         6.59         25.34         4.20         4.05         17.42         7.24         1.74         10.04         7.30         7.46           Carbon tetrachloride         2         μg/L         ND	<b>14.63</b> ND 1.14
Benzene         1         μg/L         13.91         6.59         25.34         4.20         4.05         17.42         7.24         1.74         10.04         7.30         7.46           Carbon tetrachloride         2         μg/L         ND	<b>14.63</b> ND 1.14
Carbon tetrachloride 2 µg/L ND	ND 1.14
	1.14
Ethylbenzene 700 μg/L 5.36 ND 5.31 ND ND 1.38 ND ND ND ND ND ND ND	
Methyl tert -butyl ether NLE μg/L ND 4.55 6.74 ND 1.68 5.27 2.97 2.20 ND ND ND	2.07
	ND
Toluene 1000 $\mu g/L$ ND ND 1.08 ND	ND
<i>m</i> + <i>p</i> -Xylenes NLE μg/L 10.90 ND 20.98 5.08 1.76 ND ND ND 1.38 ND ND	3.29
<i>o</i> -Xylene NLE μg/L 3.03 ND 15.24 2.60 2.17 3.14 ND ND 1.66 ND ND	2.40
Xylenes (Total) 1000 μg/L 13.93 ND 36.22 7.68 3.93 ND ND ND ND 3.04 ND ND	5.69
TICs* 500 $\mu g/L$ 434 34 205 ND ND 48 ND ND 6 ND ND ND	ND
Metals	
Antimony 20 μg/L NA ND ND ND 3.58 ND ND 3.41 ND ND ND ND	ND
Arsenic         8         μg/L         NA         ND         ND         ND         ND         6.74         4.49         3.52         3.84         3.72	4.29
Barium 2000 μg/L NA 31.0 54.6 27.7 61.7 52.9 78.1 115 229 229 232	234
Beryllium 20 μg/L NA ND ND ND ND ND ND ND 1.28 1.11 1.13	1.09
Cadmium 4 μg/L NA 1.4 1.1 1.2 <b>8.94</b> 2.29 0.773 ND 1.13 <b>9.33</b> 2.76	ND
Chromium 100 μg/L NA 27.4 ND ND 8.24 4.34 15.7 16.5 ND 2.21 3.33	0.6
Copper 1000 μg/L NA 19.0 9.4 ND 306 ND 14.1 14.6 27.9 ND ND	ND
Lead 10 μg/L 2.3 <b>12.0</b> 5.0 ND 3.55 ND 3.01 ND <b>31.2</b> ND ND	ND
Mercury 2 μg/L NA 0.9 ND 0.2 ND 0.27 0.1 0.2 ND ND ND ND	ND
Nickel 100 μg/L NA 7.3 3.7 1.8 7.84 ND 4.54 4.53 4.87 6.58 6.57	6.84
	ND
Thallium10 $\mu g/L$ NANDNDNDNDNDNDNDNDNDNDNDNDND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

NLE - No limit established

# Table 5-4Groundwater Sampling ResultsSite 750 MW01 (Apr97-Nov05)Fort Monmouth, New Jersey

Round No			12	13	14	15	16	17	18	19	20	20	21	22
WELL ID	** NJDEP	<b>**</b> •	750MW01	MW01 Duplicate	750MW01	750MW01								
Date Collected	Criteria	Units	08/27/01	12/12/01	03/15/02	05/17/02	07/31/02	11/05/02	03/06/03	06/13/03	09/26/03	09/26/03	11/21/03	02/04/04
ANALYTE / Lab ID			16385.03	16646.03	20156.06	20304.06	20492.06	20789.06	30100.06	30287.06	30611.04	30611.03	30752.01	40099.01
VOCs														
Benzene	1	μg/L	3.31	ND	ND	ND	ND	1.59	1.16 J	2.57	1.18 J	1.30 J	1.33 J	4.20
Carbon tetrachloride	2	μg/L	ND	ND	ND									
Ethylbenzene	700	μg/L	ND	ND	1.35 J									
Methyl tert -butyl ether	NLE	μg/L	ND	1.22 J	1.12 J	1.25 J	1.54 J							
Methylene chloride	3	μg/L	ND	ND	ND									
Toluene	1000	μg/L	ND	ND	ND									
<i>m</i> + <i>p</i> -Xylenes	NLE	μg/L	ND	1.26 J	ND	ND	ND	2.51 J						
o-Xylene	NLE	μg/L	ND	1.44 J	0.69 J	0.68 J	ND	2.15						
Xylenes (Total)	1000	μg/L	ND	1.70	0.69	0.68	ND	4.66						
TICs*	500	μg/L	ND	16	10	4	3	60						
Metals														
Antimony	20	μg/L	ND	ND	ND									
Arsenic	8	μg/L	3.99	2.65	ND	24.0	5.87	ND	ND	ND	4.12 ER	5.66	4.83 ER	ND
Barium	2000	μg/L	194	239	173	139	151	127	67.4	106	93.2	94.4	79.8	89.2
Beryllium	20	μg/L	ND	1.19	1.05	0.751	ND	0.868	ND	0.698	0.498 ER	0.499 ER	0.465 ER	ND
Cadmium	4	μg/L	0.780	0.631	ND	1.60	ND	1.63	1.79 ER	ND	0.474 ER	0.567 ER	ND	ND
Chromium	100	μg/L	2.61	2.15	1.01	1.83	4.28	1.35	ND	ND	1.87 ER	2.05 ER	1.08 ER	ND
Copper	1000	μg/L	9.11	3.25	5.26	6.25	ND	ND	2.86 ER	2.66 ER	2.13 ER	2.38 ER	ND	ND
Lead	10	μg/L	1.67	2.41	1.70	ND	ND	ND						
Mercury	2	μg/L	0.1	ND	ND	ND	0.13	ND	ND	ND	ND	ND	ND	ND
Nickel	100	μg/L	6.36	7.63	6.99	4.84	6.16	4.40	2.92 ER	2.91 ER	2.28 ER	2.19 ER	1.84 ER	ND
Selenium	50	μg/L	ND	ND	ND	9.20	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	10	μg/L	5.67	6.38	ND	1.99 ER	ND							

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

NLE - No limit established

# Table 5-4Groundwater Sampling ResultsSite 750 MW01 (Apr97-Nov05)Fort Monmouth, New Jersey

Round No.			23	23	24	25	26	26	27	28	29	29
WELL ID	** NJDEP	Unita	750MW01	MW01 Duplicate	750MW01	750MW01	750MW01	MW01 Duplicate	750MW01	750MW01	750MW01	MW01 Duplicate
Date Collected	Criteria	Units	05/12/04	05/12/04	08/23/04	11/01/04	01/13/05	01/13/05	04/15/05	07/07/05	11/01/05	11/01/05
ANALYTE / Lab ID			40355.04	40355.03	40618.01	40759.01	50023.04	50023.03	50203.04	50339.04	50571.04	50571.03
VOCs												
Benzene	1	μg/L	1.73 J	1.8 J	0.88 J	ND	3.91	3.77	2.52	ND	0.61 J	0.59 J
Carbon tetrachloride	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	μg/L	0.47 J	0.48 J	ND	ND	1.58	1.50 J	1.45 J	ND	ND	ND
Methyl tert -butyl ether	NLE	μg/L	0.63 J	0.65 J	0.42 J	ND	ND	ND	ND	1.46 J	ND	ND
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1000	μg/L	ND	ND	ND	ND	ND	ND	0.53 J	ND	ND	ND
m+p-Xylenes	NLE	μg/L	0.7 J	0.8 J	ND	ND	2.66	2.56 J	3.47 J	ND	ND	ND
o-Xylene	NLE	μg/L	0.58 J	0.62 J	0.49 J	ND	2.13	2.10	4.01	ND	ND	ND
Xylenes (Total)	1000	μg/L	1.28	1.42	0.49	ND	4.79	4.66	7.48	ND	ND	ND
TICs*	500	μg/L	15	16	6	5	76	67	86	ND	11	8
Metals												
Antimony	20	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	8	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barium	2000	μg/L	78.3	81.4	127	118	108	106	102	236	183	183
Beryllium	20	μg/L	ND	ND	0.796	ND	0.650	0.665	0.585	1.5	1.00	0.974
Cadmium	4	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	100	μg/L	ND	ND	ND	7.72	ND	ND	ND	ND	ND	ND
Copper	1000	μg/L	ND	ND	5.75	5.37	ND	ND	ND	ND	ND	ND
Lead	10	μg/L	20.5	26.4	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	5.18	5.21
Selenium	50	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	10	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

NLE - No limit established

# Table 5-4Groundwater Sampling ResultsSite 750 MW01 (Jan06-Jul07)Fort Monmouth, New Jersey

Round No.			30	31	31	32	33	34	34	35	35	36	36	37
WELL ID	** NJDEP	Unite	750MW01	750MW01	MW01 Duplicate	750MW01	750MW01	750MW01	MW01 Duplicate	750MW01	MW01 Duplicate	750MW01	MW01 Duplicate	750MW01
Date Collected	Criteria	Units	01/17/06	04/14/06	04/14/06	07/17/06	10/30/06	02/28/07	02/28/07	05/24/07	05/24/07	07/26/07	07/26/07	
ANALYTE / Lab ID			60032.04	60155.04	60155.03	60320.04	60471.04	70077.04	70077.03	70191.04	70191.03	70282.04	70282.03	
VOCs														
Benzene	1	μg/L	1.78 J	1.35 J	1.33 J	0.95 J	1.53 J	2.19	2.02	0.68 J	0.72 J	ND	ND	NS
Carbon tetrachloride	1	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	700	μg/L	0.39 J	0.69 J	0.72 J	ND	0.22	1.12 J	1.17 J	0.83 J	0.67 J	ND	ND	NS
Methyl tert -butyl ether	70	μg/L	0.51 J	ND	ND	ND	0.29 J	ND	ND	ND	ND	ND	ND	NS
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	1000	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
m+p-Xylenes	NLE	μg/L	ND	1.41 J	1.44 J	0.68 J	ND	1.01 J	1.12 J	1.07 J	0.87 J	ND	ND	NS
o-Xylene	NLE	μg/L	ND	1.19 J	1.17 J	0.55 J	0.07	1.09 J	1.26 J	1.26 J	1.10 J	ND	ND	NS
Xylenes (Total)	1000	μg/L	ND	2.60	2.61	1.23	0.07	2.10	2.38	2.33	1.97	ND	ND	NS
TICs*	500	μg/L	4	20	17	15	4	24	37	83	79	46	37	NS
Metals														
Antimony	6	μg/L	ND	5.09 ER	4.22 ER	6.74 ER	ND	ND	ND	ND	ND	ND	0.776 ER	NS
Arsenic	3	μg/L	ND	ND	ND	2.26 ER	ND	ND	ND	ND	3.42 ER	ND	ND	NS
Barium	2000	μg/L	111	128	129	138	111	59.1	59.2	80.5	81.7	114	114	NS
Beryllium	1	μg/L	0.785	0.695	0.679	0.511	0.743	0.311 ER	0.366 ER	0.342 ER	0.318 ER	0.796	0.770	NS
Cadmium	4	μg/L	ND	ND	ND	ND	0.623 ER	ND	ND	0.442 ER	0.484 ER	0.414 ER	0.353 ER	NS
Chromium	70	μg/L	ND	0.993 ER	ND	ND	ND	ND	ND	0.611 ER	0.972 ER	0.204 ER	0.550 ER	NS
Copper	1300	μg/L	ND	ND	ND	2.80 ER	ND	ND	0.685 ER	0.718 ER	1.14 ER	ND	ND	NS
Lead	5	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Mercury	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Nickel	100	μg/L	ND	3.80 ER	2.95 ER	3.11 ER	2.07 ER	ND	ND	2.11 ER	2.10 ER	2.17 ER	2.06 ER	NS
Selenium	40	μg/L	ND	ND	ND	ND	5.13 ER	4.13 ER	4.76 ER	6.44 ER	6.42 ER	3.71 ER	ND	NS
Thallium	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (November 7, 2005)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

NLE- No limit established

NS - Not sampled

#### Table 5-4 Groundwater Sampling Results Site 750 MW01 (Jan08-Nov09) Fort Monmouth, New Jersey

Round No.			38	39	39	40	40	41	41	42	42	43	43	44
WELL ID	** NJDEP	Unita	750MW01	750MW01	MW01 Duplicate	750MW01								
Date Collected	Criteria	Units	01/02/08	04/30/08	04/30/08	08/12/08	08/12/08	10/31/08	10/31/08	03/31/09	03/31/09	05/22/09	05/22/09	08/28/09
ANALYTE / Lab ID			80001.04	80143.04	80143.03	80292.04	80292.03	80396.04	80396.03	90135.04	90135.03	90210.04	90210.03	90361.04
VOCs														
Benzene	1	μg/L	0.95 J	0.99 J	1.04 J	0.33 J	0.31 J	ND	ND	0.64 J	0.56 J	0.73 J	0.73 J	NA
Carbon tetrachloride	1	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Ethylbenzene	700	μg/L	ND	0.71 J	0.75 J	ND	ND	ND	ND	0.87 J	0.82 J	0.67 J	0.68 J	NA
Methyl tert -butyl ether	70	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Methylene Chloride	3	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Toluene	600	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
<i>m</i> + <i>p</i> -Xylenes	NLE	μg/L	ND	0.68 J	0.75 J	ND	ND	ND	ND	0.49 J	0.44 J	0.47 J	0.43 J	NA
o-Xylene	NLE	μg/L	ND	0.62 J	0.60 J	ND	ND	ND	ND	0.24 J	0.21 J	ND	ND	NA
Xylenes (Total)	1000	μg/L	ND	1.30	1.35	ND	ND	ND	ND	0.73	0.65	0.47	0.43	NA
TICs*	500	μg/L	6	71	73	130	124	3	4	17	14	89	105	NA
Metals														
Antimony	6	μg/L	ND	ND	ND	ND	ND	ND	ND	7.19 ER	6.60 ER	ND	ND	ND
Arsenic	3	μg/L	ND	ND	2.97 ER	ND	2.50 ER	4.34 ER	6.19	15.6	17.3	6.97	5.89	11.0
Barium	6000	μg/L	113	152	151	138	135	120	125	94.5	96.0	63.1	65.6	84.2
Beryllium	1	μg/L	0.732	0.664	0.675	0.505	0.513	0.701	0.768	0.342 ER	0.368 ER	0.318 ER	0.327 ER	0.289 ER
Cadmium	4	μg/L	0.309 ER	0.301 ER	0.212 ER	0.373 ER	0.489 ER	0.317 ER	0.288 ER	ND	ND	ND	ND	3.30
Chromium	70	μg/L	ND	0.355 ER	0.367 ER	0.410 ER	0.407 ER	10.7	15.1	1.18 ER	2.21 ER	ND	ND	ND
Copper	1300	μg/L	0.686 ER	ND	ND	ND	ND	2.52 ER	3.52 ER	ND	ND	ND	0.839 ER	ND
Lead	5	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.75 ER	ND	ND
Mercury	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	μg/L	1.63 ER	4.98 ER	4.43 ER	2.97 ER	3.05 ER	3.52 ER	4.08 ER	2.25 ER	1.90 ER	2.02 ER	2.42 ER	2.50 ER
Selenium	40	μg/L	4.40 ER	ND	ND	ND	ND	ND	4.79 ER	28.9	27.3	ND	ND	17.2
Thallium	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (July 27, 2007)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

NLE- No limit established

#### Table 5-4 Groundwater Sampling Results Site 750 MW01 (Jan08-Nov09) Fort Monmouth, New Jersey

Round No.			44	44	44	45	45
WELL ID	** NJDEP	Unito	MW01 Duplicate	750MW01	MW01 Duplicate	750MW01	MW01 Duplicate
Date Collected	Criteria	Units	08/28/09	09/24/09	09/24/09	11/03/09	11/03/09
ANALYTE / Lab ID			90361.03	90397.04	90397.03	90434.04	90434.03
VOCs							
Benzene	1	μg/L	NA	ND	ND	ND	ND
Carbon tetrachloride	1	μg/L	NA	ND	ND	ND	ND
Ethylbenzene	700	μg/L	NA	ND	ND	ND	ND
Methyl tert -butyl ether	70	μg/L	NA	ND	ND	ND	ND
Methylene Chloride	3	μg/L	NA	ND	ND	ND	ND
Toluene	600	μg/L	NA	ND	ND	ND	ND
<i>m</i> + <i>p</i> -Xylenes	NLE	μg/L	NA	ND	ND	ND	ND
o-Xylene	NLE	μg/L	NA	ND	ND	ND	ND
Xylenes (Total)	1000	μg/L	NA	ND	ND	ND	ND
TICs*	500	μg/L	NA	ND	ND	7	8
Metals							
Antimony	6	μg/L	ND	NA	NA	ND	ND
Arsenic	3	μg/L	11.1	NA	NA	1.66 ER	2.22 ER
Barium	6000	μg/L	77.7	NA	NA	97.1	97.2
Beryllium	1	μg/L	0.251 ER	NA	NA	0.497 ER	0.408 ER
Cadmium	4	μg/L	2.36	NA	NA	ND	ND
Chromium	70	μg/L	ND	NA	NA	4.97 ER	3.10 ER
Copper	1300	μg/L	ND	NA	NA	ND	ND
Lead	5	μg/L	ND	NA	NA	ND	ND
Mercury	2	μg/L	ND	NA	NA	ND	ND
Nickel	100	μg/L	3.20 ER	NA	NA	5.59	4.94 ER
Selenium	40	μg/L	24.1	NA	NA	ND	ND
Thallium	2	μg/L	ND	NA	NA	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (July 27, 2007)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

NLE- No limit established

# Table 5-5 Groundwater Sampling Results Site 750 MW02 (Apr97-Nov05) Fort Monmouth, New Jersey

Round No.			1	2	3	4	5	5	6	7	8	9	10	11
WELL ID	** NJDEP	Linita	750MW02	750MW02	750MW02	750MW02	750MW02	MW02 Duplicate	750MW02	750MW02	750MW02	750MW02	750MW02	750MW02
Date Collected	Criteria	Units	04/10/97	12/09/97	03/17/98	05/26/98	03/24/99	03/24/99	06/17/99	07/28/99	10/27/99	09/15/00	11/21/00	02/08/01
ANALYTE / Lab ID			2445.05	3205.06	3415.04	3592.07	4369.07	4369.10	4555.07	4659.08	4889.08	5690.05	5872.07	668.04
VOCs														
2-Butanone	300	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	700	μg/L	ND	ND	ND	ND	ND	ND	19.92	5.00	ND	ND	ND	ND
Methyl tert -butyl ether	NLE	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	3	μg/L	3.41	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	100	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	500	μg/L	3	11	ND	5	ND	ND	8	ND	ND	ND	ND	ND
Metals														
Antimony	20	μg/L	NA	ND	ND	ND	7.63	5.49	ND	ND	5.06	3.01	ND	ND
Arsenic	8	μg/L	NA	ND	ND	ND	10.8	16.4	55.1	10.2	10.5	17.0	25.2	13.1
Barium	2000	μg/L	NA	46.2	51.2	17.6	373	419	1270	49.6	57.6	209	264	112
Beryllium	20	μg/L	NA	ND	ND	ND	1.16	1.34	4.74	1.27	1.06	4.19	4.35	1.28
Cadmium	4	μg/L	NA	ND	ND	0.6	10.3	8.24	41.9	1.33	2.32	ND	1.40	ND
Chromium	100	μg/L	NA	16.0	ND	ND	132	149	557	186	148	192	102	16.6
Copper	1000	μg/L	NA	24.0	13.9	ND	808	294	1110	28.5	39.7	238	129	104
Lead	10	μg/L	3.0	7.0	ND	ND	111	165	612	7.84	14.3	114	68.4	ND
Mercury	2	μg/L	NA	0.9	ND	ND	0.65	0.33	1.03	0.6	0.1	0.2	0.1	ND
Nickel	100	μg/L	NA	3.7	6.0	1.4	52.8	79.6	221	12.0	11.6	22.0	22.7	13.3
Selenium	50	μg/L	NA	ND	ND	3.7	5.04	5.57	20.2	ND	4.49	ND	ND	ND
Thallium	10	μg/L	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

NA - Not analyzed

ND - Not detected

# Table 5-5 Groundwater Sampling Results Site 750 MW02 (Apr97-Nov05) Fort Monmouth, New Jersey

Round No.			12	13	14	15	15	16	17	17	18	19	20	21
WELL ID	** NJDEP	<b>T</b> T <b>1</b>	750MW02	750MW02	750MW02	750MW02	MW02 Duplicate	750MW02	750MW02	MW02 Duplicate	750MW02	750MW02	750MW02	750MW02
Date Collected	Criteria	Units	08/27/01	12/12/01	03/15/02	05/17/02	05/17/02	07/31/02	11/05/02	11/05/02	03/06/03	06/13/03	09/26/03	11/21/03
ANALYTE / Lab ID			16385.04	16646.04	20156.07	20304.07	20304.03	20492.07	20789.07	20789.03	30100.07	30287.07	30611.05	30752.02
VOCs														
2-Butanone	300	μg/L	6.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	700	μg/L	9.97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert -butyl ether	NLE	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.27
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	100	μg/L	ND	ND	10.60	24.62	24.86	ND	ND	ND	ND	ND	ND	ND
TICs*	500	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals														
Antimony	20	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	8	μg/L	8.53	8.99	19.3	27.1	30.9	13.0	15.1	7.82	ND	ND	8.34	4.63 ER
Barium	2000	μg/L	44.6	139	94.8	48.2	45.8	364	389	368	188	126	302	59.1
Beryllium	20	μg/L	0.860	0.979	1.89	ND	ND	1.55	ND	ND	ND	0.207 ER	ND	0.049 ER
Cadmium	4	μg/L	0.993	1.74	2.07	0.959	1.08	4.25	1.96	1.67	3.31	0.893 ER	1.05 ER	1.23 ER
Chromium	100	μg/L	36.1	85.7	103	36.3	21.1	12.7	26.0	4.56	1.47 ER	12.8	2.20 ER	2.47 ER
Copper	1000	μg/L	31.7	43.4	56.1	49.8	26.3	17.6	16.1	10.6	13.4	6.03	7.74	2.80 ER
Lead	10	μg/L	13.7	25.1	37.1	5.41	6.78	44.8	9.25	13.1	7.60	4.23 ER	ND	ND
Mercury	2	μg/L	ND	ND	0.11	0.12	0.15	0.17	ND	ND	ND	ND	ND	ND
Nickel	100	μg/L	8.21	15.5	15.5	6.49	6.31	19.9	24.6	23.3	15.8	9.54	16.8	5.59
Selenium	50	μg/L	ND	ND	3.67	7.83	7.60	ND	5.09	ND	ND	5.27 ER	ND	ND
Thallium	10	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

NA - Not analyzed

ND - Not detected

#### Table 5-5 Groundwater Sampling Results Site 750 MW02 (Apr97-Nov05) Fort Monmouth, New Jersey

Round No.			22	23	24	25	26	27	28	29
WELL ID	** NJDEP	Unita	750MW02							
Date Collected	Criteria	Units	02/04/04	05/12/04	08/23/04	11/01/04	01/13/05	04/15/05	07/07/05	11/01/05
ANALYTE / Lab ID			40099.02	40355.05	40618.02	40759.02	50023.05	50203.05	50339.05	50571.05
VOCs										
2-Butanone	300	μg/L	ND	ND	2.73	ND	ND	ND	ND	ND
Acetone	700	μg/L	ND	ND	8.49	ND	ND	ND	ND	ND
Methyl tert -butyl ether	NLE	μg/L	ND							
Methylene chloride	3	μg/L	ND							
Styrene	100	μg/L	ND							
TICs*	500	μg/L	29	ND	ND	ND	ND	10	ND	ND
Metals										
Antimony	20	μg/L	ND							
Arsenic	8	μg/L	ND	ND	ND	6.00	21.8	5.37	ND	ND
Barium	2000	μg/L	166	184	39.7	67.7	441	75.3	49	86.4
Beryllium	20	μg/L	ND	ND	ND	0.50	4.83	0.697	ND	ND
Cadmium	4	μg/L	ND	2.20	ND	2.40	5.43	ND	ND	ND
Chromium	100	μg/L	9.36	38.8	6.86	50.6	551	77.6	ND	ND
Copper	1000	μg/L	20.2	19.4	21.4	26.0	106	15.0	16	12.3
Lead	10	μg/L	ND	20.1	6.18	7.00	59.2	ND	ND	ND
Mercury	2	μg/L	ND							
Nickel	100	μg/L	9.70	13.0	ND	ND	36.6	6.30	ND	ND
Selenium	50	μg/L	ND							
Thallium	10	μg/L	ND							

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

NA - Not analyzed

ND - Not detected

### Table 5-5Groundwater Sampling ResultsSite 750 MW02 (Jan06-Jul07)Fort Monmouth, New Jersey

Round No.			30	31	32	33	34	35	36	37
WELL ID	** NJDEP	Unita	750MW02							
Date Collected	Criteria	Units	01/17/06	04/14/06	07/17/06	10/30/06	02/28/07	05/24/07	07/26/07	
ANALYTE / Lab ID			60032.05	60155.05	60320.05	60471.05	70077.05	70191.05	70282.05	
VOCs										
2-Butanone	300	μg/L	ND	NS						
Acetone	6000	μg/L	ND	NS						
Methyl tert -butyl ether	70	μg/L	0.66 J	ND	ND	0.47 J	ND	ND	ND	NS
Methylene chloride	3	μg/L	ND	NS						
Styrene	100	μg/L	ND	NS						
TICs*	500	μg/L	ND	NS						
Metals										
Antimony	6	μg/L	ND	2.63 ER	8.26 ER	ND	ND	ND	ND	NS
Arsenic	3	μg/L	12.6	ND	7.25	21.3	ND	3.82 ER	ND	NS
Barium	2000	μg/L	647	13.4	197	275	264	207	13.0	NS
Beryllium	1	μg/L	3.04	0.356 ER	ND	0.346 ER	0.859	0.752	ND	NS
Cadmium	4	μg/L	5.97	0.378 ER	0.779 ER	9.55	2.94	2.30	1.17 ER	NS
Chromium	70	μg/L	8.59	31.3	3.46 ER	12.6	1.70 ER	1.05 ER	1.68 ER	NS
Copper	1300	μg/L	ND	36.5	30.8	11.2	22.7	17.9	3.90 ER	NS
Lead	5	μg/L	45.0	7.09	ND	ND	1.74 ER	2.05 ER	1.01 ER	NS
Mercury	2	μg/L	ND	NS						
Nickel	100	μg/L	21.4	5.21	23.0	57.0	40.6	32.7	0.726 ER	NS
Selenium	40	μg/L	ND	ND	ND	10.9 ER	8.91 ER	7.41 ER	ND	NS
Thallium	2	μg/L	ND	ND	ND	5.70 ER	ND	ND	ND	NS

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (November 7, 2005)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

NS - Not sampled

### Table 5-5 Groundwater Sampling Results Site 750 MW02 (Jan08-Nov09) Fort Monmouth, New Jersey

Round No.			38	39	40	41	42	43	44	44	45
WELL ID	** NJDEP	Unita	750MW02								
Date Collected	Criteria	Units	01/02/08	04/30/08	08/12/08	10/31/08	03/31/09	05/22/09	08/28/09	09/24/09	11/03/09
ANALYTE / Lab ID			80001.05	80143.05	80292.05	80396.05	90135.05	90210.05	90361.05	90397.05	90434.05
VOCs											
2-Butanone	300	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Acetone	6000	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Methyl tert -butyl ether	70	μg/L	ND	ND	ND	0.51 J	0.26 J	ND	NA	ND	ND
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Styrene	100	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
TICs*	500	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Metals											
Antimony	6	μg/L	ND	ND	ND	10.5	1.82 ER	2.82 ER	ND	NA	ND
Arsenic	3	μg/L	ND	ND	ND	18.2	8.63	8.11	11.4	NA	3.84 ER
Barium	6000	μg/L	77.7	82.3	54.8	845	39.8	74.9	74.0	NA	67.8
Beryllium	1	μg/L	0.228 ER	0.228 ER	ND	12.9	ND	0.200 ER	0.192 ER	NA	0.620
Cadmium	4	μg/L	0.680 ER	0.671 ER	0.678 ER	13.6	ND	0.314 ER	9.21	NA	2.22
Chromium	70	μg/L	ND	1.88 ER	0.569 ER	367	5.31	2.04 ER	14.7	NA	80.1
Copper	1300	μg/L	9.31	60.1	1.44 ER	522	6.42	12.1	6.86	NA	17.3
Lead	5	μg/L	ND	ND	ND	232	2.03 ER	3.67 ER	ND	NA	5.5
Mercury	2	µg/L	ND	NA	ND						
Nickel	100	μg/L	11.7	11.4	6.09	110	3.16 ER	7.62	7.83	NA	10.9
Selenium	40	μg/L	ND	4.45 ER	ND	ND	26.8	ND	16.2	NA	ND
Thallium	2	μg/L	ND	ND	ND	ND	ND	1.54 ER	ND	NA	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (July 27, 2007)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

#### Table 5-6 Groundwater Sampling Results Site 750 MW03 (Apr97-Nov05) Fort Monmouth, New Jersey

Round No.			1	2	3	4	5	6	6	7	8	9	10	11
WELL ID	** NJDEP	Tinita	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03	MW03 Duplicate	750MW03	750MW03	750MW03	750MW03	750MW03
Date Collected	Criteria	Units	04/10/97	12/09/97	03/17/98	05/26/98	03/24/99	06/17/99	06/17/99	07/28/99	10/27/99	09/15/00	11/21/00	02/08/01
ANALYTE / Lab ID			2445.03	3205.03	3415.05	3592.08	4369.08	4555.08	4555.10	4659.09	4889.09	5690.06	5872.08	669.05
VOCs														
1,1,1-Trichloroethane	30	μg/L	6.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	700	μg/L	ND	5.15	ND	ND	ND	ND						
Benzene	1	μg/L	ND	ND	ND	ND	ND	ND						
Methyl tert -butyl ether	NLE	μg/L	ND	44.19	ND	ND	ND	ND	ND	ND	5.83	5.26	ND	ND
Methylene chloride	3	μg/L	3.39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	500	μg/L	6	5	ND	5	ND	9	10	ND	ND	ND	ND	ND
Metals														
Antimony	20	μg/L	NA	ND	ND	ND	4.12	ND	ND	ND	2.30	ND	ND	ND
Arsenic	8	μg/L	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.28
Barium	2000	μg/L	NA	47.0	27.9	44.1	88.2	30.5	31.2	33.5	27.7	28.7	30.1	40.1
Beryllium	20	μg/L	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	4	μg/L	NA	ND	ND	ND	1.26	ND	ND	ND	ND	ND	ND	ND
Chromium	100	μg/L	NA	12.0	ND	ND	19.4	26.8	23.7	16.3	9.44	17.6	13.1	20.6
Copper	1000	μg/L	NA	14.0	10.3	5.2	103	ND	ND	8.05	10.7	ND	ND	9.88
Lead	10	μg/L	2.1	7.0	ND	ND	17.3	ND	ND	ND	ND	1.24	ND	ND
Mercury	2	μg/L	NA	0.7	ND	ND	ND	0.35	ND	ND	0.1	ND	ND	ND
Nickel	100	μg/L	NA	3.4	3.3	4.6	4.42	13900	ND	2.51	1.65	ND	1.25	2.14
Selenium	50	μg/L	NA	ND	ND	ND	4.24	ND	ND	ND	ND	ND	ND	ND
Thallium	10	μg/L	NA	ND	ND	ND	ND	ND	5.37	ND	ND	ND	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

#### Table 5-6 Groundwater Sampling Results Site 750 MW03 (Apr97-Nov05) Fort Monmouth, New Jersey

Round No.			12	13	14	15	16	17	18	19	20	21	22	23
WELL ID	** NJDEP	Linita	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03
Date Collected	Criteria	Units	08/27/01	12/12/01	03/15/02	5/17/2002	7/31/2002	11/05/02	03/06/03	06/13/03	09/26/03	11/21/03	02/04/04	05/12/04
ANALYTE / Lab ID			16385.05	16646.05	20156.08	20304.08	20492.08	20789.08	30100.08	30287.08	30611.06	30752.03	40099.03	40355.06
VOCs														
1,1,1-Trichloroethane	30	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	700	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	1	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert -butyl ether	NLE	μg/L	ND	ND	ND	ND	ND	19.19	ND	46.33	16.48	32.60	2.14	7.28
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	500	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	ND	ND
Metals														
Antimony	20	μg/L	5.57	ND	ND	ND	ND	ND	12.6 ER	ND	ND	ND	ND	ND
Arsenic	8	μg/L	3.25	ND	ND	22.7	5.32	ND	4.53 ER	3.84 ER	12.2	6.94	11.0	ND
Barium	2000	μg/L	30.2	47.5	35.8	29.5	39.8	19.3	8.18	14.5	9.26	9.34	7.53	19.3
Beryllium	20	μg/L	ND	ND	ND	ND	ND	ND	ND	0.077 ER	ND	0.071	ND	ND
Cadmium	4	μg/L	ND	ND	ND	ND	ND	ND	0.708 ER	ND	ND	ND	ND	ND
Chromium	100	μg/L	14.4	8.5	3.58	10.2	5.02	16.5	5.84	46.8	39.0	34.3	19.7	42.9
Copper	1000	μg/L	10.3	4	6.31	17.4	4.08	ND	3.22 ER	1.77 ER	4.15 ER	1.03 ER	ND	ND
Lead	10	μg/L	4.54	3	1.71	ND	ND	ND	ND	ND	ND	ND	ND	7.88
Mercury	2	μg/L	ND	ND	ND	0.13	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	100	μg/L	3.92	2	ND	ND	2.08	1.20	5.56	5.46	1.18 ER	1.69 ER	ND	ND
Selenium	50	μg/L	ND	ND	ND	7.64	ND	ND	ND	7.20 ER	10.9 ER	ND	ND	ND
Thallium	10	μg/L	3.70	ND	ND	ND	ND	ND	ND	ND	ND	2.00 ER	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected
#### Table 5-6 Groundwater Sampling Results Site 750 MW03 (Apr97-Nov05) Fort Monmouth, New Jersey

Round No.			24	25	26	27	28	29
WELL ID	** NJDEP	T Inita	750MW03	750MW03	750MW03	750MW03	750MW03	750MW03
Date Collected	Criteria	Units	08/23/04	11/01/04	01/13/05	04/15/05	07/07/05	11/01/05
ANALYTE / Lab ID			40618.03	40759.03	50023.06	50203.06	50339.06	50571.06
VOCs								
1,1,1-Trichloroethane	30	μg/L	ND	ND	ND	ND	ND	ND
Acetone	700	μg/L	ND	ND	ND	ND	ND	ND
Benzene	1	μg/L	ND	ND	ND	ND	ND	0.23 J
Methyl tert -butyl ether	NLE	μg/L	42.25	12.84	1.24 J	4.46	ND	2.91
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND
TICs*	500	μg/L	3	ND	ND	ND	ND	6
Metals								
Antimony	20	μg/L	ND	ND	ND	ND	ND	ND
Arsenic	8	μg/L	6.12	ND	ND	14.6	12	ND
Barium	2000	μg/L	11.3	12.8	12.6	53.8	13	28.7
Beryllium	20	μg/L	ND	ND	ND	0.868	ND	ND
Cadmium	4	μg/L	ND	ND	ND	ND	ND	ND
Chromium	100	μg/L	27.2	13.9	21.4	126	28.4	ND
Copper	1000	μg/L	ND	ND	ND	13.6	ND	ND
Lead	10	μg/L	ND	ND	ND	22.7	ND	ND
Mercury	2	μg/L	ND	ND	ND	ND	ND	ND
Nickel	100	μg/L	ND	ND	ND	7.06	ND	ND
Selenium	50	μg/L	ND	ND	ND	ND	ND	ND
Thallium	10	μg/L	ND	ND	ND	ND	ND	ND

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

NLE- No limit established

# Table 5-6Groundwater Sampling ResultsSite 750 MW03 (Jan06-Jul07)Fort Monmouth, New Jersey

Round No.			30	31	32	32	33	34	35	36	37
WELL ID	** NJDEP	Unite	750MW03	750MW03	750MW03	MW03 Duplicate	750MW03	750MW03	750MW03	750MW03	750MW03
Date Collected	Criteria	Units	01/17/06	04/14/06	07/17/06	07/17/06	10/30/06	02/28/07	05/24/07	07/26/07	
ANALYTE / Lab ID			60032.06	60155.06	60320.06	60320.03	60471.06	70077.06	70191.06	70282.06	
VOCs											
1,1,1-Trichloroethane	30	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	NS
Acetone	6000	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	NS
Benzene	1	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	NS
Methyl tert -butyl ether	70	μg/L	1.25 J	ND	ND	ND	0.40 J	ND	ND	ND	NS
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	NS
TICs*	500	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	NS
Metals											
Antimony	6	μg/L	ND	ND	2.86 ER	4.78 ER	ND	ND	ND	ND	NS
Arsenic	3	μg/L	ND	5.73	6.00	ND	2.41 ER	ND	8.51	ND	NS
Barium	2000	μg/L	19.7	10.5	14.4	14.2	17.5	13.1	16.9	122	NS
Beryllium	1	μg/L	ND	ND	ND	ND	0.247 ER	ND	ND	0.467 ER	NS
Cadmium	4	μg/L	ND	ND	ND	ND	0.457 ER	ND	0.412 ER	1.42 ER	NS
Chromium	70	μg/L	31.8	44.1	19.4	19.2	14.6	14.9	27.9	0.942 ER	NS
Copper	1300	μg/L	ND	ND	3.71 ER	3.78 ER	ND	2.36 ER	12.3	7.60	NS
Lead	5	μg/L	ND	ND	ND	ND	ND	ND	ND	0.712 ER	NS
Mercury	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	NS
Nickel	100	μg/L	ND	ND	ND	ND	1.21 ER	ND	0.743 ER	20.3	NS
Selenium	40	μg/L	ND	ND	ND	ND	11.9 ER	8.76 ER	7.78 ER	5.60 ER	NS
Thallium	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	NS

Notes:

*TICs - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (November 7, 2005)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

NS - Not sampled

#### Table 5-6 Groundwater Sampling Results Site 750 MW03 (Jan08-Nov09) Fort Monmouth, New Jersey

Round No.			38	39	40	41	42	43	44	44	45
WELL ID	** NJDEP	Unita	750MW03								
Date Collected	Criteria	Units	01/02/08	04/30/08	08/12/08	10/31/08	03/31/09	05/22/09	08/28/09	09/24/09	11/03/09
ANALYTE / Lab ID			80001.06	80143.06	80292.06	80396.06	90135.06	90210.06	90361.06	90397.06	90434.06
VOCs											
1,1,1-Trichloroethane	30	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Acetone	6000	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Benzene	1	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Methyl tert -butyl ether	70	μg/L	ND	ND	ND	0.31 J	ND	ND	NA	ND	ND
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
TICs*	500	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Metals											
Antimony	6	μg/L	ND	ND	ND	ND	21.1	1.43 ER	7.72 ER	NA	5.68 ER
Arsenic	3	μg/L	ND	4.26 ER	6.54	3.71 ER	73.0	18.8	25.7	NA	1.99
Barium	6000	μg/L	18.6	11.4	6.21	8.88	16.7	15.5	19.5	NA	11.4
	1	μg/L	ND	NA	ND						
Cadmium	4	μg/L	0.403 ER	ND	ND	0.333 ER	ND	ND	ND	NA	ND
Chromium	70	μg/L	3.22 ER	38.5	32.6	20.0	9.83	38.2	5.16	NA	8.55
Copper	1300	μg/L	3.08 ER	2.60 ER	0.978 ER	1.53 ER	19.7	5.49	1.29 ER	NA	2.03 ER
Lead	5	μg/L	ND	ND	ND	ND	6.68	ND	ND	NA	ND
Mercury	2	μg/L	ND	NA	ND						
Nickel	100	μg/L	1.22 ER	2.04 ER	ND	2.12 ER	ND	2.05 ER	2.06 ER	NA	1.20 ER
Selenium	40	μg/L	4.55 ER	7.32 ER	4.43 ER	7.82 ER	99.3	6.10 ER	74.4	NA	14.0 ER
Thallium	2	μg/L	ND	NA	ND						

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (July 27, 2007)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

# Table 5-7Groundwater Sampling ResultsSite 750 MW04 (Apr97-Nov05)Fort Monmouth, New Jersey

Round No.			1	2	3	4	4	5	6	7	8	9	10	11
WELL ID	** NJDEP	Unito	750MW04	750MW04	750MW04	750MW04	MW04 Duplicate	750MW04						
Date Collected	Criteria	Units	04/10/97	12/09/97	03/17/98	05/26/98	05/26/98	05/28/98	03/24/99	06/17/99	07/28/99	10/27/99	09/15/00	11/21/00
ANALYTE / Lab ID			2445.04	3205.04	3415.06	3592.09	3592.10	3599.01	4369.09	4555.09	4659.10	4889.10	5690.07	5872.09
VOCs														
1,1,1-Trichloroethane	30	μg/L	7.31	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
Acetone	700	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	4.25	ND	ND	ND
Benzene	1	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
Chloroform	6	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
Ethylbenzene	700	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
Methyl tert -butyl ether	NLE	μg/L	ND	50.94	10.76	3.66	3.09	NA	3.65	1.95	1.76	2.96	ND	ND
Methylene chloride	3	μg/L	3.36	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
Styrene	100	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
Toluene	1000	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
<i>m</i> + <i>p</i> -Xylenes	NLE	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
o-Xylene	NLE	μg/L	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND
Xylenes (Total)	1000	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	500	μg/L	40	10	ND	9	ND	NA	ND	ND	ND	ND	ND	ND
Metals														
Antimony	20	μg/L	NA	ND	ND	NA	3.3	ND	2.26	ND	ND	ND	ND	4.27
Arsenic	8	μg/L	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Barium	2000	μg/L	NA	75.6	30.7	NA	20.2	19.4	53.1	38.2	51.1	39.3	47.8	47.5
Beryllium	20	μg/L	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	4	μg/L	NA	ND	ND	NA	ND	ND	1.27	ND	ND	ND	ND	0.641
Chromium	100	μg/L	NA	8.8	ND	NA	10.2	1.9	10.4	12.0	11.5	9.77	ND	14.4
Copper	1000	μg/L	NA	14.0	7.1	NA	ND	ND	ND	ND	6.28	10.0	ND	ND
Lead	10	μg/L	3.1	9.0	ND	NA	ND	ND	ND	ND	2.33	ND	ND	5.58
Mercury	2	μg/L	NA	0.9	ND	NA	5.0	ND	ND	0.13	ND	0.2	0.1	ND
Nickel	100	μg/L	NA	5.4	1.8	NA	1.7	1.0	1.53	2.65	2.19	2.75	ND	2.32
Selenium	50	μg/L	NA	ND	ND	NA	4.8	ND	ND	ND	ND	5.25	4.61	ND
Thallium	10	μg/L	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	8.71

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

NLE - No limit established

Total Xylenes - $\sum$  of o-Xylene and m+p-Xylenes

# Table 5-7Groundwater Sampling ResultsSite 750 MW04 (Apr97-Nov05)Fort Monmouth, New Jersey

Round No.			12	13	14	15	16	17	18	19	20	21	22	23
WELL ID	** NJDEP	T Inita	750MW04											
Date Collected	Criteria	Units	02/08/01	08/27/01	12/12/01	03/15/02	05/17/02	07/31/02	11/05/02	03/06/03	06/13/03	09/26/03	11/21/03	02/04/04
ANALYTE / Lab ID			670.06	16385.06	16646.06	20156.09	20304.09	20492.09	20789.09	30100.09	30287.09	30611.07	30752.04	40099.04
VOCs														
1,1,1-Trichloroethane	30	μg/L	ND											
Acetone	700	μg/L	ND											
Benzene	1	μg/L	ND	1.08 J	0.47 J	ND								
Chloroform	6	μg/L	ND	0.83 J	ND									
Ethylbenzene	700	μg/L	ND											
Methyl tert -butyl ether	NLE	μg/L	ND	ND	ND	ND	ND	ND	57.74	11.65	159.47	96.05	52.95	20.99
Methylene chloride	3	μg/L	ND											
Styrene	100	μg/L	ND											
Toluene	1000	μg/L	ND											
m+p-Xylenes	NLE	μg/L	ND											
o-Xylene	NLE	μg/L	ND											
Xylenes (Total)	1000	μg/L	ND											
TICs*	500	μg/L	ND	25	6	ND								
Metals														-
Antimony	20	μg/L	2.60	3.37	ND	2.28	ND							
Arsenic	8	μg/L	4.90	ND	3.79	2.48	26.0	5.37	ND	ND	ND	3.36 ER	4.63 ER	12.0
Barium	2000	μg/L	48.3	48.3	95.3	75.2	32.0	42.1	34.2	35.8	12.3	17.7	23.1	9.8
Beryllium	20	μg/L	ND	0.066 ER	ND	0.058 ER	ND							
Cadmium	4	μg/L	ND											
Chromium	100	μg/L	6.78	8.45	15.9	20.1	12.0	4.13	17.8	17.6	40.3	21.2	9.53	22.6
Copper	1000	μg/L	ND	9.14	6.18	9.94	8.24	10.8	ND	3.51 ER	1.22 ER	3.73 ER	0.500 ER	ND
Lead	10	μg/L	ND	2.92	ND	3.07	ND							
Mercury	2	μg/L	ND	ND	ND	ND	0.12	ND						
Nickel	100	μg/L	1.18	2.96	1.49	1.41	ND	ND	2.84	2.53 ER	39.6	ND	ND	ND
Selenium	50	μg/L	ND	ND	ND	ND	14.2	5.33	6.97	9.79 ER	7.78 ER	9.55 ER	ND	ND
Thallium	10	μg/L	ND											

Notes:

*TICs  $\,$  - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

NLE - No limit established

Total Xylenes - $\sum$  of o-Xylene and m+p-Xylenes

#### Table 5-7 Groundwater Sampling Results Site 750 MW04 (Apr97-Nov05) Fort Monmouth, New Jersey

Round No.			24	25	26	27	28	29	29	30
WELL ID	** NJDEP	TT.: 14-	750MW04	750MW04	750MW04	750MW04	750MW04	750MW04	MW04 Duplicate	750MW04
Date Collected	Criteria	Units	05/12/04	08/23/04	11/01/04	01/13/05	04/15/05	07/07/05	07/07/05	11/01/05
ANALYTE / Lab ID			40355.07	40618.04	40759.04	50023.07	50203.07	50339.07	50339.03	50571.07
VOCs										
1,1,1-Trichloroethane	30	μg/L	ND	ND						
Acetone	700	μg/L	ND	ND						
Benzene	1	μg/L	ND	ND	ND	ND	1.51 J	ND	ND	ND
Chloroform	6	μg/L	ND	ND						
Ethylbenzene	700	μg/L	ND	ND	ND	ND	0.65 J	ND	ND	ND
Methyl tert -butyl ether	NLE	μg/L	12.86	5.06	12.97	23.44	86.94	1.83 J	ND	0.62 J
Methylene chloride	3	μg/L	ND	ND						
Styrene	100	μg/L	ND	ND	ND	ND	0.53 J	ND	ND	ND
Toluene	1000	μg/L	ND	ND	ND	ND	1.90 J	ND	ND	ND
m+p-Xylenes	NLE	μg/L	ND	ND	ND	ND	2.49 J	ND	ND	ND
o-Xylene	NLE	μg/L	ND	ND	ND	ND	11.14	ND	ND	ND
Xylenes (Total)	1000	μg/L	ND	ND	ND	ND	13.63	ND	ND	ND
TICs*	500	μg/L	ND	ND	ND	ND	114	ND	16	5
Metals										
Antimony	20	μg/L	ND	ND						
Arsenic	8	μg/L	ND	8.42	5.30	ND	16.1	ND	ND	ND
Barium	2000	μg/L	37.0	5.86	7.82	13.0	83.6	27.1	28.6	24.9
Beryllium	20	μg/L	ND	ND						
Cadmium	4	μg/L	ND	ND						
Chromium	100	μg/L	34.0	29.5	17.3	13.1	91.4	18.4	19.2	ND
Copper	1000	μg/L	ND	ND	5.08	ND	20.1	6	7	7.31
Lead	10	μg/L	5.96	ND	ND	ND	33.4	ND	ND	ND
Mercury	2	μg/L	ND	ND						
Nickel	100	μg/L	ND	ND	ND	ND	7.20	ND	ND	ND
Selenium	50	μg/L	22.2	ND	ND	ND	ND	ND	ND	ND
Thallium	10	μg/L	ND	ND						

Notes:

*TICs - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (January 7, 1993)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

NA - Not analyzed

ND - Not detected

NLE - No limit established

Total Xylenes -  $\sum$  of o-Xylene and m+p-Xylenes

# Table 5-7Groundwater Sampling ResultsSite 750 MW04 (Jan06-Jul07)Fort Monmouth, New Jersey

Round No.			31	31	32	33	34	34	35	36	37	38
WELL ID	** NJDEP	Unita	750MW04	MW04 Duplicate	750MW04	750MW04	750MW04	MW04 Duplicate	750MW04	750MW04	750MW04	750MW04
Date Collected	Criteria	Units	01/17/06	01/17/06	04/14/06	07/17/06	10/30/06	10/30/06	02/28/07	05/24/07	07/26/07	
ANALYTE / Lab ID			60032.07	60032.03	60155.07	60320.07	60471.07	60471.03	70077.07	70191.07	70282.07	
VOCs												
1,1,1-Trichloroethane	30	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Acetone	6000	μg/L	ND	ND	ND	ND	ND	0.62 J	ND	ND	ND	NS
Benzene	1	μg/L	0.35 J	0.34 J	ND	ND	ND	ND	ND	ND	ND	NS
Chloroform	70	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	700	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Methyl tert -butyl ether	70	μg/L	6.20	5.94	ND	ND	0.17	0.18	ND	ND	ND	NS
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Styrene	100	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Toluene	1000	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
<i>m</i> + <i>p</i> -Xylenes	NLE	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
o-Xylene	NLE	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Xylenes (Total)	1000	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TICs*	500	μg/L	ND	ND	ND	ND	ND	ND	ND	17	ND	NS
Metals												
Antimony	6	μg/L	ND	ND	3.03 ER	5.75 ER	ND	ND	ND	ND	ND	NS
Arsenic	3	μg/L	ND	ND	ND	2.06 ER	ND	ND	ND	5.74	ND	NS
Barium	2000	μg/L	38.8	39.7	27.3	28.1	23.0	24.3	25.9	24.0	24.6	NS
Beryllium	1	μg/L	ND	ND	ND	ND	0.241 ER	0.201 ER	ND	ND	ND	NS
Cadmium	4	μg/L	ND	ND	ND	ND	0.515 ER	ND	ND	ND	ND	NS
Chromium	70	μg/L	ND	ND	24.9	13.7	4.98 ER	5.30	11.1	9.86	17.7	NS
Copper	1300	μg/L	ND	ND	124	7.53	3.06 ER	3.12 ER	6.10	3.02 ER	6.43	NS
Lead	5	μg/L	ND	ND	14.4	ND	ND	ND	ND	ND	ND	NS
Mercury	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS
Nickel	100	μg/L	ND	ND	ND	ND	1.38 ER	ND	4.96 ER	ND	ND	NS
Selenium	40	μg/L	ND	ND	ND	ND	13.2 ER	9.44 ER	9.95 ER	11.5	10.7	NS
Thallium	2	μg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS

Notes:

*TICs - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (November 7, 2005)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

NS - Not sampled

Total Xylenes -  $\sum$  of o-Xylene and m+p-Xylenes

# Table 5-7 Groundwater Sampling Results Site 750 MW04 (Jan08-Nov09) Fort Monmouth, New Jersey

Round No.			39	40	41	42	43	44	44	45	46
WELL ID	** NJDEP	Unite	750MW04								
Date Collected	Criteria	Onits	01/02/08	04/30/08	08/12/08	10/31/08	03/31/09	05/22/09	08/28/09	09/24/09	11/03/09
ANALYTE / Lab ID			80001.07	80143.07	80292.07	80396.07	90135.07	90210.07	90361.07	90397.07	90434.07
VOCs											
1,1,1-Trichloroethane	30	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Acetone	6000	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Benzene	1	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Chloroform	70	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Ethylbenzene	700	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Methyl tert -butyl ether	70	μg/L	ND	0.41 J	ND	1.46 J	ND	ND	NA	ND	ND
Methylene chloride	3	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Styrene	100	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Toluene	600	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
m+p-Xylenes	NLE	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
o-Xylene	NLE	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Xylenes (Total)	1000	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
TICs*	500	μg/L	ND	ND	ND	ND	ND	ND	NA	ND	ND
Metals											
	6	μg/L	ND	ND	ND	ND	16.8	ND	6.94 ER	NA	ND
Arsenic	3	μg/L	ND	ND	5.23	ND	79.3	22.4	28.0	NA	1.31
Barium	6000	μg/L	24.6	22.0	17.7	28.8	31.9	28.3	20.9	NA	21.0
Cadmium	4	μg/L	0.337 ER	ND	ND	0.418 ER	ND	ND	ND	NA	ND
Chromium	70	μg/L	4.23 ER	9.59	19.9	3.93 ER	2.73 ER	9.17	10.2	NA	6.38
Copper	1300	μg/L	9.01	4.64 ER	1.45 ER	2.43 ER	6.32	6.02	1.39 ER	NA	1.22 ER
Lead	5	μg/L	ND	ND	ND	ND	ND	1.93 ER	ND	NA	ND
Mercury	2	μg/L	ND	NA	ND						
Nickel	100	μg/L	6.55	2.17 ER	ND	0.864 ER	ND	0.897 ER	ND	NA	1.46 ER
Selenium	40	μg/L	4.16 ER	10.5	6.55 ER	7.04 ER	89.6	8.84 ER	63.7	NA	21.1
Thallium	2	μg/L	ND	NA	ND						

Notes:

*TICs - Tentatively identified compounds, cannot exceed 500 ppb for

VOCs and SVOCs. No individual compound can exceed 100 ppb.

**NJDEP Groundwater quality criteria as per N.J.A.C. 7:9-6 (July 27, 2007)

Exceedances of NJDEP Groundwater Quality Criteria are shaded and bold

ER - Estimated result

J - Estimated concentration exceeds the MDL and is less than the RL

ND - Not detected

NLE - No limit established

Total Xylenes -  $\sum$  of o-Xylene and m+p-Xylenes

#### ENCLOSURE 4 of Attachment E

### 11/03/09 Analytical Data Package for Groundwater

## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS PHONE: (732)532-6224 FAX: (732)532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING



ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703 Excerpts for 750MW01, 750MW02, 750MW03, and 750MW04 only

PROJECT: UST/ Monitoring Program

#### **SAMPLE LOCATION AND IDENTIFICATION**

<u>SITE</u>: 750

LABORATORY	MONITOR	NJDEP WELL ID#	SAMPLE
ID #	WELL#		DATE
9043404	750MW01**	29-28992	11/03/09
9043405	750MW02	29-28993	11/03/09
9043406	750MW03	29-28994	11/03/09
9043407	750MW04	29-28995	11/03/09
9043408	750MW01A***		11/03/09
9043409	750MW02A*		11/03/09
9043410	750MW03A*	÷-	11/03/09
9043411	750MW04A*		11/03/09

*New Wells Round I

**Duplicate Sample for VOA and TAL Metals is 9043404.

*** Duplicate Sample for BN is 9043408.

NJDEP Laboratory Certification #13461

20/10 Dean Tardiff/Date:

Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

Seantural 3/15/10

Dean Tardiff

SAMPLING

## 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

g Laboratory Chain of Custody Record

Customer: $\mathcal{JOE}$	FALLON	Project No:				Analysis Parameters								Comments:
Phone #: 732-5	532-6223	Location: 4	TH QUI	ARTO	R		$\sim$							
()DERA ()OMA	( )Other:	MONITOR	WELLS	4mPl	NG	14	767	- V1						
Samplers Name / Co	mpany: WACTER F	EUNK,	1715	Sample	#	14	(1)	5						
LIMS/Work Order #	Sample Location	Date	Time	Туре	bottles		Ŋ	6						Remarks / Preservation Method
96494.01	750 TRIPBLANK	11-3-09	9:00	AQ	Z	$\ge$								
,02	750 FIELD BLANK	11-3-09	12:20	AQ	4	$\ge$	$\ge$	$\ge$						
,03	750 DUP.	11-3-09	*- <u></u>	Αġ	3	$\ge$	$\ge$							
,04	750 MW#01	11-3-09	15:30	AΫ	3	$\ge$	$\ge$		-					29-28992
.05	750 MW#02	11-3-09	15:00	AQ	3	$\times$	$\geq$							29-28993
.06	750 MW#03	11-3-09	15:10	AQ	3	$\ge$	$\succ$							29-28994
,07	753 MW#04	11-3-09	15:20	AQ	3	$\ge$	$\ge$							29-28995
108	750 MW#01A	11-3-09	12:30	AQ	4	X		$\ge$						
107	750 MW#02A	11-3-09	12:50	AQ	3	$\ge$		$\bowtie$			_			
e/0	750 MW #03 A	11-3-09	17:00	AQ	3_	$\geq$		$\ge$						
d	750 MW#04A	11-3-04	13:20	AQ	3	$\ge$		$\ge$						
.12	750 MW#0/ADVP	11-3-09	12:30	AQ	1			$\geq$						
						-	•							
Relinquished By Stenat	re): Date/Time: 20040 14/03/69 15:55	Received by	(signature): <u>MM</u>	N	Relind	quished	by (sig	gnature)	:	Date/	Time:	Receiv	ved by	(signature):
Relinquished by (signate	ire): Date/Time:	Received by (signature): Relin					inquished by (signature): Date/Time: Received by						ved by	(signature):
Report Type: ()Full, (	)Reduced, ()Scre	en / non-certif	ied, ()EDD			Com	nents:							· ·
Turnaround time: () Star	ndard 3 wks, ()Rush Wk.,_()	ASAP Verbal	Hrs.											

Page __/_ of __/

## SAMPLE RECEIPT FORM

Date Received: 11-4-09	Work Order ID#: <u>404-34</u>
Site/Proj. Name:	Cooler Temp (°C): <u>3.0</u>
Received By: J. URiguit	Sign: plugeline
(Print name)	
<u>Check the appropriate the appropriate the appropriate the second /u>	<u>riate box</u>
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 ar	nd legibly? 🔄 yes 🗆 no
4. Was the chain of custody signed in the approp	riate place? 🖉 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes □ no
6. Were the correct containers/preservatives used	d? 🖉 yes 🗆 no
7. Was a sufficient amount of sample supplied?	yes 🗆 no
8. Were air bubbles present in VOA vials?	🗌 yeş 🖉 no 🗌 n/a
9. Were samples received on ice?	yes 🗌 no
10. Were analyze-immediately tests perform with	iin 15 minutes □ yes□ no ☑ n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
1049411-11	NHA	HCL			
· · · · · · · · · · · · · · · · · · ·	7				
			•		
					·
· · · · · · · · · · · · · · · · · · ·					
	-				
· · ·			· · · · · · · · · · · · · · · · · · ·		

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Comments:_____

00000

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## 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

Chain of Custody Record

NJDEP Certification #13461

Customer: Jacque	Project No:			Analysis Parameters							Comments:			
Phone #: (732)532-4359		Location: 75	ocation: 750											
()DERA ()OMA (	)Other:				6									
Samplers Name / Con	npany:			Sample	#	::::: +∎								
LIMS/Work Order #	Sample Location	Date	Time	Туре	bottles	BN								Remarks / Preservation Method
9043402	Field Blank	11/3/2009	12:20	AQ	1	Х			tel in televiele					
9043408	750MW01A	11/3/2009	12:30	AQ	1	X					-			
9043408DUP.	750MW01A	11/3/2009	12:30	AQ	1	Х								
9043409	750MW02A	11/3/2009	12:50	AQ	1	Х								
9043410	750MW03A	11/3/2009	13:00	AQ	1	Х								· ·
9043411	750MW04A	11/3/2009	13:20	AQ	1	Х								
	······································													
	· · · · · · · · · · · · · · · · · · ·							•						
- <u></u> -														
			1											
Relinquished by (signatur	re): Date/Time:	Redeived by (signature):		Relind	nquished by (signature):		):	Date/Time: Received by		ved by	(signature):			
Relinquished by (signature): Date/Time:		Received by	(signature):		Relind	nquished by (signature):		):	Date/Time: Rece		Recei	eceived by (signature):		
Report Type: ()Full, ()	Reduced, (X)Standard, ()Scr	een / non-certif	ied, ()EDD			Comr	nents:	DK9/	2009-	389 ()	PO C	09-20	650)	
Turnaround time: (X)Star	dard 3 wks, ()Rush Wk., _(	)ASAP Verba	lHrs.							`			-	
print legibly				Page	/ of				<u></u>	N	o Se	A1		new coc. 1.XLS11/4/2009

LOCATION: 750 MW #:01 NJDEP ID # 29-28992 NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09 WEATHER: Sunny and cool. TIDE: N/A	COM-VINNELL SI	Sampling C Accordance v SAM ERVICES	onducted in vith TVS SOP -0205
			TDOW-13.41
Initial Readings:			
Elevation of Casing Survey Mark:			5.73 ft
Depth of Well:			13.41 ft
Height of Water in Well:			7.68 ft
PID/FID Reading:			0.00 ppm
Gallons of Water to be Purged:		411 II) <b>A</b>	15 Gal.
Purge Method: Peristaltic Pump/C Purge Rate: Not to Exceed Well I	Dther (Specify) Draw Down of 0.5	5 15/65	Gal/Min.
<b>Purge Data:</b> Start Time of Purging: 14:10 End Time of Purging: 15:15		· .	
	Initial Value	Pre-Sample	Post-Sample
pH:	5.84 su	6.52 su	5.22 su
Temperature:	20.60 ( °C)	20.46 ( °C)	20.46 ( °C)
Specific Conductivity:	3084 us/cm	3020 us/cm	2959 us/cm
ORP:	5 mv	-41 mv	-78 mv
DO:	2.65 mg/L	1.86 mg/L	2.02 mg/L
Depth to Water Post Purge:	9.36 ft	-	-
Depth to Water Post Sampling:	9.44 ft		
· · · ·			
Sampling Start Time:	15:30		
Sampling Start Time: Sampling End Time:	15:30 15:35		
Sampling Start Time: Sampling End Time: Comments: DUP. here.	15:30 15:35		
Sampling Start Time: Sampling End Time: Comments: DUP. here.	15:30 15:35		

LOCATION: 750 MW #:02 NJDEP ID # 29-28993 NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09 WEATHER: Sunny and cool. TIDE: N/A	OM-VINNELL S	Sampling C Accordance SAM ERVICES	Conducted in with TVS SOP I-0205
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2 Purge Method: Peristaltic Pump/O Purge Rate: Not to Exceed Well D	" well or 0.65 for ther (Specify) raw Down of 0.5	7 4" well) x 3 = 5' 11/48	TDOW-11.55 5.98 ft 11.55 ft 5.57 ft 0.00 ppm 11 Gal. 10.86 Gal/Min.
Purge Data: Start Time of Purging: 14:03 End Time of Purging: 14:58 pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	Initial Value 5.89 su 20.39 (°C) 7184 us/cm 34 mv 2.44 mg/L 10.16 ft 10.28 ft 15:00 15:04	<b>Pre-Sample</b> 5.71 su 21.16 ( °C) 7717 us/cm 16 mv 2.21 mg/L	Post-Sample 5.62 su 20.91 ( °C) 7416 us/cm 12 mv 2.06 mg/L

LOCATION: 750 MW #:03 NJDEP ID # 29-28994 NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09 WEATHER: Sunny and cool. TIDE: N/A	OM-VINNELL S	Sampling C Accordance SAM ERVICES	Conducted in with TVS SOP -0205
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2 Purge Method: Peristaltic Pump/O Purge Rate: Not to Exceed Well D	" well or 0.65 for ther (Specify) traw Down of 0.5	4" well) x 3 = 5 15/65	TDOW-17.28 9.96 ft 17.28 ft 7.32 ft 0.00 ppm 15 Gal. 14.27 Gal/Min.
Purge Data: Start Time of Purging: 14:00 End Time of Purging: 15:05 pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	Initial Value 6.68 su 16.60 (°C) 5217 us/cm 21 mv 1.70 mg/L 10.03 ft 10.06 ft 15:10 15:15	<b>Pre-Sample</b> 6.88 su 16.33 ( °C) 5108 us/cm -40 mv 1.08 mg/L	<b>Post-Sample</b> 7.28 su 16.43 ( °C) 5161 us/cm -59 mv 1.05 mg/L
Comments:			

LOCATION: 750 MW #:04 NJDEP ID # 29-28995 NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09 WEATHER: Sunny and cool. TIDE: N/A	OM-VINNELL S	Sampling ( Accordance SAM ERVICES	Conducted in with TVS SOP 1-0205
			TDOW-18.21
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well:			9.73 ft 18.21 ft 8 48 ft
PID/FID Reading:			0.40 IL 0.00 nnm
Gallons of Water to be Purged:			17 Gal.
Purge Method: Peristaltic Pump/C Purge Rate: Not to Exceed Well E <b>Purge Data:</b> Start Time of Purging: 13:54 End Time of Purging: 15:08	oraw Down of 0.5	5' 17/74	Gal/Min.
 	Initial Value	Pre-Sample	Post-Sample
pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	6.39 su 16.55 ( °C) 4839 us/cm 25 mv 1.76 mg/L 9.82 ft 9.86 ft 15:20 15:25	7.28 su 16.17 ( °C) 5104 us/cm -45 mv 1.19 mg/L	7.27 su 16.11 ( °C) 5067 us/cm -65 mv 1.12 mg/L
Comments:			

# CONFORMANCE/ NON-CONFORMANCE SUMMARY



#### GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
·1.	Chromatograms labe (Field samples a	led/Compounds identified nd method blanks)	<u>Yes</u>
2.	Retention times for c	hromatograms provided	Yes
3.	GC/MS Tune Specif	ications	
	a. b.	BFB Meet Criteria DFTPP Meet Criteria	<u>Yes</u> <u>NA</u>
4.	GC/MS Tuning Freq series and 12 hours f	uency – Performed every 24 hours for 600 or 8000 series	Yes
5.	GC/MS Calibration - analysis and continui sample analysis for 6	Yes	
6.	GC/MS Calibration	equirements	
	a. b.	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	<u>Yes</u> Yes
7.	Blank Contamination	- If yes, List compounds and concentrations in each blank:	No
	a.	VOA Fraction	
	b.	B/N Fraction NA	
	с.	Acid Fraction <u>NA</u>	
8.	Surrogate Recoveries	Meet Criteria	Yes
	If not met, list th outside the accep	ose compounds and their recoveries, which fall otable range:	
	а	VOA Fraction	
	ц. b.	B/N Fraction NA	
	c.	Acid Fraction <u>NA</u>	
	If not met, were as "estimated"?	the calculations checked and the results qualified	
0	Matrix Snike/Matrix	Snike Dunlicate Recoveries Meet Criteria	No
	(If not met. list those	compounds and their recoveries, which fall	
	outside the acceptable	e range).	
	a.	VOA Fraction: <u>Several compounds have high recoveries</u> , see summary form	
	b.	B/N Fraction <u>NA</u>	

c. Acid Fraction <u>NA</u>

			Indicate Yes, No, N/A
10.	Internal Standard (If not met, list th	Area/Retention Time Shift Meet Criteria ose compounds, which fall outside the acceptable range)	Yes
	a.	VOA Fraction	
	b.	B/N Fraction <u>NA</u>	
	с.	Acid Fraction <u>NA</u>	
11.	Extraction Holdir	ng Time Met	<u>NA</u>
	If not met, list the	number of days exceeded for each sample:	
12.	Analysis Holding	Time Met	<u>Yes</u>
	If not met, list the	number of days exceeded for each sample:	
Ađđ	itional Comments:		
•			
Lab	pratory Manager: _	Scantenary Date: 1/20/10	

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



N

#### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Fort Monmouth Environmental Testing Lab.

Job No JA33317

**Report Date** 

12/6/2009 6:26:47 PM

Site: 750

On 11/18/2009, 5 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.5 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA33317 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:	OP41049		

* All samples were extracted within the recommended method holding time.

* All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JA33267-2MS, JA33267-2MSD were used as the QC samples indicated.

- Blank Spike Recovery(s) for Atrazine are outside control limits.
- Matrix Spike Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Sample(s) OP41049-MSD have surrogates outside control limits. Probable cause due to matrix interference.

#### Extractables by GCMS By Method SW846 8270C BY SIM

Γ	Matrix AQ	Batch ID: OP41049	A
101	All samples were extracted within	the recommended method holding ti	me.

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA33267-2MS were used as the QC samples indicated.

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

Sunday, December 06, 2009



#### METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Lab ID:	90434	Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2	ICP Interference Check Sample Results Meet Criteria	Yes
3	Serial Dilutions Meet Criteria	Yes
4	Laboratory Control Samples Meet Criteria	Yes
5	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank	No
6	Spike Sample Recoveries Meet Criteria 9043103: Al = 55.9%	Yes
7	Duplicates Meet Criteria	Yes
8	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes
	Additional Comments:	
	Laboratory Manager: Dean Tandy Date: /	120/10

METHOD SUMMARY



#### Method Summary

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

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

#### EPA Method 3510/8270 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.

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

#### Milestone MLS 1200 MEGA

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

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

#### Perkin Elmer OPTIMA 3000 DV

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

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

#### Varian SpectrAA-640, VGA-77

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

# LABORATORY CHRONICLE



## **Laboratory Chronicle**

Lab ID: 90447

Site: 750 LTM

	Date	Hold Time
Date Sampled	11/03/09	NA
Receipt/Refrigeration	11/03/09	NA

#### Analyses

Volatiles	11/14,15/09	14 Days
Base Neutral	11/11,17/09	7 Days
TAL Metals	11/10/09	6 Months
Arsenic	11/17/09	6 Months
Mercury	11/13/09	28 Days
Thallium	11/16/09	6 Months
	Volatiles Base Neutral TAL Metals Arsenic Mercury Thallium	Volatiles       11/14,15/09         Base Neutral       11/11,17/09         TAL Metals       11/10/09         Arsenic       11/17/09         Mercury       11/13/09         Thallium       11/16/09

000021

# **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	VA4841.D		Sample Name	MB11040902
Operator	ROBERTS		Field ID	METHOD 624 11/04/09
Date Acquired	4 Nov 2009	7:26 pm	Sample Multiplier	1

CAS#	Compound Name	RТ	Resnanse	Result		Regulatory Level (ug/l)*	MDL	$\mathbf{RL}$	Oualifiers
107028	Acrolein			pot	detected	5	2.09 ug	/L 5.00 ug/L	
107131	Acrylonitrile	1		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	1		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 1.00 ug/L	
74-87-3	Chloromethane	1		not	detected	nle	0.10 ug	/L 1.00 ug/L	
75-01-4	Vinyl Chloride	1		not	detected	1	0.22 ug	/L 1.00 ug/L	
74-83-9	Bromomethane	1		not	detected	10	0.25 ug	/L 1.00 ug/L	
75-00-3	Chloroethane			not	detected	пle	0,22 ug	/L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug	/L 1.00 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	Vinvl Acetate			not	detected	7000 ·	0.20 ug	/L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug	/L 1.00 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	1		not	detected	1	0.16 ug	/L 0.50 ug/L	
107-06-2	1 2-Dichioroethane			not	detected	2	0.19 ug	/L 0.50 ug/L	
79-01-6	Trichloroethene			not	detected	I	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	I	0.14 ug	/L 0.50 ug/L	
110-75-8	2-Chloroethyl vinvl ether .			not	detected	nle	0,25 ug	/L 1.00 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 1,00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug	/L 0.50 ug/L	
10061-02-6	trans-1 3-Dichloronropene			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	Ethylhenzene			not	detected	700	0.16 ug	/L 0.50 ug/L	
630-20-6	1 1 1 2-tetrachloroethane			not	detected	j	0.15 ug	/L 0.50 ug/L	
1330-20-7	m+p-Xvlenes			not	detected	nle	0.27 ug	/L 1.00 ug/L	
1330-20-7	o-Xvlene	I		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 1.00 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-Dichlorohenzene			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



VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

		TENTATI	VELY IDEN	TIFIED COMP	POUND	S <u>.</u>	ND44040	
Lab Name:	FMETL			Contra	ct:		WB11040	902
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS	No.:	S	DG No.: 90434	1 .
Matrix: (soil/v	vater)	WATER	-	¢	Lab Sa	mple ID:	MB11040902	
Sample wt/vo	ol:	5.0	(g/ml) ML		Lab File	e ID:	VA4841.D	_
Level: (low/n	ned)	LOW	-		Date R	eceived:	11/3/2009	
% Moisture: r	not dec.				Date A	nalyzed:	11/4/2009	
GC Column:	RTX-V	<u>M</u> ID: <u>0.2</u>	2 <u>5</u> (mm)		Dilution	Factor:	1.0 ·	
Soil Extract V	olume:		(uL)		Soil Ali	quot Volu	Ime:	_ (uL)
Number TICs	found:	0	_	CONCENTF (ug/L or ug/l	RATION Kg)	UNITS: UG/L		
CAS NO.		COMPOU	ND NAME		R	r es	ST. CONC.	Q

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

Regulatory Level (ug/l)*

Data File Operator Date Acquired	VA4843.D ROBERTS 4 Nov 2009	8:28 pm	Sample Name Field ID Sample Multiplier	9043401 750 TRIP BLANK 1	

CAS#	Compound Name	вт	Resnonse	Result	ł	Regulatory Level (ug/l)*	MDL	RL	Oualifiers
107028	Acrolein			not	detected	5	2.09 ug/	L 5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.64 ug/	( 5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	001	1.89 ug/	L 5.00 ug/L	
1634044	Methyl-tert-Butyl ether		<u></u>	not	detected	70	0.18 ug/	L 0.50 ug/L	
108203	Di-isopronyl ether			not	detected	20000	0.12 ug/	L 0,50 ug/L	,
75718	Dichlorodifluoromethane	1		not	detected	1000	0,22 ug/	L 1.00 ug/L	
74-87-3	Chloromethane		· · · · · · · · · · · · · · · · · · ·	not	detected	nle	0,10 ug/	L 1.00 ug/L	
75-01-4	Vinvi Chloride			not	detected	1	0.22 ug/	L 1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25 ug/	L 1.00 ug/L	
75-00-3	Chloroethane	1		not	detected	ole	0.22 ug/	L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/	L 1,00 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	1		not	detected	. 700	0.18 ug/	L 0.50 ug/L	
75-09-2	Methylene Chloride	1		not	detected	3	0.16 ug/	L 0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene	1	-	not	detected	100	0.20 ug/	L 0.50 ug/L	
75-35-3	1.1-Dichloroethane	1		not	detected	50	0,19 ug/	L 0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.20 ug/	L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/	L 1.00 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	1		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 1.00 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 1.00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug/	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 ug/	0.50 ug/L	
79-00-5	1.1.2-Trichloroethane			not	detected	3	0.14 ug/	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	1	0.18 ug/	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14 ug/	0.50_ug/L	
108-90-7	Chlorobenzene			not	detected	50	0.15 ug/	. 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		0.15 ug/	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27 ug/l	_ <u>1.00 ug/L</u>	
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/J	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.12 ug/	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/	<u>0.50 ug/L</u>	
95-50-1	1,2-Dichlorobenzene			not	detected	600	0.12 ug/l	<u>  0.50 ug/L</u>	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

#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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		TENTATI	VELY IDEN	TIFIED COMPOU	NDS		
Lab Name:	FMETL			Contract:		750 TRIP BL	ANK
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS No.		SDG No.: 90434	
Matrix: (soil/v	vater)	WATER	_	Lab	Sample II	D: 9043401	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab	File ID:	VA4843.D	_
Level: (low/n	ned)	LOW	_	Date	e Receive	d: <u>11/3/2009</u>	-
% Moisture: r	not dec.		<u></u>	Date	e Analyzeo	d: <u>11/4/2009</u>	_
GC Column:	RTX-V	<u>/M_</u> ID; <u>0.2</u>	25 (mm)	Dilu	tion Facto	r: <u>1.0</u>	_
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	. (uL)
				CONCENTRATI		S:	
Number TICs	s found:	0	<u> </u>	(ug/L or ug/Kg)	UG/L		
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q

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3/90 000027

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

Data File	VA4844.D	Sample Name	9043402
Operator	ROBERTS	Field ID	750 FIELD BLANK
Date Acquired	4 Nov 2009 8:59 pm	Sample Multiplier	1

<u> </u>		5.00	<b>D</b>	Decult		Regulatory Level (ug/l)*	MDI		рĭ	Qualifiers
CAS#	Compound Name	<u>R.1.</u>	Response	Result	datastad		2 00	11 <i>m</i> /T	5.00 ug/f	Quanners
107028	Acrolein			not	detected		1.64	<u>цель</u> ма/Г	5.00 ug/L	
107131	Acrylonitrile			not	detected	- 2	1.04	ug/L ug/T	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100	0.19		0.50 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.10	ид/С	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12	ug/L v.~/T	0.00 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22	<u>ug/L</u>	1.00 ug/L	····
74-87-3	Chloromethane			not	detected	nle	0.10	ug/L /r	1.00 ug/L	· · · · - · - · - · - · -
75-01-4	Vinyl Chloride			not	detected		0.22	ug/L	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25	ид/ш	1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22	ug/L	1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.10	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	0,10	ug/L væ/T	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	700	0,16	ug/L ua/T	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	3	0.10	ugyr.	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20	ugyr.	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	0.50 ug/L	1
78-93-3	2-Butanone			not	detected	300	0.10	ug/L	1.00 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	defected		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 Tetrachioride			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	I	0,18	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane	-		not	detected		0.16	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle.	0.25	ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0,16	ug/L	0.50 ug/L	···
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0,26	ug/L	<u>1.00 ug/L</u>	
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		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	nie	0.27	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	nie	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	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.1 <u>2</u>	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	ļ
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
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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

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					NDO		
Lab Name:	FMETL			Contract:			DEANN
Lab Code:	13461	Ca	se No.: MW	SAS No.	:	SDG No.: 90	)434
Matrix: (soil/v	vater)	WATER	-	Lab	Sample II	D: 9043402	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4844.D	
Level: (low/n	ned)	LOW	_	Dat	e Receive	d: <u>11/3/2009</u>	
% Moisture: r	not dec.			Dat	e Analyzeo	d: <u>11/4/2009</u>	
GC Column:	RTX-V	/ <u>M_</u> ID: <u>0.2</u>	25(mm)	Dilu	ition Facto	r: <u>1.0</u>	
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	(uL)
Number TICs	s found:	0	_	CONCENTRAT (ug/L or ug/Kg)	ION UNIT	S:	
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q



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

Bandatan ( mal /mal)

Data File	VA4845.D	Sample Name	9043403
Operator	ROBERTS	Field ID	750 DUP
Date Acquired	4 Nov 2009 9:30 pm	Sample Multiplier	1

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CAS#	Compound Name	<u>R.T.</u>	Response	Result			MDE	RL	Qualifiers
107028	Acrolein			not	detected	5	2.09 ug/1	, <u>5.00 ug/L</u>	
107131	Acrylonitrile	·		not	detected	2	1.64 ug/1	. <u>5.00 ug/L</u>	
75650	tert-Butyl alcohol			not	detected	100	1.89 ug/1	, <u>5.00 ug/L</u>	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.18 ug/1	, 0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12 ug/1	, 0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22 ug/L	, 1.00 ug/L	
74-87-3	Chloromethane			not	detected	nle	0.10 ug/1	, <u>1.00 ug/L</u>	
75-01-4	Vinyl Chloride	ļ		not	detected	1	0.22 ug/1	/ 1.00 ug/L	
74-83-9	Bromomethane			not	detected	- 10	0.25 ug/1	, 1.00 ug/L	
75-00-3	Chloroethane			not	detected	ple	0.22 ug/1	, <u>1,00 ug/L</u>	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/1	<u>, 1.00 ug/L</u>	
75-35-4	1,1-Dichloroethene			not	detected		0.20 ug/1	. 0.50 ug/L	
67-64-1	Acetone			not	detected	6000	0.18 ug/1	$\frac{0.50 \text{ ug/L}}{0.50 \text{ ug/L}}$	
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/1	, 0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20 ug/1	, 0.50 ug/L	1
75-35-3	1,1-Dichloroethane			not	detected	50	0.19 ug/1	, 0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.20 ug/1	. 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/I	<u>, 1.00 ug/L</u>	
156-59-2	cis-1,2-Dichloroethene			not	detected	70	0.14 ug/I	. 0.50 ug/L	
67-66-3	Chloroform	<u> </u>		not	detected	70	0.21 ug/1	. 0.50 ug/L	
75-55-6	1,1,1-Trichloroethane		·	not	detected	30	0.17 ug/1	. 0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	1	0.27 ug/I	, 0.50 ug/L	
71-43-2	Benzene			not	detected	<u>ļ 1</u> .	0.16 ug/1	, 0.50 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	2	0.19 ug/I	. 0,50 ug/L	
79-01-6	Trichloroethene			not	detected	1	0.18 ug/1	0.50 ug/L	· · · ·
78-87-5	1,2-Dichloropropane			not	detected	_1	0.16 ug/I	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
75-27-4	Bromodichloromethane			not	detected	11	0.14 ug/1	. 0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle	0.25 ug/I	/ 1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	1	0.16 ug/I	, 0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	nie	0.26 ug/I	. 1.00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug/I	, 0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0,12 ug/1	. 0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not	detected	3	0,14 ug/I	, 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/I	, 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	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	11	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	L		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	j

*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

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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

EPA SAMPLE NO. 

	750 DUD					
Lab Name:	FMETL			Contract:	750 DUP	
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS No.:	SDG No.: 90434	
Matrix: (soil/w	/ater)	WATER	_	Lab Sample ID	9043403	
Sample wt/vo	d:	5.0	(g/ml) ML	Lab File ID:	VA4845.D	
Level: (low/m	ned)	LOW	_	Date Received	: 11/3/2009	
% Moisture: r	not dec.			Date Analyzed	11/4/2009	
GC Column:	RTX-V	<u>M</u> ID: <u>0.</u>	25 (mm)	Dilution Factor	1.0	
Soil Extract V	olume:		(uL)	Soil Aliquot Vo	lume:	(uL)
CONCENTRATION UNITS:     (ug/L or ug/Kg)     UG/L						
Number TICs	found:	2				

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkane: Branched	10.48	4	J
2.	1H-Indene-dihydro-dimethyl-	23.87	4	J.

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

Data File	VA4846.D	•	Sample Name	9043404
Operator	ROBERTS		Field ID	750 MW#01
Date Acquired	4 Nov 2009 10:01 pm		Sample Multiplier	1

01.04	Commenced Name	n m	Dermonee	Dogulé		Regulatory Level (ug/l)*	MDI	DT.	Qualifiers
107029	Agentale	<u>K.I.</u>	Response	Result	detected	5	2 091	ICL 5 00 110/T	Quanners
107028	Acroiem	-		not	detected	2	1 64 1	10/L 5 (10 $10/L$	
75650	tert Bubd alcohol	·	· ·	not	detected	100	1 89 1	ug/L 5.00 ug/L	
1634044	Method tert Bubd ether	1		not	detected	70	0 18 1	1g/L 0.50 ug/L	
1024044	Di isopropulather		· · ·	not	detected	20000	0 12 1	ug/L 0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.221	ig/L 1.00 ug/L	
74-87-3	Chloromethane			not	detected	nle	0.10 1	1.00 ug/L	
75-01-4	Vinul Chloride			not	detected	1	0.22 1	ig/L 1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25 ι	1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22 ι	ıg/L 1.00 ug/L	
75-69-4	Trichlorofhoromethane	1		not	detected	2000	0.18 ι	ıg/L 1.00 ug/L	
75-35-4	1.1-Dichloroethene	1		not	detected	1	0.20 1	1g/L 0.50 ug/L	
. 67-64-1	Acetone	1		not	detected	6000	0.18	ug/L 0.50 ug/L	
75-15-0	Carbon Disulfide	1		not	detected	700	0.18 1	ug/L 0.50 ug/L	
75-09-2	Methylene Chloride	1		not	detected	3	0.16 ı	g/L 0.50 ug/L	
156-60-5	trans-1.2-Dichloroethene			not	detected	100	0.20 ı	ig/L 0.50 ug/L	
75-35-3	1.1-Dichloroethane	1		not	detected	50	0.19 ı	ig/L 0.50 ug/L	
108-05-4	Vinvi Acetate			not	detected .	7000	0.20 ı	ig/L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 1	ig/L 1.00 ug/L	
156-59-2	cis-1.2-Dichloroethene			not	detected	70	0.14 ı	ig/L 0.50 ug/L	
67-66-3	Chloroform			not	detected	70	0.21 1	ug/L 0.50 ug/L	
75-55-6	1.1.1-Trichloroethane			not	detected	30	0.17 t	ug/L 0.50 ug/L	<u> </u>
56-23-5	Carbon Tetrachloride			not	detected	1	0.27 ι	ıg/L 0.50 ug/L	
71-43-2	Benzene			not	detected	1	<u>0.16</u> ı	ig/L 0.50 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	2	0.19 t	ig/L 0.50 ug/L	
79-01-6	Trichloroethene			not	detected	1	0.18 u	ig/L 0.50 ug/L	
78-87-5	1,2-Dichloropropane			not	detected	1	0.16 t	g/L 0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected	1	<u> </u>	ig/L 0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle	0.25 ı	ıg/L 1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	1	<u>0.16</u> ı	ig/L 0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0.26 1	ig/L 1.00_ug/L	
108-88-3	Toluene			not	detected	1000	0.15	ıg/L 0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 ı	ig/L 0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			not	detected	3	0.14 ı	ıg/L 0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	1	0.18 1	ig/L 0.50 ug/L	
591-78-6	2-Hexanone			not	detected	<u>nle</u>	0.20 1	ig/L 0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14 1	ig/L 0.50 ug/L	
108-90-7	Chlorobenzene			not	detected	50	<u>0.15 </u> ι	ig/L 0.50 ug/L	
100-41-4	Ethylbenzene			not	detected	700	<u>0.16 u</u>	ig/L 0,50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	1	<u>0.15 u</u>	ig/L 0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27 u	ig/L 1.00 ug/L	
1330-20-7	o-Xylene			not	detected	nie	0.14 u	g/L 0.50 ug/L	
100-42-5	Styrene			not	detected	100	0.12 ı	g/L 0.50 ug/L	
75-25-2	Bromoform			not	detected	4	<u>0.14</u> ι	ig/L 1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	ii	0,12 u	ig/L 0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	detected	600	0.12 u	ug/L 0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	detected	75	0.12 u	g/L 0.50 ug/L	
95-50-1	1.2-Dichlorobenzene			not	detected	600	0.12 u	g/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

EPA SAMPLE NO. 

		TENTAL	IVELY IDENTIFIE		POUNDS	<b>350 105///0</b>	.
Lab Name:	FMETL			Contra	act:	750 10100#07	1
Lab Code:	13461	Ca	ase No.: <u>MW</u>	SAS	S No.: S	SDG No.: 90434	
Matrix: (soil/	water)	WATER			Lab Sample ID	: 9043404	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	<u> </u>	Lab File ID:	VA4846.D	
Level: (low/r	ned)	LOW			Date Received	: 11/3/2009	
% Moisture:	not dec.				Date Analyzed:	11/4/2009	
GC Column:	RTX-V	/ <u>M_</u> ID: <u>0</u> ,	.25 (mm)		Dilution Factor:	1.0	
Soil Extract \	/olume:		(uL)		Soil Aliquot Vol	ume:	(uL)
			СС	NCENT	RATION UNITS	:	

(ug/L or ug/Kg)

Number TICs found: 2

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· UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	Alkane: Branched	10.47	3	J
2.	1H-Indene-dihydro-dimethyl-	23.87	4	J

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

Data File	VA4847.D	Sample Name	9043405
Operator	ROBERTS	Field ID	750 MW#02
Date Acquired	4 Nov 2009 10:32 pm	Sample Multiplier	1

C & 84	Compound Name	рт	Decourse	Realf		Regulatory Level (ug/l)*	MDL	RL	Oualifiers
107028	Acrolein		Response	not	detected	5	2.09 ug	/L 5.00 ug/L	
107131	Acritonitrile		· · · · · · · · · · · · · · · · · · ·	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	
163/04/	Methyl tert Butyl ether			not	detected	70	0.18 ug	/L 0.50 ug/L	
1034044	Di jeonronul ether			not	detected	20000	0.12 ug	/L 0.50 ug/L	
75718	Dichloradifluoromethane			not	detected	1000	0.22 ug	/L 1.00 ug/L	
74-87-3	Chloromethane			not	detected	nle	0.10 ug	/L 1.00 ug/L	
75-01-4	Vinul Chloride			not	detected	1	0,22 ug	/L 1.00 ug/L	
74-83-9	Bromounethane			not	detected	10	0.25 ug	/L 1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22 ug	/L 1.00 ug/L	
75-69-4	Trichlorofluoromethane		-	not	detected	2000	0.18 ug	/L 1.00 ug/L	
75-35-4	1 1-Dichlozoethene			not	detected	I	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	Vinvl Acetate			not	detected	7000	0.20 ug	/L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug	/L 1.00 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-Trichioroethane			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-Dichloropropage			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 vinvi ether			not	detected	nle	0,25 ug	/L 1.00 ug/L	
10061-01-5	cis-1 3-Dichloroprozene			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 1.00 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 Trichioroethane			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-Heranone			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	Chlorobeuzene	·		not	detected	50	0.15 ug	/L 0.50 ug/L	
100-41-4	Ethylbenzena			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+n-Xvienes		<u></u>	not	detected	nle	0,27 ug	/L 1.00 ug/L	
1330-20-7	n-Xvlene			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 1.00 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

VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

		IENIAL	VELYIDE	NIFIEDC	JMPOUNDS		750 84	W#02
Lab Name:	FMETL			Co	ntract:		750 10	VV#U2
Lab Code:	13461	Cas	se No.: M	W	SAS No.:	SI	DG No.: <u>90</u>	434
Matrix: (soil/w	vater)	WATER	-		Lab Samp	le ID:	9043405	
Sample wt/vo	ol:	5.0	(g/ml) <u>N</u>	1L	Lab File II	D:	VA4847.D	
Level: (low/n	ned)	LOW			Date Rece	eived:	11/3/2009	
% Moisture: r	not dec.				Date Anal	yzed:	11/4/2009	
GC Column:	RTX-V	<u>M</u> ID: <u>0.2</u>	2 <u>5</u> (mm	)	Dilution Fa	actor:	1.0	
Soil Extract V	olume:		_ (uL)		Soil Alique	ot Volu	me:	(uL)
				CONCE	NTRATION U	NITS:		
Number TICs	s found:	0	—	(ug/L or	ug/Kg) U	G/L		
CAS NO.		COMPOU	ND NAME		RT	ES	T. CONC.	Q



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

Data File	VA4848.D	Sample Name	9043406
Operator	ROBERTS	Field ID	750 MW#03
Date Acquired	4 Nov 2009 11:03 pm	Sample Multiplier	1

<i></i>			D	<b>DI</b> /		Regulatory Level (ug/l)*	MDI	τα	Qualifiers
CAS#	Compound Name	<u> </u>	Response	Kesult			2.001	5.00	Quanners
107028	Acroleín			not	detected	5	2.09 ug/L	5.00 ug/L	
107131	Acrylonitrile	·		not	detected	2	1.04 ug/L	5.00 ug/L	<u> </u>
75650	tert-Butyl alcohol			not	detected	100	1.69 ug/L	0.50 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	1.00 ug/L	<u>-</u> _
75718	Dichlorodifluoromethane	·		not	detected	1000	0.22 ug/L	1.00 ug/L	<u> </u>
/4-8/-3	Chloromethane					nie	0.10 ug/L	1.00 ug/L	
75-01-4	Vinyl Chloride	<u>_</u>		not		1	0.22 ag/L	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.23 ug/L	1.00 ug/L	
75-00-3	Chloroethane			not	detected	<u>nie</u>	0.22 ug/L	1.00 ug/L	<u>.</u>
75-69-4	Trichlorofluoromethane	· · · · ·		not	detected	2000	0.10 ug/L	0.50 119/1	
75-35-4	1,1-Dichloroethene		<u> </u>	по	detected	(000	0.20 ug/L	0.50 ug/L	
67-64-1	Acetone		1	not	detected	6000	0.18 ug/L	0.50 ug/L	
75-15-0	Carbon Disuitide	· · · ·	}	not	detected	/00	0.16 ug/L	0.50 ug/L	
75-09-2	Methylene Chloride			100	detected	3	0.10 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			100	detected	100	0.20 ug/L	0.50 ug/L	
/3-35-3	1,1-Dichloroethane			not	detected	2000	0.19 ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.16 ug/I	1.00 µg/I	
78-93-3	2-Butanone			not	detected	300	0.10 ug/L	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene		<b> -</b>	not	detected	70	0.14 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
67-66-3	Chloroform		<b>_</b>	100	detected	70	0.21 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane			noi	detected	30	0.17 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			<u></u>		<u> </u>	0.27 ug/L	0.50 ug/1	
71-43-2	Benzene			noi			0.10 ug/L	0.50 ug/L	
107-06-2	1.2-Dichloroethane			not			0.19 ug/L	0.50 ug/L	
79-01-6	Trichloroethene	ļ					0.16 ug/L	0.50 ug/L	
78-87-5	1.2-Dichloropropane	·		not	detected	1	0.10 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane	Į		not	detected	<u> </u>	0.14 ug/L	1.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nie	0.25 ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene				detected	<u> </u>	0.10 ug/L	1.00 119/1	
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0.20 ug/L	0.50 ug/L	
108-88-3	Toluene	ļ		not	detected	1000	0.13 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene		<u> </u>		detected		0.12 ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane			nou	detected		0.19 ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene		ļ	not	detected		0.10 цр/С	0.50 ug/L	
591-78-6	2-Hexanone		·	not	detected	nle	0.20 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
126-48-1	Dibromochloromethane			nou	delected	1	0.14 ug/L	0.50 ug/L	·····
108-90-7	Chlorobenzene			noi		50	0.15 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not		700	0.10 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
630-20-6	1,1,1,2-tetrachloroethane			not	detected		0.13 ug/L	1.00 100/	
1330-20-7	m+p-Xylenes	·		not	detected	nle	0.27 ug/L	0.50 ug/L	
1330-20-7	o-Xylene			not	detected	<u>nie</u>	0.14 ug/L	0.50 ug/L	
100-42-5	Styrene			not	aetected	100	0.12 112/12	1.00 10/12	
75-25-2	Bromoform			not	aetected	4	0.14 ug/L	0.50 10/1	
79-34-5	1,1,2,2-Tetrachloroethane			not	aetected	1	0.12 ug/L	0.50 ug/L	
541-73-1	1,3-Dichlorobenzene			not	aetected	600	0.12 ug/L	0.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not	aetected	75	0.12 ug/L	0.50 ug/L	
95-50-1	1,2-Dichlorobenzene			not	aeiectea	600		1 0.30 ug/L	<u> </u>

*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	

750 MW#03 Lab Name: FMETL Contract: SAS No.: SDG No.: 90434 Lab Code: 13461 Case No.: MW Matrix: (soil/water) Lab Sample ID: 9043406 WATER Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VA4848.D Date Received: 11/3/2009 Level: (low/med) LOW % Moisture: not dec. Date Analyzed: 11/4/2009 GC Column: RTX-VM ID: 0.25 (mm) Dilution Factor: 1.0 (uL) Soil Extract Volume: Soil Aliquot Volume: (uL) CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Number TICs found: 0 COMPOUND NAME RT EST. CONC. Q CAS NO.

FORM I VOA-TIC



EPA SAMPLE NO.

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

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Data File	VA4849,D	Sample Name	9043407
Operator	ROBERTS	Field ID	750 MW#04
Date Acquired	4 Nov 2009 11:35 pm	Sample Multiplier	1

CAS#	Compound Name	R.T.	Response	Result		Reginatory Devei (aga).	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 1.00 ug/L	
74-87-3	Chloromethane	1		not	detected	nle	0.10 ug/	L 1.00 ug/L	
75-01-4	Vinyl Chloride			not	detected	1	0.22 ug/	L 1.00 ug/L	
74-83-9	Bromomethane		•	not	detected	10	0.25 ug/	L 1.00 ug/L	
75-00-3	Chloroethane			not	detected	nie	0.22 ug/	L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/	L 1.00 ug/L	ļ
75-35-4	1,1-Dichloroethene			not	detected	1	0.20 ug/	L 0.50 ug/L	<u> </u>
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	ļ
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 0.50 ug/L	<u> </u>
78-93-3	2-Butanone		·	not	detected	_300	0.16 ug/	L 1.00 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	<u> </u>
71-43-2	Benzene			not	detected	1	0.16 ug/	L 0.50 ug/L	<u> </u>
107-06-2	1,2-Dichloroethane			not	detected	2	0.19 ug/	L 0.50 ug/L	<u> </u>
79-01-6	Trichloroethene			not	detected	1	0.18 ug/	L 0.50 ug/L	<u></u>
78-87-5	1,2-Dichloropropane			not	detected	1	0.16 ug/	L 0.50 ug/L	<u> </u>
75-27-4	Bromodichloromethane			not	detected	1	0.14 ug/	L 0.50 ug/L	<u> </u>
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle	0.25 ug/	L 1.00 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/	L1.00 ug/L	<u> </u>
108-88-3	Toluene	·		not	detected	1000	0.15 ug/	L0.50 ug/L_	<u> </u>
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 ug/	L 0.50 ug/L	. <u> </u>
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	<u></u>
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	<u> </u>
630-20-6	1,1,1,2-tetrachloroethane			not	detected	<u> </u>	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	<u> </u>
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 1.00 ug/L	<u> </u>
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-Dichlorohenzene			not	detected	600	0.12 ug/	L 0.50 ug/L	<u> </u>

*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

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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



VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA S/	۱۹MA	LE NO.
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		TENTATIVELY IDEN	FIFIED COMPOUN	DS	750 5050////	и
Lab Name:	FMETL		Contract:		750 10100#0	14
Lab Code:	13461	Case No:: MW	SAS No.:	S	DG No.: <u>90434</u>	<u></u>
Matrix: (soil/v	vater)	WATER	Lab S	Sample ID:	9043407	
Sample wt/vo	ol:	5.0 (g/ml) <u>ML</u>	Lab F	ile ID:	VA4849.D	-
Level: (low/n	ned)	LOW	Date	Received:	11/3/2009	_
% Moisture: I	not dec.		Date	Analyzed:	11/4/2009	_
GC Column:	RTX-V	<u>/M_</u> ID: <u>0.25_</u> (mm)	Dilutio	on Factor:	1.0	<u></u>
Soil Extract V	/olume:	(uL)	Soil A	liquot Volu	ime:	_ (uL)
Number TICs	s found;	0	CONCENTRATIC (ug/L: or ug/Kg)	ON UNITS: UG/L		
CAS NO.		COMPOUND NAME		RT ES	ST. CONC.	Q



# TAL METALS

000226

Client: U.S. Army

DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703 Lab ID #: 90434 Sample Prepared: 11/06/09 Sample Matrix: Aqueous

Site: 750 Wells

Field ID#: Method Blank

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B EPA Method 279.2

Element	Date of	Pegult	Regulatory	R I.	MDL
Element	Analysia	(uo/I)	Level (ug/L)*	(no/I)	(ng/L)
Aluminum	11/10/00		200	<u>     (ug/L)                                    </u>	7 60
Antimony	11/10/09	ND	6	10.00	4 80
Antimony	11/17/00	ND	3	5.00	2.40
Arsenic	11/1//09		2000	5.00	1.00
Barium	11/10/09	ND	2000	3.00	1.00
Beryllium	11/10/09	ND	<u> </u>	0.500	0.04
Cadmium	11/10/09	ND	4	2.00	0.500
Calcium	11/10/09	46.4	NLE	1000	21.0
Chromium	11/10/09	ND	70	5.00	1.00
Cobalt	11/10/09	ND	NLE	2.00	0.400
Copper	11/10/09	ND	1300	5.00	1.00
Iron	11/10/09	ND	300	500	43.0
Lead	11/10/09	ND	5	5.00	2.40
Magnesium	11/10/09	ND	NLE	1000	19.0
Manganese	11/10/09	ND	50	5.00	0.300
Mercury	11/13/09	ND	2	0.500	0.050
Nickel	11/10/09	0.683	100	5.00	0.400
Potassium	11/10/09	58.5	NLE	1000	32.0
Selenium	11/10/09	ND	40	20.0	7.00
Silver	11/10/09	ND	40	5.00	0.500
Sodium	11/10/09	1420	50000	- 5000	530
Thallium	11/16/09	ND	2	5.00	1.30
Vanadium	11/10/09	ND	NLE	5.00	0.600
Zinc	11/10/09	4.25	2000	50.00	1.20

## TAL-METALS RESULTS SUMMARY (ug/L)

ND = Not Detected NLE = No Limit Established

* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05

R.L. = Reporting limit. MDL = Method Detection Limit Estimated results between MDL & R.L

Client: U.S. Army

DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703 Lab ID #: 9043402 Sample Received: 11/03/09 Sample Matrix: Aqueous

Site: 750 Wells

Field ID#: Field Blank

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B EPA Method 279.2

Element	Date of	Result	Regulatory	R.L.	MDL
	Analysis	(ug/L)	Level (ug/L)*	(ug/L)	(ug/L)
Aluminum	11/10/09	ND	200	100	7.60
Antimony	11/10/09	ND	6	10.00	4.80
Arsenic	11/17/09	ND	3	5.00	2.40
Barium	11/10/09	ND	2000	5.00	1.00
Beryllium	11/10/09	ND	1	0.500	0.04
Cadmium	11/10/09	ND	4	2.00	0.500
Calcium	11/10/09	ND	NLE	1000	21.0
Chromium	11/10/09	ND	70	5.00	1.00
Cobalt	11/10/09	ND	NLE	2.00	0.400
Copper	11/10/09	ND	1300	5.00	1.00
Iron	11/10/09	ND	300	500	43.0
Lead	11/10/09	ND	5	5.00	2.40
Magnesium	11/10/09	ND	NLE	1000	19.0
Manganese	11/10/09	0.559	50	5.00	0.300
Mercury	11/13/09	ND	2	0.500	0.050
Nickel	11/10/09	1.21	. 100	5.00	0.400
Potassium	11/10/09	ND	NLE	1000	32.0
Selenium	11/10/09	ND	40	20.0	7.00
Silver	11/10/09	ND	40	5.00	0.500
Thallium	11/16/09	ND	2	5000	1.30
Sodium	11/10/09	1470	50000	5.00	530
Vanadium	11/10/09	ND	NLE	5.00	0.600
Zinc	11/10/09	ND	2000	50.00	1.20

#### TAL-METALS RESULTS SUMMARY (ug/L)

ND = Not Detected NLE = No Limit Established

* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05 R.L. = Reporting limit. MDL = Method Detection Limit

Estimated results between MDL & R.L

Client: U.S. Army

DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703 Lab ID #: 9043403 Sample Received: 11/03/09 Sample Matrix: Aqueous

Site: 750 Wells

Field ID#: Duplicate

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B EPA Method 279.2

Element	Date of	Result	Regulatory	R.L.	MDL
	Analysis	(ug/L)	Level (ug/L)*	(ug/L)	(ug/L)
Aluminum	11/10/09	413	200	100	7.60
Antimony	11/10/09	ND	6	10.00	4.80
Arsenic	11/17/09	2.22	3	5.00	2.40
Barium	11/10/09	97.2	2000	5.00	1.00
Beryllium	11/10/09	0.408	1	0.500	0.04
Cadmium	11/10/09	ND	4	2.00	0.500
Calcium	11/10/09	8320	NLE	1000	21.0
Chromium	11/10/09	3.10	70	5.00	1.00
Cobalt	11/10/09	0.403	NLE	2.00	0.400
Copper	11/10/09	ND	1300	5.00	1.00
Iron	11/10/09	1550	300	500	43.0
Lead	11/10/09	ND	5	5.00	2.40
Magnesium	11/10/09	· 3250	NLE	1000	19.0
Manganese	11/10/09	77.9	50	5.00	0.300
Mercury	11/13/09	ND	2	0.500	0.050
Nickel	11/10/09	4.94	100	5.00	0.400
Potassium	11/10/09	2130	NLE	1000	32.0
Selenium	11/10/09	ND	40	20.0	7.00
Silver	11/10/09	ND	40	5.00	0.500
Sodium	11/10/09	61200	50000	5000	530
Thallium	11/16/09	ND	2	5.00	1.30
Vanadium	11/10/09	1.95	NLE	5.00	0.600
Zinc	11/10/09	27.0	2000	50.00	1.20

## TAL-METALS RESULTS SUMMARY (ug/L)

ND = Not Detected NLE = No Limit Established

* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05

R.L. = Reporting limit. MDL = Method Detection Limit Estimated results between MDL & R.L



Client: U.S. Army

DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703 Lab ID #: 9043404 Sample Received: 11/03/09 Sample Matrix: Aqueous

Site: 750 Wells

#### Field ID#: MW01

000230

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B EPA Method 279.2

Element	Date of	Result	Regulatory	R.L.	MDL
	Analysis	(ug/L)	Level (ug/L)*	(ug/L)	(ug/L)
Aluminum	11/10/09	568	200	100	7.60
Antimony	11/10/09	ND	6	10.00	4.80
Arsenic	11/17/09	1.66	3	5.00	2.40
Barium	11/10/09	97.1	2000	5.00	1.00
Beryllium	11/10/09	0.497	1	0.500	0.04
Cadmium	11/10/09	ND	4	2.00	0.500
Calcium	11/10/09	7680	NLE	1000	21.0
Chromium	11/10/09	4.97	70	5.00	1.00
Cobalt	11/10/09	0.621	NLE	2.00	0.400
Copper	11/10/09	ND	1300	5.00	1.00
Iron	11/10/09	1810	300	500	43.0
Lead	11/10/09	ND	5	5.00	2.40
Magnesium	11/10/09	3270	NLE	1000	19.0
Manganese	11/10/09	79.2	50	5.00	0,300
Mercury	11/13/09	ND	2	0.500	0.050
Nickel	11/10/09	5.59	100	5.00	0.400
Potassium	11/10/09	2110	NLE	1000	32.0
Selenium	11/10/09	ND	40	20.0	7.00
Silver	11/10/09	ND	40	5.00	0.500
Sodium	11/10/09	59300	50000	5000	530
Thallium	11/16/09	ND	2	5.00	1.30
Vanadium	11/10/09	2.76	NLE	5.00	0.600
Zinc	11/10/09	26.9	2000	50.00	1.20

## TAL-METALS RESULTS SUMMARY (ug/L)

ND = Not Detected NLE = No Limit Established

* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05

R.L. = Reporting limit. MDL = Method Detection Limit Estimated results between MDL & R.L

Client: U.S. Army

DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703 Lab ID #: 9043405 Sample Received: 11/03/09 Sample Matrix: Aqueous

Site: 750 Wells

Field ID#: MW02

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B EPA Method 279.2

Element	Date of	Result	Regulatory	R.L.	MDL
	Analysis	(ug/L)	Level (ug/L)*	(ug/L)	(ug/L)
Aluminum	11/10/09	8030	200	100	7.60
Antimony	11/10/09	ND	6	10.00	4.80
Arsenic	11/17/09	3.84	3	5.00	2.40
Barium	11/10/09	67.8	2000	5.00	1.00
Beryllium	11/10/09	0.620	1	0.500	0.04
Cadmium	11/10/09	2.22	4	2.00	0.500
Calcium	11/10/09	7480	NLE	1000	21.0
Chromium	11/10/09	80.1	70	5.00	1.00
Cobalt	11/10/09	1.05	NLE	2.00	0.400
Copper	11/10/09	17.3	1300	5.00	1.00
Iron	11/10/09	13800	300	500	43.0
Lead	11/10/09	5.50	5	5.00	2.40
Magnesium	11/10/09	4590	NLE	1000	19.0
Manganese	11/10/09	81.6	50	5.00	0.300
Mercury	11/13/09	ND	2	0.500	0.050
Nickel	11/10/09	10.9	100	5.00	0.400
Potassium	11/10/09	7070	NLE	1000	32.0
Selenium	11/10/09	ND	40	20.0	7.00
Silver	11/10/09	ND	40	5.00	0.500
Sodium	11/10/09	225000	50000	5000	530
Thallium	11/16/09	ND	2	5.00	1.30
Vanadium	11/10/09	35.5	NLE	5.00	0.600
Zinc	11/10/09	146	2000	50.00	1.20

#### TAL-METALS RESULTS SUMMARY (ug/L)

ND = Not Detected NLE = No Limit Established

* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05

R.L. = Reporting limit. MDL = Method Detection Limit

Estimated results between MDL & R.L

Client: U.S. Army

DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703 Lab ID #: 9043406 Sample Received: 11/03/09 Sample Matrix: Aqueous

Site: 750 Wells

Field ID#: MW03

Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B EPA Method 279.2

Flement	Date of	Result	Regulatory	R.L.	MDL
	Analysis	(ug/L)	Level (ug/L)*	(ug/L)	(ug/L)
Aluminum	11/10/09	210	200	100	7.60
Antimony	11/10/09	5.68	6	10.00	4.80
Arsenic	11/17/09	1.99	3	5.00	2.40
Barium	11/10/09	11.4	2000	5.00	1.00
Beryllium	11/10/09	ND	1	0.500	0.04
Cadmium	11/10/09	ND	4	2.00	0.500
Calcium	11/10/09	30700	NLE	1000	21.0
Chromium	11/10/09	8.55	70	5.00	1.00
Cobalt	11/10/09	ND	NLE	2.00	0.400
Copper	11/10/09	2.03	1300	5.00	1.00
Iron	11/10/09	280	300	500	43.0
Lead	11/10/09	ND	5	5.00	2.40
Magnesium	11/10/09	2690	NLE	1000	19.0
Manganese	11/10/09	9.56	50	5.00	0.300
Mercury	11/13/09	ND	2	0.500	0.050
Nickel	11/10/09	1.20	100	5.00	0.400
Potassium	11/10/09	4610	NLE	1000	32.0
Selenium	11/10/09	14.0	40	20.0	7.00
Silver	11/10/09	0.947	40	5.00	0.500
Sodium	11/10/09	119000	50000	5000	530
Thallium	11/16/09	ND	2	5.00	1.30
Vanadium	11/10/09	17.3	NLE	5.00	0.600
Zinc	11/10/09	6.00	2000	50.00	1.20

#### TAL-METALS RESULTS SUMMARY (ug/L)

ND = Not Detected NLE = No Limit Established

* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05

R.L. = Reporting limit. MDL = Method Detection Limit Estimated results between MDL & R.L

Client: U.S. Army

DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703 Lab ID #: 9043407 Sample Received: 11/03/09 Sample Matrix: Aqueous

Site: 750 Wells

#### Field ID#: MW04

### Method of Analysis: Std. Methods 18th, Method 3120B, 3113B & 3112B EPA Method 279.2

Element	Date of	Result	Regulatory	R.L.	MDL
	Analysis	(ug/L)	Level (ug/L)*	(ug/L)	(ug/L)
Aluminum	11/10/09	ND	200	100	7.60
Antimony	11/10/09	ND	6	10.00	4.80
Arsenic	11/17/09	1.31	3	5.00	2.40
Barium	11/10/09	21.0	2000	5.00	1.00
Beryllium	11/10/09	ND	1	0.500	0.04
Cadmium	11/10/09	ND	4	2.00	0.500
Calcium	11/10/09	50200	NLE	1000	21.0
Chromium	11/10/09	6.38	70	5.00	1.00
Cobalt	11/10/09	ND	NLE	2.00	0.400
Copper	11/10/09	1.22	1300	5.00	1.00
Iron	11/10/09	ND	300	500	43.0
Lead	11/10/09	ND	5	5.00	2.40
Magnesium	11/10/09	5460	NLE	1000	19.0
Manganese	11/10/09	1.99	50	5.00	0.300
Mercury	11/13/09	ND	2	0.500	0.050
Nickel	11/10/09	1.46	100	5.00	0.400
Potassium	11/10/09	4480	NLE	1000	32.0
Selenium	11/10/09	21.1	40	20.0	7.00
Silver .	11/10/09	2.05	40	5.00	0.500
Sodium	11/10/09	103000	50000	5000	530
Thallium	11/16/09	ND	2	5.00	1.30
Vanadium	11/10/09	5.91	NLE	5.00	0.600
Zinc	11/10/09	2.10	2000	50.00	1.20

#### TAL-METALS RESULTS SUMMARY (ug/L)

ND = Not Detected NLE = No Limit Established

* Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9C 11/07/05

R.L. = Reporting limit. MDL = Method Detection Limit

Estimated results between MDL & R.L

#### LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

The following Laboratory Deliverables Checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete 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: 1 / 10/ 10

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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.

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Dean Tardiff Laboratory Manager

ATTACHMENT F

UST 750C Report



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

Date: September 6, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: <b>750C</b>	Registration ID: 81533-198
Recommended Status of Site: Cho	ange to Case Closed
Based on the file review, were there	indications of a contaminant release? [ ] Yes [X] No
NJDEP Release No. or DICAR (If appli	cable): <u>None</u>
Did NJDEP approve No Further Actio	n (NFA) for this site?[ ] Yes [ X ] No  [ ]Not Applicable
Tank Description: [ ] Steel [X] Fib	perglass Size: <u>1000 gallon</u> Contents: <u>Waste oil</u>
[ ] Residential [X] Commerce	cial/Industrial
Tank Removed? [X]Yes [ ] No	If "yes," removal date: <u>3/11/1998</u>
Were closure soil samples taken? [ >	( ] Yes [ ] No Analyses: <u>TPH; PP+40</u>
Comparison criteria: <u>RDCSRS</u>	
Were closure soil sample results less	than comparison criteria? [X]Yes []No
	Brief Narrative

The closure and site assessment of UST 750C is presented in the attached Weston report. However, clarification on the location of this UST is provided herein.

UST 750C was located just north of the central portion of Building 750. It was located in the same grassed area as the oil-water separator for the covered wash rack area. This location was confirmed by historic engineering drawings (Attachment C), photographs of the removed tank and excavation during closure (attached), and discussions with Mr. Kevin Courtney (who formerly managed the Building 750 Motor Pool area).

Figure 2-1 of the attached Weston report showing the tank excavation as 16 feet from the northeast corner of Building 750 is correct, considering that the referenced Building 750 corner is for the central office area, and not the eastern Wash Rack wing (which is generally considered as a covered outdoor structure, rather than the building).

Jena U. Frim

Signed:

Kent A. Friesen, Parsons



## UNDERGROUND STORAGE TANK CLOSURE AND SITE INVESTIGATION REPORT BUILDING 750 NJDEPE UST REGISTRATION NO. 81533-198

October 28, 1993

W.O. No.: 03886-088-001

Prepared For:

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

Prepared by:

ROY F. WESTON, INC. Raritan Plaza I, 4th Floor Edison, New Jersey 08837



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#### **EXECUTIVE SUMMARY**

On 11 March 1993, one underground storage tank (UST) was closed at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, New Jersey Department of Environmental Protection and Energy (NJDEPE) Registration Number 81533-198, was located immediately adjacent to Building 750 in the Main Post area of Fort Monmouth. UST No. 81533-198 was a single wall fiberglass, 1,000-gallon waste oil UST which was installed in 1986. Mr. Douglas Greenfield of the NJDEPE Division of Hazardous Waste Management (NJDEPE-DHWM) was onsite for the duration of the closure activities. The UST closure was performed by All Service Environmental, Inc. and Casie Protank Environmental Services.

Soils surrounding UST No. 81533-198 were screened visually and with air monitoring instruments for evidence of contamination. The UST was inspected following removal for cracks and puncture holes for indications of historical leakage. No cracks or puncture holes were noted and no potentially contaminated soils were identified surrounding the tank.

Following removal of UST No. 81533-198 and associated piping, six (6) post-excavation samples were collected. Three (3) were collected from the sidewalls of the UST excavation and three (3) were collected from the base of the excavation. These samples were analyzed for total petroleum hydrocarbons (TPHC) and priority pollutants plus forty tentatively identified compounds (PP+40). All samples contained either non-detectable concentrations of contaminants or concentrations below proposed NJDEPE subsurface cleanup criteria.

No further action is proposed at this site in reference to UST No. 81533-198 since no soils were identified during closure with concentrations of contaminants exceeding proposed NJDEPE subsurface cleanup criteria.

### **SECTION 1.0**

#### UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

## 1.1 <u>Overview:</u>

One underground storage tank (UST), New Jersey Department of Environmental Protection and Energy (NJDEPE) Registration No. 81533-198, was closed at Building 750 at U.S. Army Fort Monmouth, New Jersey on 11 March 1993. This Underground Storage Tank Closure and Site Investigation Report was prepared by Roy F. Weston Inc. (WESTON®), to assist the United States Army Directorate of Public Works (DPW) in complying with the NJDEPE Bureau of Underground Storage Tanks (NJDEPE-BUST) regulations. The applicable NJDEPE-BUST regulations at the date of closure were the "Technical Requirements for Site Remediation-Proposed New Rules" (NJAC 7:26E-1 et seq., May 1992). This report presents the results of the DPW's implementation of the UST Decommissioning/Closure Plan submitted to the NJDEPE on 12 July 1991. UST No. 81533-198 was a 1,000-gallon capacity, single wall fiberglass, waste oil UST.

All activities associated with the decommissioning of UST No. 81533-198 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: NJAC 7:14B-1 et seq., NJAC 5:23-1 et seq., NJAC 7:26E-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 &1910.120. All permits including but not limited to the NJDEPE-approved Closure/Decommissioning Plan were posted on site for inspection. All Service Environmental Inc. and Casie Protank Environmental Services, the contractors that conducted the decommissioning activities, are registered and certified by the NJDEPE for performing UST closure activities. Closure of UST No. 81533-198 was conducted under approval and onsite oversight of the NJDEPE Division of Hazardous Waste Management (NJDEPE-DHWM). The NJDEPE-DHWM conditional closure approval letter and the UST Site Assessment Summary Form for UST No. 81533-198 have been included in Appendices A and B, respectively.

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 are presented in the final section of this report, including the results of the soil sampling investigation.



Building 750 is located on Alexander Avenue within the northeastern portion of the Main Post area of U.S. Army Fort Monmouth, New Jersey. A site location map is provided in Figure 1-1. Building 750 is an active military vehicle repair and maintenance facility which was constructed in 1986. No groundwater monitoring wells were installed as part of the closure of this tank and no soils were identified with concentrations of contaminants exceeding proposed NJDEPE subsurface soil cleanup criteria.

Two additional USTs, New Jersey Registration Nos. 81533-191 and 81533-192, (TMS # S-91-2881) are present approximately 100 yards north of UST No. 81533-198. UST No. 81533- 191 is a 15,000-gallon capacity diesel UST and UST No. 81533-192 is a 8,000-gallon gasoline UST. Four monitoring wells have been installed as part of closure of the product distribution system associated with these USTs. The monitoring wells were installed to assess impacts, if any, to groundwater from historical discharges from the product distribution system (Case #92-5-7-1600-23). Closure of UST No. 81533-198 is being conducted separately from the closure of the product distribution system associated with UST Nos. 81533-191 and 81533-192.

### 1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 750. Included is a description of the regional geology of the area 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,

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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 grey 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).

Over the last 80 years, the natural topography of Fort Monmouth has been altered by excavation and filling activities by the military. Topographic elevations for the Main Post area range from five feet above mean sea level (MSL) to 31 feet above MSL.

#### Hydrogeology

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

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



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

- tidal-influence (based on proximity to the Atlantic Ocean),
- topography,
- nature of fill material within the Main Post,
- presence of clay and silt lenses in the natural overburden deposits, and
- local groundwater recharge areas (i.e. stream, 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 silt and/or clay.

## 1.3 <u>Health and Safety</u>

Before, during, and after all activities, hazards at the work site which may have posed a threat to the health and safety of all personnel who were involved 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 approved equipment. The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

## 1.4 <u>Removal of Underground Storage Tanks</u>

### 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 screened visually and with a flame ionization detector (FID) for evidence of contamination. No potentially contaminated soils were identified during closure activities.
- Surface materials (i.e, asphalt, concrete, etc..) were excavated and staged separate from all soils and were recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all closure activities.

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### 1.4.2 Underground Storage Tank Excavation and Cleaning

Soil was excavated to expose the UST and associated piping. The piping was not removed/disturbed until all free product was drained into the UST. The UST was rendered vapor free by purging prior to any cutting or access. After the removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all product prior to removal from the ground. Approximately 110 gallons of waste oil was removed from UST No. 81533-198. This waste oil was transported and disposed of by L and L Oil Service, Incorporated. A hazardous waste manifest was completed and can be found in Appendix C. All of the openings in the tanks were plugged except for one hole (manway).

After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for cracks and puncture holes. The presence or absence of cracks and puncture holes was documented by the Sub-Surface Evaluator. No holes were observed upon the inspection of the UST. Soils surrounding the UST were screened visually and with a FID for evidence of contamination. No evidence of contamination was noted.

The UST was cleaned in accordance with all applicable regulations. Following cleaning of the UST, two rinsate samples were collected and analyzed for total petroleum hydrocarbons (TPHC). Rinsate samples were analyzed by the U.S. Army, Fort Monmouth Environmental Laboratory, a NJDEPE certified testing laboratory. The rinsate samples indicated concentrations of 334 milligrams per liter (mg/L) and 107 mg/L. The analytical data package is presented in Appendix D.

### 1.5 <u>Underground Storage Tank Transportation and Disposal:</u>

The tank was transported to the Monmouth County Reclamation Center located in Tinton Falls, New Jersey for disposal in compliance with all applicable regulations and laws. The tank reclamation certificate for UST No. 81533-198 is presented in Appendix E.

The Subsurface Evaluator labelled each tank prior to transport with the following information:

- site of origin,
- contact person,
- NJDEPE UST Facility ID number,
- name of transporter/contact person, and
- destination site/contact person.

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## 1.6 Management of Excavated Soils:

No potentially contaminated soils were excavated as part of the removal of UST No. 81533-198. All soils were free of evidence of contamination and were backfilled into the excavation following removal of the UST.

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#### **SECTION 2.0**

#### SITE INVESTIGATION ACTIVITIES

## 2.1 <u>Overview:</u>

The Site Investigation was managed and carried out by U.S ARMY DPW personnel. All analyses were performed and reported by 21st Century Environmental and the U.S. Army Fort Monmouth Environmental Laboratory, which are NJDEPE-certified testing laboratories. All sampling was performed under the direct supervision of a NJDEPE Certified Sub-Surface Evaluator according to the methods described in the NJDEPE Field Sampling Procedures Manual (June 1992). Sampling frequency and parameters analyzed complied with the NJDEPE document "Technical Requirements for Site Remediation-Proposed New Rules" (NJAC 7:26E-1 et seq. May 1992) which was the applicable regulation at the date of the closure. All records of the Site Investigation activities are maintained by Fort Monmouth DPW: Environmental Office.

The following Parties participated in Closure and Site Investigation activities.

- Closure Contractor No 1: All Service Environmental, Inc. Contact Person: Mark Turoff Phone Number: (914) 365-0800 NJDEPE Company Certification No.: 3100194
- Closure Contractor No. 2: Casie Protank Environmental Services Contact Person: Greg Call Phone Number: (609) 696-4401 NJDEPE Company Certification No.: NJD045995693
- Subsurface Evaluator: Charles Appleby Employer: U.S. Army, Fort Monmouth Phone Number: (908) 532-1475
  NJDEPE Certification No.: 2056
- Analytical Laboratory No. 1: U.S. Army, Fort Monmouth Environmental Laboratory Contact Person: Brian McKee Phone Number: (908) 532-4359 NJDEPE Company Certification No.: 13461

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- Analytical Laboratory No 2: 21st Century Environmental, Inc. Contact Person: Richard W. Lynch Phone Number: (609) 467-9521 NJDEPE Company Certification No.: 08031
- NJDEPE On-site Representative: DOUG GREENFIELD DIVISION OF HAZARDOUS WASTE MANAGEMENT Phone Number: (609) 584-4200

#### 2.2 <u>Field Screening/Monitoring</u>

All soils that were excavated as part of the removal of the UST were screened using a FID for evidence of contamination. Soils were also visually screened for evidence of contamination (staining, free product, etc..). No evidence of contamination was noted during excavation of soils surrounding UST No. 81533-198.

Soils on the sidewalls and base of the excavation were screened with a FID by an individual under the direct supervision of a NJDEPE Certified Sub-Surface Evaluator. No evidence of contamination was noted within soils on the sidewalls or base of the excavation.

#### 2.3 Soil Sampling

Following removal of UST No. 81533-198, six post-excavation soil samples (samples A-F) were collected in accordance with NJDEPE procedure. These samples were analyzed for TPHC and for priority pollutants plus 40 tentatively identified compounds (PP+40). Four samples (samples A,B,C and D) were collected from the area of UST No. 81533-198, in accordance with the approved closure plan. Samples E and F were collected from the former area of piping associated with UST No. 81533-198 to assess impacts, if any, from historical leakage from the piping if any. A summary of sampling activities including parameters analyzed is provided in Table 2-1. Figure 2-1 depicts the location of the post-excavation samples. The samples were collected along the base and sidewalls of the excavation using decontaminated stainless steel scoops. Following soil sampling activities, samples were chilled and delivered to the U.S. Army Fort Monmouth Environmental Laboratory for TPHC analysis, and to 21st Century Environmental, Inc. located in Bridgeport, New Jersey for PP+40 analysis.

## **TABLE 2-1**

# SUMMARY OF POST-EXCAVATION SAMPLING UST REGISTRATION NO. 81533-198 BUILDING NO. 750 FORT MONMOUTH, NEW JERSEY

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Sampling Method	Stainless Steel Scoop					
Analytical Parameters	TPHC, PP+40					
Sample Type	Post-Excavation	Post-Excavation	Post-Excavation	Post-Excavation	Post-Excavation	Post-Excavation
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date Collected	3/11/93	3/11/93	3/11/93	3/11/93	3/11/93	3/11/93
Sample I.D	Υ	B	c	D	Е	Ĺ

TPHC - Total Petroleum Hydrocarbons.

PP+40 - Priority pollutant plus 40 - The priority pollutant list of 126 compounds and elements developed by EPA pursuant to Section 307(a)(1) of the Clean Water Act and 40 non-targeted organic compounds detected by gas chromatography/mass spectroscopy (GC/MS) analysis.

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#### **SECTION 3.0**

#### CONCLUSIONS AND RECOMMENDATIONS

#### 3.1 Soil Sampling Results

To evaluate soil conditions following removal of the UST and associated piping, six postexcavation samples were collected and analyzed for TPHC and PP+40. Analytical results for the post-excavation samples were compared to proposed NJDEPE subsurface cleanup criteria (NJAC 7:26D and revisions dated 8 March 1993). A summary of analytical results and comparison to proposed NJDEPE subsurface cleanup criteria is provided in Table 3-1. A summary of analytical methods and quality assurance information is provided in Table 3-2. The analytical data package summary is provided in Appendix D. The full data package, including associated quality control and chromatograph data is on file at the U.S. Army Fort Monmouth DPW.

TPHC was detected in samples A through F at concentrations ranging from 5.9 milligrams per kilogram (mg/kg) to 27 mg/kg. No subsurface cleanup criterion has been proposed for TPHC by the NJDEPE; however, the proposed NJDEPE subsurface cleanup criterion for total organic compounds is 10,000 mg/kg. All samples contained concentrations of total organic compounds below the NJDEPE criterion of 10,000 mg/kg. Several volatile organic and base neutral compounds were detected in the samples; however at concentration below the proposed NJDEPE subsurface cleanup criteria. Several metals were detected in the post-excavation samples; however, no cleanup criteria has been proposed by NJDEPE for metals in subsurface soils.

#### 3.2 Conclusions and Recommendations:

DPW removed one (1) UST at Building 750 in the Main Post area of U.S. Army Fort Monmouth. Based on visual inspection of the UST and field screening of the soils adjacent to the UST, it was determined that no discharges had historically occurred from the UST. Analytical results of the post-excavation samples confirm that no soils are present with concentrations of contaminants exceeding proposed NJDEPE subsurface cleanup criteria.

No further action is proposed at Building 750 in reference to UST No. 81533-198.

## **TABLE 3-1**

## SUMMARY OF ANALYTICAL RESULTS UST REGISTRATION NO. 81533-198 BUILDING NO. 750 FORT MONMOUTH, NEW JERSEY

SAMPLE ID NO.		A	B	C	D	E	F	
LAB ID NO.		1161.1	1161.2	1161.3	1161.4	1161.5	1161.6	NDEPE
MATRIX		SOIL	SOIL	SOIL	SOIL	SOIL	soil	SUBSURFACE
SAMPLE TYPE		PE	PE	PE	PE	PE	PE	CRITERIA
DATE OF COLLECTION		3/11/93	3/11/93	3/11/93	3/11/93	3/11/93	3/11/93	
ANALYTICAL PARAMETER	UNITS							mg/kg
TPHC	mg/kg	23.7	5.9	18.0	13.8	10.2	27.0	NC*
BN+25	mg/kg							
BIS(2-ETHYLHEXYL) PHTHALATE		ND	0.061JB	0.053JB	0.047JB	QN	QN	100
CHRYSENE		0.05J	ND	DN	ND	QN	QN	NC
BENZO(A)PYRENE		0.11J	ND	QN	ND	ND	DN	100
INDENO(1,2,3-cd)PYRENE		1760.0	ND	QN	DN	QN	QN	500
BENZO(g,h,i)PERYLENE		0.12J	ŊD	QN	Ð	QN	QN	500

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TABLE 3-1 SUMMARY OF ANALYTICAL RESULTS (CONTINUED) UST REGISTRATION NO. 81533-198 BUILDING NO. 750 FORT MONMOUTH, NEW JERSEY

SAMPLE ID NO.		Α	8	С	D	æ	ш	
LAB ID NO.		1161.1	1161.2	1161.3	1161.4	1161.5	1161.6	NDEPE
MATRIX		SOIL	soil	solL	soil	SOIL	SOIL	SUBSURFACE CLEANUP
SAMPLE TYPE		PE	PE	PE	PE	PE	PE	CRITERIA
DATE OF COLLECTION		3/11/93	3/11/93	3/11/93	3/11/93	3/11/93	3/11/93	
ANALYTICAL PARAMETER	NITS							mg/kg
V0+15	mg/kg							
ACETONE		0.012	0.014	0.012	0.014	0.010J	0.0072J	50
METHYLENE CHLORIDE		0.0062	0.0052J	0.0047J	0.0039J	0.006	0.0068J	10
TOLUENE		0.0038J	0.0028J	0.0036J	0.0016J	0.004J	ND	500
ETHYLBENZENE		0.0121	ND	ND	ND	0.0018J	ND	100
M & P XYLENES		0.0056J	0.005J	0.0049J	ND	0.0089J	ND	NC
O-XYLENE		0.0018J	0.0018J	0.0016J	ND	0.0029J	ND	NC
CYANIDE	mg/kg	0.26	0.27	0.17	0.14	0.16	0.20	NC
PHENOLS	mg/kg	QN	ND	DN	DN	DN	DN	NC

nk/HUBBARD/Tank.198

3-3

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SUMMARY OF ANALYTICAL RESULTS (CONTINUED) **UST REGISTRATION NO. 81533-198** FORT MONMOUTH, NEW JERSEY **BUILDING NO. 750 TABLE 3-1** 

SAMPLE ID NO.		A	В	C	D	E	Ľ,	
LAB ID NO.		1.161.1	1161.2	1161.3	1161.4	1161.5	1161.6	PROPOSED NIDEPE
MATRIX		SOIL	soll	SOIL	SOIL	SOIL	soil	SUBSURFACE
SAMPLE TYPE		PE	PE	PE	PE	Æ	PE	CRITERIA
DATE OF COLLECTION		3/11/93	3/11/93	3/11/93	3/11/93	3/11/93	3/11/93	
ANALYTICAL PARAMETER	<b>UNITS</b>							mg/kg
PRIORITY POLLUTANT METALS	mg/kg							
ANTIMONY		DN	ND	5.64	DN	QN	DN	NC
ARSENIC		1.00	1.86	1.60	1.40	1.41	1.49	NC
CHROMIUM		14.6	24.3	20.0	35.7	20.8	22.5	NC
COPPER		2.02	1.79	6.82	2.16	1.40	4.27	NC
LEAD		10.9	7.13	22.3	18.1	8.27	18.0	NC
NICKEL		QN	ND	DN	DN	3.11	DN	NC
SELENIUM		QN	ND	QN	DN	DN	0.52	NC
ZINC		16.2	16.5	22.9	20.8	18.4	20.2	NC

Notes: NC*: NC: J: TPHC: TPHC:

No cleanup criterion has been proposed for TPHC by NJDEPE; however, the proposed NJDEPE subsurface cleanup criterion for total organic compounds is 10,000 mg/kg. No subsurface cleanup criterion has been proposed for this analyte by NJDEPE.

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Indicates an estimated value.

Indicates compound not detected. Total Petroleum Hydrocarbons.

Post-Excavation. Indicates also present in blank. н Э.

mg/kg:

Milligrams per Kilogram.

**TABLE 3-2** 

# ANALYTICAL METHODS/QUALITY ASSURANCE SUMMARY TABLE UST REGISTRATION NO. 81533-198 BUILDING NO. 750 FORT MONMOUTH, NEW JERSEY

TPHC         6         S         3/11/93         3/12/93         Cool to 4°C         418.1           VOCs         6         S         3/11/93         3/16/93         Cool to 4°C         8240           VOCs         6         S         3/11/93         3/16/93         Cool to 4°C         8240           BNAs         6         S         3/11/93         3/16/93         Cool to 4°C         8270           PCBs         6         S         3/11/93         3/16/93         Cool to 4°C         8270           PP Metals         6         S         3/11/93         3/16/93         Cool to 4°C         8080	Analytical Parameter	No. of Samples Collected	Matrix	Date Collected	Date Analysis Completed	Preservation Method	USEPA SW-486 Analytical Method
VOCs         6         S         3/11/93         3/16/93         Cool to 4°C         8240           BNAs         6         S         3/11/93         3/16/93         Cool to 4°C         8270           BNAs         6         S         3/11/93         3/16/93         Cool to 4°C         8270           PCBs         6         S         3/11/93         3/17/93         Cool to 4°C         8080           PP Metals         6         S         3/11/93         3/16/93         Cool to 4°C         6010, 7060, 7470, 7740, 7841	TPHC	6	S	3/11/93	3/12/93	Cool to 4°C	418.1
BNAs         6         S         3/11/93         3/16/93         Cool to 4°C         8270           PCBs         6         S         3/11/93         3/17/93         Cool to 4°C         8080           PP Metals         6         S         3/11/93         3/16/93         Cool to 4°C         6010, 7060, 7470, 7740, 7841	VOCs	6	S	3/11/93	3/16/93	Cool to 4°C	8240
PCBs         6         S         3/11/93         3/17/93         Cool to 4°C         8080           PP Metals         6         S         3/11/93         3/16/93         Cool to 4°C         6010, 7060, 7470, 7740, 7841	BNAs	6	S	3/11/93	3/16/93	Cool to 4°C	8270
PP Metals 6 S 3/11/93 3/16/93 Cool to 4°C 6010, 7060, 7470, 7740, 7841	PCBs	6	S	3/11/93	3/17/93	Cool to 4°C	8080
	PP Metals	6	S	3/11/93	3/16/93	Cool to 4°C	6010, 7060, 7470, 7740, 7841

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	Total Petroleum Hydrocarbons.	Volatile Organic Compounds.	Base Neutral Acid Extractable Compounds.	Polychlorinated Biphenyls.	Priority Pollutant Metals.	Soil.	Water.	
	ı	ı	•	ı	•	ı	,	
Notes:	TPHC:	VOCs:	BNA:	PCBs:	PP Metals:	S:	W:	

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**مە**رەر مەرب APPENDIX A

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NJDEPE CONDITIONAL APPROVAL LETTER

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State of New Jersey Department of Environmental Protection and Energy Office of Enforcement Policy CENTRAL BUREAU OF WATER AND HAZARDOUS WASTE ENFORCEMENT FIELD OPERATIONS

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Scott A. Weiner Commissioner

Edward M. Neafsey Director

September 20,1991

James Ott, Deputy Director Directorate of Engineering and Housing U.S. Army Commmunications-Electronic Command Building 167 SELHI-FE Fort Monmouth, NJ 07003

Dear Mr. Ott

The Department of Environmental Protection & Energy has completed its review of your submitted closure plans for six underground waste oil tanks. It has been determined that the plan is acceptable conditioned on the following revision/modifications:

1.In addition to the total petroleum hydrocarbon (TPHC) analysis for each sample taken, the total priority pollutant analysis (PP+40 or TCL) should be utilized for an initial screening. These analyses would be helpful for the remediation of tank number 68 which is known to contain 1000 ppm of hydrogenated chlorides.

2.A detailed description of the steps needed to decontaminate the tanks should be included.

3.An indication of whether the tanks will be disposed off-site as hazardous waste. If not the tanks must be decontaminated and a final rinse water sample and a washwater blank sample must be analyzed for total petroleum hydrocarbons (TPHC) concentration to determine the adequacy of decontamination. The decontamination procedure may have to be repeated to achieve a concentration acceptable to the Department or until the TPHC results of two consecutive samples do not show an appreciable change.

Please Respond To: CN 407 TRENTON, NJ 08625

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Please submit these changes in an addendum to your submitted closure plans prior to beginning any closure activities. This writer should be notified 2 weeks in advance of initiation of closure activities.

If you have any questions regarding these requirements, please contact me at (609) 584-4200.

Yours truly,

Douglas Greenfield Sr. Environmental Engineer Hazardous Waste Enforcement CBW&HWEFO APPENDIX B

NJDEPE UST ASSESSMENT SUMMARY FORM

#### STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF WATER RESOURCES BUREAU OF UNDERGROUND STORAGE TANKS TANK MANAGEMENT SECTION

> CN 029, 401 EAST STATE STREET TRENTON, N.J. 08625-0029

#### 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 <u>attachments</u> in order to complete the Summary. The technical guidance document, <u>Interim Closure Requirements for UST's</u>, explains the regulatory (and technical) requirements for closure and the <u>Scope of Work</u>, <u>Investigation and Corrective Action Requirements for</u> <u>Discharges from Underground Storage Tanks and Piping Systems</u> 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

0081533-198

FACILITY REGISTRATION #

#### I. FACILITY NAME AND ADDRESS

U.S. Army Fort Monmouth

D.E.H. Bu	ilding 167	Attn:	Charles	Appleby		<u></u>	 _
Fort Monm	outh New_Je	rsev		County_	Monmouth		 _
Toleohone No	908-532-62	24					

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OWNER'S NAME AND ADDRESS, if different from above

Telephone No.

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UST#	_					_
Data Rec'd					_	_
TMS #	_					
Smit			 			

#### DISCHARGE REPORTING REQUIREMENTS 11.

- If Yes. Case No. Yes <u>x</u> No A. Was contamination found? (Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)
- B. The substance(s) discharged was(were)  $\underline{N/A}$ Yes No X N/A C. Have any vapor hazards been mitigated? N/A Closure Approval No.

III. DECOMMISSIONING OF TANK SYSTEMS

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
  - <u>____</u>N/A No Yes

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 _____
  - 2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each weil:
    - 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. 23.6 ppb total BTEX. N/A ppb total non-targeted VOC
- 2. 674.0 ppb total B/N. N/A ppb total non-targeted B/N
- 3. <u>27.0</u> ppm TPHC
- 4. N/A ppb N/A (for non-petroleum substance)

#### C. Remediation of free product contaminated soils

- 2. Free product contaminated soils are suspected to exist below the water table _____Yes _X_ No
- 3. Free product contaminated soils are suspected to exist off the property boundaries. ____Yes X_No

D. Was the vertical and horizontal extent of contamination determined? ____Yes ____No _X_N/A

E. Does soil contamination intersect ground water? ____Yes ____No __X_N/A

#### VI. GROUND WATER CONTAMINATION

- A. Was ground water contamination found? ____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:

4	N/A	oop total BTEX.	N/A	ppb total non-targeted VOC
	11/12			

 N/A
 ppb total B/N,
 N/A
 ppb total non-targeted B/N

 N/A
 ppb total MTBE,
 N/A
 ppb total TBA

 3.
 N/A
 ppb total MTBE,
 N/A
 ppb total TBA

 4.
 N/A
 ppb
 N/A
 (for non-petroleum substance)

5. greatest thickness of separate phase product found _____N/A

6. separate phase product has been delineated ____Yes ___No X_N/A

#### C. Result(s) of well search

1. A well search (including a review of manual well records) indicates that private, municipal or commercial wells do exist within the distances specified in the Scope of Work. ____Yes ____No ____N/A

- D. Proximity of wells and contaminant plume-
  - 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 <u>N/A</u> feet below grade (consideration has been given a for the effects of pumping; subsurface structures, etc. on the direction(s) of contaminant migration). This well is <u>N/A</u> feet from the source and its screening begins at a depth of <u>N/A</u> feet.
  - 2. The shallowest depth to the top of the well screen for any well in the potential path of the plume(s) (as: described in D1 above) is N/A feet below grade. This well is located: N/A feet from the source.
  - 3. The closest horizontal distance of a private, commercial or municipal well in the potential path of the plume (as determined in D1) is <u>N/A</u> feet from the source. This well is <u>N/A</u> feet deep and screening begins at a depth of <u>N/A</u> feet.
- E. A plan for separate phase product recovery has been included. ____Yes ____No N/AN/A
- F. A ground water contour map has been submitted which includes the ground water elevations for each well. Yes No XNA

G. Delineation of contamination

- 1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. ____Yes ___No ____N/A
- 2. The plume is suspected to continue off the property at concentrations greater than MCLs. ____Yes ____No ____N/A

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

N/A

### VII. SITE ASSESSMENT CERTIFICATION (preparer of site assessment plan - N.J.A.C. 7:148-6.3(b) &9.5(a)3)

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C.7:148-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:148-8.3(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 NJA.C. 7:14B-8 and 9.1 am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) Charles Appleby SIGNATURE		
	NAME (Print or Type) Charles Appleby SIGNATURE	5

## VIII. TANK DECOMMISSIONING CERTIFICATION (person performing tank decommissioning portion of closure plan - N.J.A.C. 7:148-9.5(a)4}

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

NAME (Print or Type)	ALL SERVICE ENVIRONMENTAL_INC	SIGNATUR	EMOV	$ \rightarrow $
	523 Route 303	DATE	9-30-93	<u> </u>
	(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 inprisonment."

NAME (Print or Type)	James Ott, P.E.	SIGNATURE KIMED CLA
COMPANY NAME	U.S. Army Fort Monmouth	DATE 10/29/93

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

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

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

NAME (Print or Type)	SIGNATURE
----------------------	-----------

DATE

COMPANY NAME

#### **ATTACHMENT I**

#### NO/NA RESPONSE EXPLANATION

SAS OUESTION #	<u>RESPONSE</u>	EXPLANATION
IIA.	No	No contaminants were identified in soil samples at concentrations exceeding proposed NJDEPE cleanup criteria.
IIB.	N/A	Same as above.
IIC.	N/A	Same as above.
III.	N/A	Closure of Facility Registration No. 0081533-198 was conducted under approval and from onsite supervision the NJDEPE Division of Hazardous Waste Management.
IV.C.2	N/A	No soil borings were proposed in the closure plan.
V.A	No	No contaminants were identified in soil samples at concentrations exceeding proposed NJDEPE cleanup criteria.
V.B.1-4	N/A	Same as above.
V.C.1-3	N/A	Same as above.
V.D	N/A	Same as above.
V.E	N/A	Same as above.
VI.A	No	No groundwater monitoring wells were installed as part of closure of Facility Registration No. 0081533-198; therefore, no groundwater samples were collected.

#### ATTACHMENT I

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#### **NO/NA RESPONSE EXPLANATION**

SAS OUESTION #	<u>RESPONSE</u>	EXPLANATION
VI.B.1-6	N/A	Same as above.
VI.C.1-3	N/A	No release to groundwater has occurred from Facility Registration No. 0081533-198; therefore, no well search was performed as part of the site assessment.
VI.E	N/A	Same as above.
VI.F	N/A	Same as above.
VI.G.1-3	N/A	No groundwater contamination resulting from a release from Facility Registration No. 0081533-198 has been identified.

APPENDIX C

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HAZARDOUS WASTE MANIFEST

P.02

April 15, 1993

U.S. Army Communications Electronics Command c/o James Shirghio, Bldg \$2504 Attn: SELFN-DL-EM-MS Fort Monmouth, N.J. 07703

RE: Manifest #NJA1307870

Gentlemen:

Please be advised that in reference to the above mentioned: manifest, we were advised that the words "Waste" and "Petroleum: distillates" were to be X'd out of any manifests that the truckers used from their briefcases.

Our state inspector told us that in view of the cost of said manifests the X'ing out of these words was preferable to destroying them.

If you have any further questions please do not hesitate to call me.

sincerely,

(Inne Slear Onmil

Anne J. Giacomoni Environmental Co-ordinator

oc: All Service Environmental, Inc. Attn: Susan O'Brien

Encl.

• P.O. BOX 92 • FRANKLINVILLE N.J. 08822 • (509) 696-4401 • TELEFAX NO. (809) 696-7085

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Sale Dispos	Sale Disposal Purchase				
OILS LAB		MAN	IFEST #		
CHLORINATED CONTENT PPM BS&W % FLASH °F PHC PPM		/] /9 / 3 plan tank	U 28	×70	
Product		Gals.	Price	Amount	
X722		850			
		-			
Generat I hereby certify that the all plete and accurate to the determine, that no delibera or properties exists, and th been disclosed. Generator's Authorized Si TITLE	Or bes ate o at al gnat	Certific and attaches to of my kno r willful omis known or su willow willow	ation d descript wiedge ar sions of c ispected ha	tion is com- id ability to compositions azards have 25-93	
			/		

APPENDIX D

 $\left( \right)$ 

ANALYTICAL DATA PACKAGE

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

Client: U.S. Army DEH, SELFM-EH-E Bldg. 167 Ft. Monmouth, N	V Sa Anal J07703 Ana	Lab. ID #: mple Rec'd: ysis Start: lysis Comp:	1161.16 Ø3/11/93 Ø3/12/93 Ø3/12/93
Analysis: 418.1 (TPH)	NJDEPE UST Reg.#:	XXXXXXX-XX,	XX,XX,XX
Matrix: Soil	Closure Approval #:	X-XX-XXXX/X	(X
Analyst: S. Hubbard	NJDEPE Case #:	XX-XX-XX-XX	(XX

Building #: 750

Lab ID.	Description	%Solid	Result (mg/H	MDL (g)
1161.1	S #A	90	23.7	3.3
1161.2	S #B	91	5.9	3.3
1161.3	S #C	89	18.0	3.3
1161.4	S #D	83	13.8	3.3
1161.5	S #E	88	10.2	3.3
1161.6	S #F	88	27.0	3.3
M B1.	Method Blank		ND	3.3

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

Brian K. McKee Laboratory Director

CLIENT:	() 5. 6	CI JEmy CI	HAIN OF	: CUSTC	DY REC	<b>CORD</b> PROJECT	ID: 875		ſ <del></del>
ADDRESS					1 1	SAMPLER	Redu	kovski	
CITY/STA	Ü	-		-		PHONE #:		/	·
# OI BVI	SAMPLE ID	SAMPLE	SAMPLE	GRAB	AMPLE TYF	<u>COMP</u>	NO. OF BOTTLES	ANALYSIS REQUESTED	···· 1 ····
THEN' I	5 6 4100-mb	3/ "	1350		×		\	16.965 15,365	d d
a.	IN/CEH E'NS	b 3/11	00/11		×		_	16.980 15.491	9100
E.	NW- (WH ) S		6.041		~		/	16.098 14.40	89%
$\gamma$ ,	SHD H.J. WI	<	1412		~		/	13.493	83%
·5	SHE HNU NID		1423		×.		/	16. 1 80	88%
1.6	NN CKH JR.S	$\mathcal{N}$	1419		×		(	30.863 14.564	883
•	Fall Black			•					
									)
									<u></u>
SAMPLE COLLECTED	BY: Rathorady	DATE	TIME	PRESERVE	ED WITH: NaOH	H2SO4		NONF OTHER	
RELINQUISH	ED BY: Ladense	1/6	INAI		BY: Hull	Card			

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

Client: U.S. Army	Lab. ID #: 1159.1+.2
DEH, SELFM-EH-EN	Sample Rec'd: 03/11/93
Bldg. 167	Analysis Start: 03/12/93
Ft. Monmouth, N.	J 07703 Analysis Comp: 03/12/93
Analysis: 418.1 (TPH) Matrix: Aqueous Analyst: S. Hubbard	NJDEPE UST Reg.#: XXXXXX-XX,XX,XX,XX Closure Approval #: X-XX-XXXX/XX NJDEPE Case #: XX-XX-XX-XXXX Building #: 759

Lab ID.	Description	Result (mg/I	MDL .)
1159.1	Rinse #1	334.	1.0
1159.2	Rinse #2	107.	1.0
M B1.	Method Blank	ND	1.0
· ·			

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

< 1~

Brian K. McKee Laboratory Director



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#### E-SYSTEMS

**PROJECT: UST-BLG 750** 

#### US ARMY FORT MONMOUTH, NJ

ANALYSIS NO:	CLIENT ID:
A 1254	Site A
A 1255	Site B
A 1256	Site C
A 1257	Site D
A 1258	Site E
A 1259	Site F
A 1260	Trip Blank
A 1265	Field Blank

DATE RECEIVED: MARCH 15, 1993

TWENTY FIRST CENTURY ENVIRONMENTAL, INC.

RICHARD W. LYNCH (LABORATORY MANAGER

LICENSED ANALYTICAL LABORATORY #08031

#### TABLE OF CONTENTS

Narrative	00001
Chain of Custody Forms	00002
Methodology	00003
Laboratory Chronicle	00005
Result Summary	00006
Data Package	00058
Quality Control Data	00154

#### NARRATIVE

All extractions and analysis were completed within proper hold times for this batch of samples (Al254 to Al260 and Al265). Please note that 1,1,2,2-Tetrachloroethane and 1,1,2-Trichloroethane were found in several semivolatile searches. We believe this is a breakdown byproduct of methylene chloride caused during sonication.

real rescalation:	Alasy to Alabo	<b>3</b> (
P.0.0	ANALYSES REQUESTED	0000
151×15		
SAMPLE SAMPLE TYPE PRESERV. N OF SAMPLE SAMPLE CONT.	REMARKS	]
811173 1350 J 4°C 5 V		
787		
7 4 2 7		
112 5		
WA WA VA V 2 1		]
/TIME RECEIVED AY: DATE/TIME RELINGU/JAHED AY:	DATE/TIME RECEIVED BY:	
143 Much W. Justin 2115/42 Much Jacto	3/11-[43	$\mathbf{r}$
2) Mrt DFei telle / 1600 Met DEitelsen	1730	
E/TIME RECEIVED FOR LAB:		
30 R. Lowell Data Deliverable	S TURNAROUND TIME	
11 131 (x1 7, 1)	[ / STANDARD (2-3 xks.)	
[ ] Other	The following need prior lab authorization:	14
	AIITHADIZED av. [ ] 24 hrs. [ 5	<u><u>2</u></u>

#### Acid Extractables Base Neutrals

U.S.E.P.S. Method 625 - This method covers the determination of a number of organic compounds that are partitioned in an organic solvent and amenable to gas chromatography. This is a gas chromatography/mass spectrometer (GC/MS) method applicable to the determination of the compounds listed in the U.S.E.P.A. Manual entitled "Test Procedures for the Analysis of Organic Pollutants".

A HP5970 was used with a DB-5 FSCC.

Method detection limits are as stated.

Soil samples were prepared for analysis as prescribed in Method 3550 and analyzed as prescribed in Method 8270 from SW846.

Analysis performed according to U.S.E.P.A. 335.2 (Spectrophotometric with distillation). Sample is reacted with Chloramine-T to produce Cyanogen, Chloride, CNC1. Red color develops when combined with Pyridine/Barbituric Acid Reagent; which is read at 578nm.

Soil samples are prepared for analysis as prescribed in Method 9010 from SW846.

Analysis performed according to U.S.E.P.A. 420.1 (Spectrophotometric, Manual 4AAP with distillation). Phenolic materials react with four (4) Aminoantipyrine and Potassium Ferricyanide at pH 10. Red color is read at 510 nm.

Soil samples are prepared for analysis as prescribed in Method 9067 from SW846.

Cyanide

Phenols

#### Metals

Pesticides/PCB's

**Purgeables** 

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

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

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

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

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

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

Method detection limits are as stated.

Soil samples are prepared for analysis as prescribed in Method 8249 from SW846.

#### LABORATORY CHRONICLE

RECEIPT/REFRIGERATION		3/15/93		
ORGANICS EXTRACTION				
1.	Acids	3/15/93 - 3/19/93		
2.	Base/Neutrals	3/15/93 - 3/19/93		
3.	Pesticides/PCB's/Herbicides	3/15/93		
4.	4. Petroleum Hydrocarbons/011 & Grease NA			
ANALYSIS		. –		
1.	Volatiles	3/16/93 - 3/24/93		
2.	Acids	3/16/93 - 3/25/93		
3.	Base/Neutrals	3/16/93 - 3/25/93		
4.	Pesticides/PCB's/Herbicides	3/17/93		
5.	Petroleum Hydrocarbons/0il & Grease	NA		
6.	Total Organic Carbon	NA		
	Section Supervisor Review & Approvalequer A mattin			
INORGANICS				
1.	Metals	3/16/93 - 3/23/93		
2.	Cyanides	3/17/93		
3.	Phenols	3/17/93		
OTHER ANALYTES				
	Section Supervisor Review & ApprovalMan Kinnels			
	Quality Control Supervisor Review & Approval			
	Laboratory Director Review & Approval Ruber Wignet			

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

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RESULT SUMMARY

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# US ARMY FORT MONMOUTH, NJ UST-BLDG 750

# CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1254

CLIENT ID: Site A

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.26
PHENOL	0.50	N.D.

LICENSED ANALYTICAL LABORATORY #08031

# US ARMY FORT MONMOUTH, NJ UST-BLDG 750 CERTIFICATE OF ANALYSIS

## PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1254

CLIENT ID: Site A

METALS	MDL (mg/Kg)	RESULT (mg/Kg)	
ANTIMONY	5.00	N.D.	
ARSENIC	0.25	1.00	
BERYLLIUM	1.00	N.D.	
CADMIUM	1.00	N.D.	
CHROMLUM	1.00	14.6	
COPPER	1.00	2.02	
LEAD	5.00	10.9	
MERCURY	0.10	N.D.	
NICKEL	5.00	N.D.	
SELENIUM	0.25	N.D.	
SILVER	1.00	N.D.	
THALLIUM	1.00	N.D.	
ZINC	1.00	16.2	

## 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

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job Number	US ARMY FT. MONHOUTH NJ	hatrix	Soil
Sample Number	A1254	DILUTION FACTOR	1.00
CLIENT ID	SITE A BLOG 750	qa batch	
data file	>A1061	date analyzed	03/16/93

42928232922525555552525255555555555555555					
COMPOUND	UG/KG	MDL	COMPOUND	UG/KG	HDL
Acrolein	ND	55	Browndichloromethane		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Acrylonitrile	ND	55	2-Chlargethulvinulether	NO	11
Chloromethane	ND	11	2-Hexanone	NO	11
Bromomethane	ND	11	trans-1.3-Dichloropropene	ND	5
Vinyl Chloride	ND	11	Toluene	3.8 J	5
Chloroethane	ND	11	cis-1,3-Dichloropropene	ND	5
Acetone	12 B	11	1.1.2.2-Tetrachloroethane	ND	5
1,1-Dichloroethene	ND	5	1.1.2-Trichlorgethane	ND	5
Carbon Disulfide	ND	11	4-Methyl-2-pentanone	ND	11
Methylene Chloride	6.2	5	Tetrachloroethene	ND	
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	- 5
Vinyl Acetate	NÐ	5	Ethvibenzene	1.2 J	5
2-Butanone	ND	11	m&p-Xvlanes	5.6	5
Chloroform	ND	5	o-Xviene	1.8 J	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	- 5
1,2-Dichloropropane	ND	5			-

SURROGATE COMPOUNDS	X RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	109	70 - 121	OK
Toluene-d8	102	81 - 117	ÛK
Bromofluorobenzene	97.4	74 - 121	OK

Percent Solid of 91.0 is used for all Target compounds.

(J) Indicates detected below HDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

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#### 21ST CENTURY Environmental SEMIVOLATILE ANALYSIS DATA

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job number	US ARMY, FT, MONMOUTH, NJ	MATRIX	Soil
Sample Number	A1254	DILUTION FACTOR	1.00
CLIENT ID	BLDG 750, SITE A	QA BATCH	
data file	>C0822	date analyzed	03/25/

RIX	Soil	
JTION FACTOR	1.00	
Batch		
e analyzed	03/25/93	

Compound	ug/kg	MDL .	Compound	UG/Ki	G	MDL
N-Nitrosodimethylamine	ND	360 J	Acenaphthene	ND	23362:	
Phenol	ND	360	2.4-Dinitrophenol	ND		1800
bis(-2-Chloroethyl)Ether	ND	360	4-Nitrophenol	ND		1800
2-Cholorophenol	ND	360	Dibenzofuran	ND		360
1,3-Dichlorobenzene	ND	360	2,4-Dinitrotoluene	ND		360
,4-Dichlorobenzene	ND	360	2,6-Dinitrotoluene	ND		360
Benzyl Alcohol	ND	360	Diethylphthalate	NÐ		360
,2-Dichlorobenzene	ND	360	4-Chlorophenyl-phenlyether	ND		360
-Methylphenol	ND	360	Fluorene	ND		360
bis(2-chloroisopropyl)Ether	ND	360	4-Nitroaniline	ND		1800
4-Methylphenol	ND	360	4.6-Dinitro-2-Methylphenol	ND		1800
N-Nitroso-Di-n-Propylamine	ND	360	N-Nitrosodiphenvlamine	ND		360
Hexachloroethane	ND	360	4-Bromophenvl-phenvlether	ND		360
Nitrobenzene	ND	360	Hexachlorobenzene	ND		360
Isophorone	ND	360	Pentachlorophenol	ND		1800
2-Nitrophenol	ND	360	Phenanthrene	ND		360
2,4-Dimethylphenol	ND	360	Anthracene	ND		360
Bénzoic Acid	ND	1800	Di-n-Butvlphthalate	ND		360
ois(-2-Chloroethoxy)Methane	ND	360	Fluoranthene	36	3	360
2.4-Dichlorophenol	ND	360	Purene	40	.]	360
1,2,4-Trichlorobenzene	ND	360	Butulbenzulphthalate	ND	•	360
Naphthalene	ND	360	3.3'-Dichlorobenzidine	ND		720
-Chloroaniline	ND	360	Benzo(a)Anthracene	36	J	360
lexachlorobutadiene	ND	360	Bis(2-Ethulhexul)Phthalate	55	JB	360
4-Chloro-3-Methylphenol	ND	360	Chrusene	67	J	360
2-Methylnaphthalene	ND	360	Di-n-Octul Phthalate	ND	-	360
lexachlorocyclopentadiene	ND	360	Benzo (b) Fluoranthene	ND		360
2,4,6-Trichlorophenol	ND	360	Benzo(k)Fluoranthene	ND		360
2,4.5-Trichlorophenol	ND	1800	Benzo(a)Purene	130	.1	360
2-Chloronaphthalene	ND	360	Indeno(1.2.3-cd)Purene	160	J	360
2-Nitroaniline	ND	1800	Dibenzo(a.h)Anthracene	ND	•	360
)imethyl Phthalate	ND	360	Benzo(g.h.i)Perulene	150	.1	360
Acenaphthylene	ND	360	Benzidine	ND	Ū	72 በ
Nitroaniline	ND	1800				

Percent Solid of 91.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

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Lab Name :	21ST	CENTUR	Y ENVIE	RONMENTAL			
Client ID:	US	ARMY	FORT	MONMOUTH,	NJ	UST-BLG	750
	SIT	TE A					

÷.				-+
ł	Lao	Sample	ID:	ł
1		A1254		1
+-				+

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#### PESTICIDE ORGANICS ANALYSIS DATA SHEET

#### Pesticides/PCBs

GPC Cleanup ___Yes ___No Separatory Funnel Extraction ___Yes Continu.ous Liquid-Liquid Extraction ___Yes Concentration: Low Medium ( Circle One ) Date Extracted/Prepared: 03/15/93 Date Analyzed: 03/16/93 18:34 Conc/Dil Factor: 10.00g/10ml Percent Moisture: 9

C.A.S.	uq/L or
Number	uq/Kq

319-84-6	Alpha-EHC.	5.5	IJ
319-87-7	Seta-BHC	5.5	Ξ.)
319-86-8	Delta-9HC	5.5	IJ
58-89-9	Gamma-BHC (Lindane)	5.5	U
76-44-8	Heptachior	5.5	IJ
309-00-2	Aldrin	5.5	0
1024-57-3	Heptachior Epoxide	5.5	U
959-98-8	Endosulfan I	5.5	ij
60-57-1	Dieldrin	5.5	IJ
72-55-9	4,4'-DDE	5.5	IJ
72-20-8	Endrin	5.5	IJ
33213-65-9	Endosulfen II	11	U
72-54-8	4,4'-DDD	11	ប
1031-07-8	Endosulfan Sulfate	11	U
50-29-3	4,4'-DCT	11	U
72-43-5	Methoxycnion	279	U
7421-93-4	Endrin Aldehyde	11	IJ
57-74-9	Chlordane	270	U
8001-35-2	Toxaphene.	550	U
12674-11-2	Arachler-1016	270	Ű
11104-28-2	Arechlor-1221	279	0
11141-16-5	Arochier-1272.	270	5
53469-21-9	Arechier-1242	270	2
12672-29-6	Aroch1ar-1248	170	2
11097-39-1	Arocsis:-1254	170	2
11096-82-3	Arechler-1261	275	ŋ

J Undetected ____J Estimated Lalue talca detection level

Form 1

			.~	•
1 Lab Name:21st	VOLATILE ORGA TENTATIVEL	1E ANICS ANALYSI Y IDENTIFIED	S DATA SHEET COMPOUNDS	EPA SAMPLE NO.
Client Name:	US ARMY FT. M	DNMOUTH, NJ	Client ID:	BLDG 750
Matrix: (soil	/water) SOIL		Lab Sample	ID: A1254
Sample wt/vol	: 5	(g∕mL) g	Lab File ID	: >A1061
Level: (low	/med) LOW		Date Receiv	ed: 03/15/93
% Moisture: '	9		Date Analyz	ed: 03/16/93
Column: DB-62	24		Dilution Fa	ctor: 1
Number TICs	found: 0		CONCENTRATION UNI	
I	ł		1 1	l i

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1	CAS NUMBER	COMPOUND NAME	I RT	I EST. CONC.		1
1		No Unknowns	= = = = = = = :   		= = = =       	)   
1			l	·		; 
1			I	·		1
1			·	······································		ļ

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FORM I VOA-TIC

1/87 Rev.

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	E1 semi-VOLATILE ORGANICS ANALYS TENTATIVELY IDENTIFIED COMP	EPA SIS DATA SHEET POUNDS I I I	SAMPLE	NUMBER
Matrix: (soi	l∕water) SOIL	Lab Sample ID:	A1254	
Client Name:	US Army, Ft.Monmouth, NJ	Client ID: Bldg	750	
Sample wt∕vo	1:30 (g∕mL) GM	Lab File ID: >0	0822	
Level: LOW		Date Received:	NA	
% Moisture:	9	Date Analyzed (	13/25/9	3
Extraction:	(Sepf/Cont/Sonc) SONC	Date Extracted	03/15/	93
GPC ( Y or N	): N			
Column: DB-5		Dilution Factor	:	1
Number TICs f	Found 5	CONCENTRATION ( (ug/L or ug/Kg)	UG/KG	$\left( \right)$
I ICAS NUMBER I	I COMPOUND NAME		I I RT I	IEST CONCI
   1   2 79345   3   4   5	UNKNOWN Ethane, 1,1,2,2-tetrachloro UNKNOWN UNKNOWN UNKNOWN	- (8CI9CI)	   4.27    8.21   30.44   30.79   31.16	150   440   260   370   180

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## US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1255

CLIENT ID: Site B

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.27
PHENOL	0.50	N.D.

## US ARMY FORT MONMOUTH, NJ UST-BLDG 750 CERTIFICATE OF ANALYSIS

## PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1255

CLIENT ID: Site B

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	3.05
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	24.3
COPPER	1.00	1.79
LEAD	5.00	7.13
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	N.D.
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	16.5

## 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

2

job number	US ARMY FT. MONHOUTH NJ	MATRIX	Soil
SAMPLE NUMBER	<u>A1255</u>	DILUTION FACTOR	1.00
CLIENT ID	SITE B BLDG 750	Qa Batch	
DATA FILE	>A1062	date analyzed	03/16/93

***************************************	ISEXESSESITES:	122213 <b>4</b>	13621
Compound	ug/kg	HDL.	COMPO
×=====================================			
Acrolein	ND	55	Brom
Acrylonitrile	ND	55	` 2-Ch
Chloromethane	ND	11	2-Hex
Bromomethane	ND	11	trans
Vinyl Chloride	ND	11	Tolue
Chloroethane	ND	11	cis-1
Acetone	14 B	11	1,1,2
1,1-Dichloroethene	ND	5	1,1,1
Carbon Disulfide	ND	11	4-flet
Methylene Chloride	5.2 J	5	Tetra
1,2-Dichloroethene(trans)	ND	5	Dibro
1,1-Dichloroethane	ND	5	Chlor
Vinyl Acetate	ND	5	Ethyl
2-Butanone	ND	11	ntp->
Chloroform	ND	5	o-Xyl
1,1,1-Trichloroethane	ND	5	Styre
Carbon Tetrachloride	ND	5	Bromo
1,2-Dichloroethane	NÐ	5	m-Dic
Benzene	ND	5	p-Dic
Trichloroethene	ND	5	o-Dic
1,2-Dichloropropane	ND	5	
• •			

Compound	ug/kg	HOL
<del>1=10==================================</del>		222222 C
Dromodicnioromethane	NU	7
2-Laioroethylvinylether	NU	11
2-Hexanone	ND	11
trans-1,3-Dichloropropene	ND	5
Toluene	2.8 J	5
cis-1,3-Dichloropropene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,1,2-Trichloroethane	ND	5
4-Methyl-2-pentanone	ND	11
Tetrachloroethene	ND	5
Dibromochloromethane	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
n≰p-Xylenes	5.0 J	5
-Xylene	1.8 J	5
Styrene	ND	5
Bromoform	ND	5
-Dichlorobenzene	ND	5
-Dichlorobenzene	ND	5
o-Dichlorobenzene	ND	5

<u>_SURROGATE_COMPOUNDS_</u>	<u>X RECOVERY</u>	LIMITS	STATUS
1,2-Dichloroethane-d4	110	70 - 121	ÛK.
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	101	74 - 121	OK

Percent Solid of 91.0 is used for all Target compounds.

(J) Indicates detected below MDL

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(B) Indicates also present in blank

#### 21ST CENTURY Environmental SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ
Sample Number	A1255
CLIENT ID	BLDG 750, SITE B
DATA FILE	>C0734

<u>___</u>

MATRIX	Soil	
DILUTION FACTOR	1.00	
QA BATCH		
date analyzed	03/16/93	

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	UG/KG	MDL	COMPOUND	UG/KG		MDL
N-Nitrosodimethylamine	ND	 360	Acenaphthene	===*==## ND	****	
Phenol	ND	360	2,4-Dinitrophenol	ND		1800
bis(-2-Chloroethyl)Ether	ND	360	4-Nitrophenol	ND		1800
2-Cholorophenol	ND	360	Dibenzofuran	ND		360
1,3-Dichlorobenzene	NÐ	360	2,4-Dinitrotoluene	ND		360
1,4-Dichlorobenzene	ND	360	2,6-Dinitrotoluene	ND		360
Benzyl Alcohol	ND	360	Diethvlphthalate	ND		360
1,2-Dichlorobenzene	ND	360	4-Chlorophenyl-phenlyether	ND		360
2-Methylphenol	ND	360	Fluorene	ND		360
bis(2-chloroisopropyl)Ether	ND	360	4-Nitroaniline	ND		1800
4-Methylphenol	ND	360	4.6-Dinitro-2-Methylphenol	ND		1800
N-Nitroso-Di-n-Propylamine	ND	360	N-Nitrosodiphenvlamine	ND		360
Hexachloroethane	ND	360	4-Bromophenvl-phenvlether	ND		360
Nitrobenzene	ND	360	Hexachlorobenzene	ND		360
Isophorone	ND	360	Pentachlorophenol	ND		1800
2-Nitrophenol	ND	360	Phenanthrene	ND		360
2,4-Dimethylphenol	ND	360	Anthracene	ND		360
Benzoic Acid	ND	1800	Di-n-Butvlohthalate	ND		360
bis(-2-Chloroethoxy)Methane	NÐ	360	Fluoranthene	ND		360
2,4-Dichlorophenol	ND	360	Pyrene	ND		360
1,2,4-Trichlorobenzene	ND	360	Butvibenzvinhthalate	ND		360
Naphthalene	ND	360	3.3'-Dichlorobenzidine	ND		720
4-Chloroaniline	ND	360	Benzo(a)Anthracene	ND		360
Hexachlorobutadiene	ND	360	Bis(2-Ethulhexul)Phthalate	61	.18	360
4-Chloro-3-Methylphenol	ND	360	Chrusene	ND	00	360
2-Methylnaphthalene	ND	360	Di-n-Octvl Phthalate	ND		360
Hexachlorocyclopentadiene	ND	360	Benzo(b)Fluoranthene	ND		360
2,4,6-Trichlorophenol	ND	360	Benzo(k)Fluoranthene	ND		360
2,4.5-Trichlorophenol	ND	1800	Benzo(a)Purene	ND		360
2-Chloronaphthalene	ND	360	Indeno(1.2.3-cd)Purene	ND		360
2-Nitroaniline	ND	1800	Dibenzo(a.h)Anthracene	ND		360
)imethyl Phthalate	ND	360	Benzo(a.h.i)Perulene	ли		360
Acenaphthylene	ND	360	Benzidine	ND		720
-Nitroaniline	ND	1800				, 23

Percent Solid of 91.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

orient io.	SITE B	t H1277 (
Client ID:	IS ADMY FORT MOMMONITH NILLIGT BLC 750	1 01055 1
Lab Name :	21ST CENTURY ENVIRONMENTAL	Lab Sample 10:

#### PESTICIDE ORGANICS ANALYSIS DATA SHEET

#### Pesticides/PCBs

Concentration:LowMedium( Circle One )GPC CleanupYesNoDate Extracted/Prepared:03/15/93-Separatory Funnel ExtractionYesDate Analyzed:03/16/93 19:17Continu.ous Liquid-Liquid ExtractionYesConc/Dil Factor:10.02g/10mlPercent Moisture:9

C.A.S.	ug∕L ar
Number	ug/Kg

319-84-6	Alpha-8HC	5.5 U
319-87-7	Beta-BHC	5.5 U
319-86-8	0elta-BHC	5.5 U
58-89-9	Gamma-BHC (Lindane)	5.5 U
76-44-8	Heptachlor	5.5 U
309-00-2	Aldrin	5.5 U
1024-57-3	Heptachlor Epoxide	5.5 U
9 <b>59-</b> 98-8	Endosulfan I	5.5 U
- 60-57-1	Dieldrin	5.5 U
72-55-9	4,4'-DDE	5.5 U
72-20-8		5.5 U
33213-65-9	Endesulfan II	11 U
72-94-8	4,4'-000	i u
1931-07-8	Endosulfen Sulfate	11 E
50-29-3	4,4:-307	11 J
72-43-5	Methoxychier	270 _
7421-93-4	Engrin Aldenyde	11 U
57-74-9	Salardana	270 J
8001-35-2	Toxaphene	FF6 U
11274-11-0	Arochier-1016	276 .
11104-18-1	Freshler-1221	270 - 2
11141-16-7	Arachier-1271	271 0
53469-21-9	Sector=1242	178 H
12672-09-5	Broch 128-1248	276 - 1
11097-69-1	Anschlar -1254	270 U
11896-82-5	Arochior-1260	270 L

U Enderected ..... 3 Estimated value below detection level

Form 1

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	1 1E VOLATILE ORGANICS ANALYSIS DATA	SHEET	EPA SAMPLE NO.
-	TENTATIVELY IDENTIFIED COMPOL	INDS I	
	Lab Name:21st Century Environmental	ı I	
	Client Name: US ARMY FT. MONMOUTH, NJ	Client ID: BLD	DG 750
	Matrix: (soil/water) SOIL	Lab Sample ID:	A1255
	Sample wt/vol: 5 (g/mL) g	Lab File ID:	>A1062
	Level: (low/med) LOW	Date Received:	03/15/93
-	% Moisture: 9	Date Analyzed:	03/16/93
	Column: DB-624	Dilution Facto	r: 1
	Number TICs found: 0 (ug/L	NTRATION UNITS:	

CONCEPTER OF

(ug/L or ug/Kg) ug/Kg

I CAS NUMBER I COMPOUND NAME I	RT	I EST. CONC.	Q
11_No Unknowns			
		·	
		·	

FORM I VOA-TIC

1/87 Rev.

E1 semi-VOLATILE ORGANICS ANALYS TENTATIVELY IDENTIFIED COMP	EPA SAMPLE NUMBER
Matrix: (soil/water) SOIL	Lab Sample ID: A1255
Client: US Army, Ft.Monmouth,NJ	Client ID: Bldg 750
Sample wt/vol: 30 (g/mL) GM	Lab File ID: >C0734
Level: LOW	Date Received: NA
% Moisture: 9	Date Analyzed 03/16/93
Extraction: (Sepf/Cont/Sonc) SONC	Date Extracted 03/15/93
GPC ( Y or N ): N	
Column: DB-5	Dilution Factor: 1
Number TICs Found 1	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG

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ICAS I	NUMBER	I COMPOUND	NAME		1	RT	I IEST I	CONC I
   1 	79005	   Ethane, 1,1 	,2-trichloro-	(8CI9CI)	:===:     	5.35	= = = = =       	180   



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## US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1256

CLIENT ID: Site C

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.17
PHENOL	0.50	N.D.

#### US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

#### PRIORITY POLLUTANT LIST

ANALYSIS	NO:	A	1256
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CLIENT ID: Site C

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	5.64
ARSENIC	0.25	1.60
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	20.0
COPPER	1.00	6.82
LEAD	5.00	22.3
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	0.47
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	22.9

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#### 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

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Job Number	US ARMY FT. HONMOUTH NJ	MATRIX	Soil
Sample Number	A1256	DILUTION FACTOR	1.00
CLIENT 10	SITE C BLDG 750	QA BATCH	
DATA FILE	>A1063	date analyzed	03/16/93

COMPOUND	116/KG	MOI			reser Mini
Acrolein	NÐ	56	Bromodichloromethane	ND	6
Acrylonitrile	ND	56	2-Chloroethylvinylether	ND	11
Chloromethane	ND	11	2-Hexanone	ND	11
Vinyl Chloride	ND	11	Toluene	3.6 J	6
Chloroethane	ND	11	cis-1,3-Dichloropropene	ND	6
Acetone	12 B	11	1,1,2,2-Tetrachlorgethane	ND	6
1,1-Dichloroethene	ND	6	1,1,2-Trichloroethane	ND	6
Carbon Disulfide	ND	11	4-Methyl-2-pentanone	ND	11
Methylene Chloride	4.7 J	6	Tetrachloroethene	ND	6
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	6
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	6
Vinyl Acetate	ND	6	Ethylbenzene	ND	6
2-Butanone	ND	11	m&p-Xvlenes	4.9 J	6
Chloroform	ND	6	o-Xulene	1.6 3	6
1,1,1-Trichloroethane	ND	6	Sturene	ND	6
Carbon Tetrachloride	ND	6	Bromoform	ND	6
1,2-Dichloroethane	ND	6	-Dichlorobenzene	ND	6
Benzene	ND	6	p-Dichlorobenzene	ND	6
Trichloroethene	ND	6	o-Dichlorobenzene	ND	6
1,2-Dichloropropane	ND	6			J

SURROGATE COMPOUNDS	* RECOVERY	LIMITS	STATUS
1,2-Dichloroethans-d4	111	70 - 121	0K
Toluene-d8	102	81 - 117	OK
Bromofluorobenzene	99 <b>.9</b>	74 - 121	OK

Percent Solid of 90.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

#### 21ST CENTURY Environmental SEMIVOLATILE ANALYSIS DATA

Job Number	US ARMY, FT. MONMOUTH, NJ	MATRIX	Soil
Sample Number	A1256	DILUTION FACTOR	1.00
CLIENT ID	BLDG 750, SITE C	QA BATCH	
data file	>C0735	date analyzed	03/16/93

Compound	UG/KG	MDL	COMPOUND	UG/KG		MDL
		**************************************				
N-Nitrosocimetnyiamine	NU	2/U 770	Heenaphthene	NU		2/0
	NU	2/0	2,4-Dinitrophenol			1800
2 Chalesanhanal	NU	2/0	4-Nitrophenol	NU		1800
1 7 Dishlashasasa	NU	2/1		ND		3/0
1,2-Dichiorobenzene	NU	5/0	2,4-Dinitrotoluene	NU		3/0
1,4-Dichiorobenzene	NU	3/0	2,6-Uinitrotoluene	ND		370
Benzyl Hiconol	ND	3/0	Diethylphthalate	NU		3/0
1,2-Dichiorobenzene	ND	370	4-Chlorophenyl-phenlyether	ND		370
	ND	370	Fluorene	ND		370
DIS(2-chlorolsopropyl)Ether	ND	370	4-Nitroaniline	ND		1800
4-flethylphenol	ND	370	4,6-Dinitro-2-Methylphenol	ND		1800
N-Nitroso-Di-n-Propylamine	ND	370	N-Nitrosodiphenylamine	ND		370
Hexachloroethane	ND	370	4-Bromophenyl-phenylether	ND		370
Nitrobenzene	ND	370	Hexachlorobenzene	ND		370
Isophorone	ND	370	Pentachlorophenol	ND		1800
2-Nitrophenol	ND	370	Phenanthrene	ND		370
2,4-Dimethylphenol	ND	370	Anthracene	ND		370
Benzoic Acid	ND	1800	Di-n-Butylphthalate	ND		370
bis(-2-Chloroethoxy)Methane	ND	370	Fluoranthene	ND		370
2,4-Dichlorophenol	ND	370	Pyrene	ND		370
1,2,4-Trichlorobenzene	ND	370	Butylbenzylphthalate	ND		370
Naphthalene	ND	370	3,3'-Dichlorobenzidine	ND		730
4-Chloroaniline	ND	370	Benzo(a)Anthracene	ND		370
Hexachlorobutadiene	ND	370	Bis(2-Ethylhexyl)Phthalate	52	JB	370
4-Chloro-3-Methylphenol	NÐ	370	Chrysene	ND		370
2-Methylnaphthalene	ND	370	Di-n-Octvl Phthalate	ND		370
Hexachlorocyclopentadiene	ND	370	Benzo(b)Fluoranthene	ND		370
2,4,6-Trichlorophenol	ND	370	Benzo(k)Fluoranthene	ND		370
2,4.5-Trichlorophenol	ND	1800	Benzo (a) Purene	ND		370
2-Chloronaphthalene	ND	370	Indeno(1.2.3-cd)Purene	ND		370
2-Nitroaniline	ND	1800	Dibenzo(a.h)Anthracene	ND		370
)imethyl Phthalate	ND	370	Benzo(a.h.i)Perulene	ND		370
Acenaphthylene	ND	370	Benzidine	ND		73N
3-Nitroaniline	ND	1800				, , , ,

Percent Solid of 90.0 is used for all Target compounds.

(J) Indicates detected below MDL

(8) Indicates also present in blank

Lab Name : 21ST CENTUR	' ENVIRONMENTAL		- Lab Sample ID: (
Client ID: US ARMY	FORT MONMOUTH,	NJ UST-BLG 75	O ! A1256 I
SITE C			++

#### PESTICIDE ORGANICS ANALYSIS DATA SHEET

#### Pesticides/PCBs

Concentration: Low Medium (Circle One ) GPC Cleanup ____Yes ___No Separatory Funnel Extraction ____Yes Date Extracted/Prepared: 03/15/93 . Date Analyzed: 03/16/93 19:59 Continu.ous Liquid-Liquid Extraction ____Yes Conc/Dil Factor: 10.06g/10ml Percent Moisture: 10

> C.A.S. ug/L or Number uq/Kq

319-84-6	Alpha-8HC	IJ
319-97-7	Beta-BHC 5.6	2
319-36-8	Delta-BHC 5.6	U
58-89-9	Gamma-BHC (Lindane) 5.6	IJ
76-44-8	Heptachlor 5.6	IJ
309-00-2	Aldrin 5.6	U
1024-57-3	Heptachler Epoxide 5.6	ij
959-98-8	Endosulfan I 5.6	IJ
- 60-57-1	Dieldrin : : 5.6	U
72-55-9	4,4'-DDE 5.6	U
72-20-9	Endrin	U
33213-65-9	Endosulfan II 11	8
72-54-8	4,41-200	Ľ
1031-97-8	Endosuifan Suifate 11	ų
50-20-3	-,4'-DDT 11	1
72-43-5	Methoxychlor	2
7421-93-4	Endrin Aldehyde 11	11
57-74-9	Chlordane	Ŀ
8001-35-2	Toxaphene	e
12674-11-2	Arochlor-1016 280	U
11104-28-2	Arechier-1221	IJ
11141-16-5	Arochier-1232 280	IJ
53469-21-9	Arachler-1242	U
12672-29-6	Arechier-1248 280	5
11097-69-1	Aracalar-1254	9
11096-82-5	Arpehlor-1260	1

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1E VOLATILE ORGANICS ANALYSIS	EPA SAMPLE NO.
TENTHITOELY IDENTIFIED (	
Lab Name:21st Century Environmental	۱۱
Client Name: US ARMY FT. MONMOUTH, NJ	Client ID: BLDG 750
Matrix: (soil/water) SOIL	Lab Sample ID: A1256
Sample wt/vol: 5 (g/mL) g	Lab File ID: >A1063
Level: (low/med) LOW	Date Received: 03/15/93
% Moisture: 10	Date Analyzed: 03/16/93
Column: DB-624	Dilution Factor: 1
Number TICs found: 0	CONCENTRATION UNITER

(ug/L or ug/Kg) ug/Kg

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		<u>`</u>	
CAS NUMBER	COMPOUND NAME		I EST. CONC. I Q
	I_No Unknowns		
		i	۱ ۱ ۱
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·	1 1 1
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FORM I VOA-TIC

1/87 Rev.

	E1			EPA	SAMPLE	NUMBER
semi-VOLATILE	ORGANICS	ANALYSIS	DATA	SHEET		
TENTATIVELY	IDENTIFI	ED COMPOUN	NDS	_		

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SITE C

Matrix: (soil/water) SOIL Lab Sample ID: A1256 Client: US Army, Ft.Monmouth, NJ Client ID: Bldg 750 Sample wt/vol: 30 (g∕mL) GM Lab File ID: >C0735 Level: LOW Date Received: NA % Moisture: 10 Date Analyzed 03/16/93 Extraction: (Sepf/Cont/Sonc) SONC Date Extracted 03/15/93 GPC ( Y or N ): N Column: DB-5 Dilution Factor: 1 CONCENTRATION UNITS Number TICs Found 3 (ug/L or ug/Kg/ ÚG∕KG

ICAS	NUMBER	I COMPOUND NAME	   	RT	IEST	CONC I
   1   2   3 	79005 79345	   Ethane, 1,1,2-trichloro- (8CI9CI)   Ethane, 1,1,2,2-tetrachloro- (8CI9CI)   UNKNOWN 	       	5.34 8.81 27.83	  1	410   100   300



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## US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1257

CLIENT ID: Site D

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.14
PHENOL	0.50	N.D.

## US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

## PRIORITY POLLUTANT LIST

ANALISIS NO: A 123/	ANALYSIS	NO:	A	1257
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CLIENT ID: Site D

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	1.40
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	35.7
COPPER	1.00	2.16
LEAD	5.00	18.1
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	N.D.
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	20.8

## 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER	US ARHY FT. MONMOUTH NJ	MATRIX	Soil
Sample Number	<u>A1257</u>	DILUTION FACTOR	1.00
CLIENT ID	SITE D BLDG 750	QA BATCH	
URIA FILE	<u>&gt;A1064</u>	date analyzed	03/16/93

	ᇃᆕᅘᇊᇃᆂᆂᅖᇃᆂᆂᆍᆂ	272232	유민원유명은 유민은 모르 유민은 박정은 유명 모양은 유명 문		
	UG/KG	HDL	COMPOUND	UG/KG	MDL
Acrolein	ND	56	Bromodichloromethane	ND	***************************************
Acrylonitrile	ND	56	2-Chloroethylvinylether	ND	11
Chloromethane	ND	11	2-Hexanone	ND	11
Bromomethane	ND	11	trans-1.3-Dichloropropene	ND	4
Vinyl Chloride	ND	11	Toluene	1.6.1	6
Chloroethane	ND	11	cis-1.3-Dichloropropene	ND ND	6
Acetone	14 8	11	1,1,2,2-Tetrachloroethane	ND	6
1,1-Dichloroethene	ND	6	1.1.2-Trichloroethane	ND	4
Carbon Disulfide	ND	11	4-Methyl-2-pentanone	ND	11
Methylene Chloride	3.9 J	6	Tetrachlorgethene	ND	4
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	4
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	4
Vinyl Acetate	ND	6	Ethvibenzene	NO	4
2-Butanone	ND	11	n&p-Xvlenes	ND	4
Chloroform	ND	6	o-Xulene	ND	4
1,1,1-Trichloroethane	ND	6	Styrene	ND ND	2
Carbon Tetrachloride	ND	6	Bromoform	ND ND	۵ ۲
1,2-Dichloroethane	ND	6	-Dichlorobenzene	NO	۵ ۲
Benzene	ND	6	o-Dichlorobenzene	มก	۰ ۲
Trichloroethene	ND	6	o-Dichlorobenzene	ND ND	0 4
1,2-Dichloropropane	ND	6			0

SURROGATE COMPOUNDS	<b>X RECOVERY</b>	LIMITS	STATIS
1,2-Dichloroethane-d4	109	70 - 121	<u> </u>
Toluene-d8	102	B1 - 117	OK
Bromofluorobenzene	99.3	74 - 121	0K

Percent Solid of 90.0 is used for all Target compounds.

(J) Indicates detected below MDL

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(B) Indicates also present in blank

## 21ST CENTURY Environmental SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATI
Sample Number	A1257	DILL
CLIENT ID	BLDG 750, SITE D	QA I
DATA FILE	>C0736	DATE

Soil	
1.00	
03/16/93	
	Soil 1.00 03/16/93

COMPOUND	UG/KG	MDL	Compound	UG/KG		MDL
N-Nitrosodimethylamine	ND	370	Acenaphthene	ND		 370
Phenol	ND	370	2,4-Dinitrophenol	ND		1800
bis(-2-Chloroethyl)Ether	ND	370	4-Nitrophenol	ND		1800
2-Cholorophenol	ND	370	Dibenzofuran	ND		370
1,3-Dichlorobenzene	ND	370	2,4-Dinitrotoluene	ND		370
1,4-Dichlorobenzene	ND	370	2,6-Dinitrotoluene	ND		370
Benzyl Alcohol	ND	370	Diethylphthalate	ND		370
1,2-Dichlorobenzene	ND	370	4-Chlorophenyl-phenlyether	ND		370
2-Methylphenol	ND	370	Fluorene	ND		370
bis(2-chloroisopropyl)Ether	ND	378	4-Nitroaniline	ND		1800
4-Methylphenoi	ND	370	4,6-Dinitro-2-Methylphenol	ND		1800
N-Nitroso-Di-n-Propylamine	ND	370	N-Nitrosodiphenylamine	ND		370
Hexachloroethane	ND	370	4-Bromophenyl-phenylether	ND		370
Nitrobenzene	ND	370	Hexachlorobenzene	ND		370
Isophorone	ND	370	Pentachlorophenol	ND		1800
2-Nitrophenol	ND	370	Phenanthrene	ND		370
2,4-Dimethylphenol	ND	370	Anthracene	ND		370
Benzoic Acid	ND	1800	Di-n-Butylphthalate	ND		370
bis(-2-Chloroethoxy)Methane	NÐ	370	Fluoranthene	ND		370
2,4-Dichlorophenol	ND	370	Pyrene	ND		370
1,2,4-Trichlorobenzene	ND	370	Butylbenzylphthalate	ND		370
Naphthalene	ND	370	3,3'-Dichlorobenzidine	ND		730
4-Chloroaniline	ND	370	Benzo(a)Anthracene	ND		370
Hexachlorobutadiene	ND	370	Bis(2-Ethylhexyl)Phthalate	49	JB	370
4-Chloro-3-Methylphenol	ND	370	Chrysene	ND		370
2-Methylnaphthalene	ND	370	Di-n-Octyl Phthalate	ND		370
Hexachlorocyclopentadiene	ND	370	Benzo(b)Fluoranthene	ND		370
2,4,6-Trichlorophenol	ND	370	Benzo(k)Fluoranthene	ND		370
2,4.5-Trichlorophenol	ND	1800	Benzo(a)Purene	ND		370
2-Chloronaphthalene	ND	370	Indeno(1.2.3-cd)Purene	ND		370
2-Nitroaniline	ND	1900	Dibenzo(a,h)Anthracene	ND		370
Dimethyl Phthalate	ND	370	Benzo(g,h,i)Pervlene	ND		370
Acenaphthylene	ND	370	Benzidine	ND		730
3-Nitroaniline	ND	1800				

Percent Solid of 90.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

Lab Nam	ie :	21ST	CENTUR	II ENVIE	RONMENTAL			
Client	10:	US	ARMY	FORT	MONMOUTH,	NJ	UST-BLG	750
		SIT	TE D					

#### +-----+ i Lab Sample ID: 1 1 A1257 I +----+

#### PESTICIDE ORGANICS ANALYSIS DATA SHEET

#### Pesticides/PCBs

Concentration: Low Medium ( Circle One ) GPC Cleanup ___Yes ___No Date Extracted/Prepared: 03/15/93 . Separatory Funnel Extraction ____ Yes Date Analyzed: 03/16/93 20:41 Continutous Liquid-Liquid Extraction ____ Yes Conc/Dil Factor: 10.00g/10mi Percent Moisture: 10

C.A.S.	ug∕L or
Number	ug/Kg

319_84_6	Alaba_BBC 5.6	::
319_97_7	$D_{a+a} OUP \qquad	0 11
710 07 0		<u>u</u>
. 17-00-0	ceita-BHL	U
58-89-9	Gamma-BHC (Lindane) 5.6	U
76-44-8	Heptachlor 5.6	U
309-00-2	Aldrin 5.6	IJ
1024-57-3	Heptachler Epoxide 5.6	IJ
959-98-8	Endosulfan I 5.6	IJ
60-57-1	Dieldrin 5.6	IJ
72-55-9	4.4'-DDE	U
72-20-8	Endrin 5.6	; !
33213-65-9	Endosulfar II. 11	Ū.
72-54-3		11
1071-07-2	Endosultan Sulfate 11	ī.
59_09_3		10
		<u>ل</u> .
/2-43-7	Pethoxychior 280	Ų
7421-93-4	Endrin Aldehyde 11	IJ
57-74-9	Chlordane	U
8601-35-2	Taxaphene	ij
12674-11-2	Arochlor-1916	$\odot$
11104-28-2	Arechlor-1221	3
11141-16-5	Brochler-1232	U
534-9-21-9	Arechlar-1242	9
.2672-29-6	Arsenlor-1248	9
11097-69-1	Arachier-1254	3
11976-82-5	Arochlor-1260	- E

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VOLATILE ORGA	EPA SAMPLE NO.		
TENTATIVELY	IDENTIFIED COMPOU	NDS I	SITE D
Lab Name:21st Century Envir	ronmental	١_	1
Client Name: US ARMY FT. MC	DNMOUTH, NJ	Client ID: BLD	G 750
Matrix: (soil/water) SOIL		Lab Sample ID:	A1257
Sample wt/vol: 5	(g∕mL) g	Lab File ID:	>A1064
Level: (low/med) LOW		Date Received:	03/15/93

% Moisture: 10

Column: DB-624

Number TICs found:

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Dilution Factor: 1

Date Analyzed: 03/16/93

CONCENTRATION UNITS

I CAS NUMBER	COMPOUND NAME	   RT	I EST. CONC. I	Q
	I_No Unknowns	 	 	l
1		l	 	1
		l	l l .	1 1
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FORM I VOA-TIC

1/87 Rev.

E1 semi-VOLATILE ORGANICS ANALYS:	EPA SAMPLE NUMBER
TENTATIVELY IDENTIFIED COMPO	UNDS 1 1 1 SITE D 1 11
Matrix: (soil/water) SOIL	Lab Sample ID: A1257
Client: US Army, Ft.Monmouth, NJ	Client ID: Bldg 750
Sample wt∕vol: 30 (g∕mL) GM	Lab File ID: >C0736
Level: LOW	Date Received: NA
% Moisture: 10	Date Analyzed 03/16/93
Extraction: (Sepf/Cont/Sonc) SONC	Date Extracted 03/15/93
GPC (Yor N): N	
Column: DB-5	Dilution Factor: 1
Number TICs Found 3	CONCENTRATION UNITS (ug/L or ug/Kg/UG/KG
	· · · · · · · · · · · · · · · · · · ·

ICAS NUMBER	I I COMPOUND NAME I		T CONC
   1 79005   2 79345   3	   Ethane, 1,1,2-trichloro- (8CI9CI)   Ethane, 1,1,2,2-tetrachloro- (8CI9CI)   UNKNOWN 	   5.34    8.81   31.26  	300   810   330



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## US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1258

CLIENT ID: Site E

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

## US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

## PRIORITY POLLUTANT LIST

ANALYSIS NO: A 1258

CLIENT ID: Site E

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	1.43
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	20.8
COPPER	1.00	1.40
LEAD	5.00	8.27
MERCURY	0.10	N.D.
NICKEL	5.00	3.11
SELENIUM	0.25	N.D.
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	18.4

## 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

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JOB NUMBER	US ARMY FT. MONMOUTH NJ	MATRIX	Soil
Sample Number	A1258	DILUTION FACTOR	1.00
CLIENT ID	SITE E BLDG 750	DA BATCH	
data file	>A1065	DATE ANALYZED	03/16/93

, 북쪽 프 등 은 것 같은 후 두 등 는 후 등 은 가 두 등 는 것 은 은 약 등 부분	*************	+======================================						
COMPOUND	UG/KG	HDL	COMPOUND	UG/KG	HDL			
Acrolein	HRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR	<b>33356</b> 67		12222222222222 12222222222222222				
Acrulanitrile	80	57		NU	6			
Chloromethane	10	7/	2-La lorostayivinyisther	NU	11			
Bronnethane	10	11		ND	11			
Vinul Chloride		11	trans-1,2-Dichioropropene	NU	6			
Chlocosthane	NU NO	11	loluene	4.0 J	6			
	NU 10 10	11	cis-1,3-Dichloropropene	DK	6			
	10 JB	11	1,1,2,2-Tetrachloroethane	ND	6			
1,1-Dichiorsethene	ND	6	1,1,2-Trichloroethane	ND	6			
Carbon Disulfide	ND	11	4-Methyl-2-pentanone	ND	11			
Methylene Chloride	6.0	6	Tetrachloroethene	ND				
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND	6			
1,1-Dichloroethane	ND	6	Chlorobenzene	ND	6			
Vinyl Acetate	ND	6	Ethylbenzene	1.8.1	6			
2-Butanone	ND	11	nšo-Xvienes	8.9	4			
Chloroform	ND	6	o-Xulene	293	6			
1,1,1-Trichloroethane	ND	6	Styrene	ND	4			
Carbon Tetrachloride	ND	6	Bromoform	NO	4			
1,2-Dichloroethane	ND	6		80	<u>ل</u>			
Benzene	ND	6	n-Nichlarabenzene		0 4			
Trichloroethene	ND	6	n-Bichlorabenzene	פאי				
1,2-Dichloropropane	ND	6		<b>.</b>	0			

SURROGATE COMPOUNDS	<b>% RECOVERY</b>	LIMITS	STATUS
1,2-Dichloroethane-d4	111	70 - 121	OK
Toluene-d8	101	81 - 117	OK
Bromofluorobenzene	99.7	74 - 121	ЭK

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Percent Solid of 87.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

## 21ST CENTURY Environmental SEMIVOLATILE ANALYSIS DATA

job Number	US ARMY, FT. MONMOUTH, NJ
SAMPLE NUMBER	A1258
CLIENT ID	BLDG 750, SITE E
data file	>C0737

MATRIX _	Soil	
DILUTION FACTOR	1.00	
QA BATCH		
Date analyzed _	03/16/93	

Compound	ug/kg	HDL	COMPOUND	UG∕KG		MDL
N-Nitrosodimethylamine	ND	380	Acenaphthene	ND	****	
Phenol	ND	380	2,4-Dinitrophenol	ND		1900
bis(-2-Chloroethyl)Ether	ND	380	4-Nitrophenol	ND		1980
2-Cholorophenol	ND	380	Dibenzofuran	ND		380
1,3-Dichlorobenzene	ND	380	2,4-Dinitrotoluene	ND		380
1,4-Dichlorobenzene	ND	380	2,6-Dinitrotoluene	ND		380
Benzyl Alcohol	ND	380	Diethylphthalate	ND		380
1,2-Dichlorobenzene	ND	380	4-Chlorophenyl-phenlyether	ND		380
2-Methylphenol	ND	380	Fluorene	ND		380
bis(2-chloroisopropyl)Ether	ND	380	4-Nitroaniline	ND		1900
4-Methylphenol	ND	380	4.6-Dinitro-2-Methylphenol	ND		1900
N-Nitroso-Di-n-Propylamine	ND	380	N-Nitrosodiphenvlamine	ND		380
Hexachloroethane	ND	380	4-Bromophenvi-phenvlether	ND		380
Nitrobenzene	ND	380	Hexachlorobenzene	ND		380
Isophorone	ND	380	Pentachlorophenol	ND		1900
2-Nitrophenol	ND	380	Phenanthrene	ND		380
2,4-Dimethylphenol	ND	380	Anthracene	ND		380
Benzoic Acid	ND	1900	Di-n-Butylphthalate	ND		380
bis(-2-Chloroethoxy)Methane	ND	380	Fluoranthene	ND		380
2,4-Dichlorophenol	ND	380	Purene	ND		380
1,2,4-Trichlorobenzene	ND	380	Butvibenzviphthalate	ND		380
Naphthalene	ND	380	3.3'-Dichlorobenzidine	ND		760
4-Chloroaniline	ND	380	Benzo(a)Anthracene	ND		380
lexachlorobutadiene	ND	380	Bis(2-Ethulhexul)Phthalate	ND	в	380
4-Chloro-3-Methylphenol	ND	380	Chrysene	ND	-	380
2-Methylnaphthalene	ND	380	Di-n-Octul Phthalate	ND		380
lexachlorocyclopentadiene	ND	380	Benzo(b)Fluoranthene	ND		380
2,4,6-Trichlorophenol	ND	380	Benzo(k)Fluoranthene	ND		380
2,4.5-Trichlorophenol	ND	1900	Benzo(a)Pvrene	ND		380
2-Chloronaphthalene	ND	380	Indeno(1.2.3-cd)Purene	ND		380
2-Nitroaniline	ND	1900	Dibenzo(a,h)Anthracene	ND		380
)imethyl Phthalate	ND	380	Benzo(g.h.i)Pervlene	ND		380
tcenaphthylene	ND	380	Benzidine	NĐ		760
-Nitroaniline	ND	1900				

Percent Solid of 87.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

		SIT	ΕE				COI DEC	150	+			+
Client I	D:	US A	ARMY	FORT	MONMOUTH.	N.T	UST-BLC	750	1	A1258		ł
Lab Name	:	21ST CE	NTURY	ENVIRON	IMENTAL				! Lab	Sample	10:	1

#### PESTICIDE ORGANICS ANALYSIS DATA SHEET

#### Pesticides/PCBs

Concentration:LowMedium( Circle One )GPC CleanupYesNoDate Extracted/Prepared:03/15/93·Separatory Funnel Extraction __ YesDate Analyzed:03/16/93 21:23Continu.ous Liquid-Liquid Extraction __ YesConc/Dil Factor:10.05g/10mlPercent Moisture:13

C.A.S.	ug/L or
Number	ug/Kg

319-84-6	Alpha	-BHC								۶Q	11
319-87-7	Beta-I	RHC	Ċ	•	•	·	·	•	•	5 9	
319-86-8	Delta	-BHC.	•							5.3	
58-89-9	Samma	-BHC	(  i	nd	Ian	, e j	·	Ċ		5,8	0
76-44-8	Hentar	th lar				,		·	•	ភ្ន	Н
309-00-2	Aldrin	1				·	•	Ċ	•	к.e	н
1024-57-3	Hentad	blor	- Fo	ov	id		•	•	•	5 8	а Н
959-98-8	Endos	ulfan	T	0 /			•	•	•	Бġ	8
68-57-1	Dieldr	in	•	•	•	•	•	•	•	5.9	ш Н
72-55-9	4.41-6	10F	•	•	•	•	•	•	•	5.0	H
72-20-8	Endrig		•	•	•	•	•	•	•	5.0	- 11
33213-65-9	Endosi	lfan		·	•	•	•	•	•	12	11
72-54-8	4.4'-6	nn	• •	•	•	•	•	•	•	19	ų
1031-07-8	Endosi	ulfan.	e	! {	• = †	e	•	•	•	10	11
50-29-3	4.41-0	DT		• '		-	•	•	`	• ?	
72-43-5	Methox	uchla	r	•	•	•	•	•	•	290	н
7421-93-4	Endrin	Alde	hu	de	•	•	•	•	•	12	11
57-74-9	Chlord	ane		40	•	•	•	•	•	100	н
8001-35-2	Toyant	ene	•	•	•	•	•	•	•	570	0 :1
12674-11-2	- Aroch I	or-10	14	•	•	•	•	·	•	906	
11104-28-2	Acceb }	or_17	25	•	•	•	•	•	•	100	ц .1
11141-16-5	Arochl	07-12	24 39	•	-	•	•	•	•	200	
53469_21_9	Arochl	or_10	- 4 .(1)	•	•	•	•	•	•	-279 	ы 11
12679_29_6	Arach!	01-12	74 70	•	•	•	•	•	•	270	0
11097_69_1	dreebl	01-12	40 £4	•	•		•	•	•	170 han	С 11
11094_07_5		ur-:2	294 20	•	•	•	•	•	•	270	U
110/0-07+2	-ucocut	or-12	ΟU.	•	•	•		•	•		U

Form 1

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1E VOLATILE ORGANICS ANALYSIS DATA	SHEET		EPA SA
TENTATIVELY IDENTIFIED COMPOU	NDS		I I SITE E
Lab Name:21st Century Environmental			۱
Client Name: US ARMY FT. MONMOUTH, NJ	Clien	t ID:	8LDG 750
Matrix: (soil/water) SOIL	Lab S	ample	ID: A1258

Sample wt/vol: 5 (g/mL) g Level: (low/med) LOW

% Moisture: 13

Column: DB-624

Lab File ID: >A1065 Date Received: 03/15/93

Date Analyzed: 03/16/93

Dilution Factor: 1

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

Number	TICs	found:	0

CAS NUMBER	I COMPOUND NAME	I I RT	EST. CONC.	
	_No Unknowns	= = = = = = = = = = = = = = = = = = =		= = = = =     
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	1	۱۱ ۱۱		 
	۱ ۱	l !		 

FORM I VOA-TIC

1/87 Rev.

SAMPLE NO.

E1 semi-VOLATILE ORGANICS ANALYS TENTATIVELY IDENTIFIED COMPO	EPA SAMPLE NUMBER
Matrix: (soil/water) SOIL	Lab Sample ID: A1258
Client: US Army, Ft. Monmouth, NJ	Client ID: Bldg 750
Sample wt∕vol: 30 (g∕mL) GM	Lab File ID: >C0737
Level: LOW	Date Received: NA
% Moisture: 13	Date Analyzed 03/16/93
Extraction: (Sepf/Cont/Sonc) SONC	Date Extracted 03/15/93
GPC ( Y or N ): N	
Column: DB-5	Dilution Factor: 1
Number TICs Found 3	CONCENTRATION UNITS (ug/L or ug/Kg) UG/KG

I ICAS NI I	UMBER	I I COMPOUND NAME I	1   	RT	I I EST I	CONC	1
   1   2   3 	79005 79345	   Ethane, 1,1,2-trichloro- (8CI9CI)   Ethane, 1,1,2,2-tetrachloro- (8CI9CI)   UNKNOWN 	         	5.35 8.81 31.26	- <del>-</del>       	190 540 230	

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## US ARMY FORT MONMOUTH, NJ UST-BLDG 750

## CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1259

CLIENT ID: Site F

PARAMETER	MDL (mg/kg)	RESULT (mg/kg)
CYANIDE	0.10	0.20
PHENOL	0.50	N.D.
#### US ARMY FORT MONMOUTH, NJ UST-BLDG 750

# CERTIFICATE OF ANALYSIS

# PRIORITY POLLUTANT LIST

ANALYSIS	NO:	A	1259
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CLIENT ID: Site F

METALS	MDL (mg/Kg)	RESULT (mg/Kg)
ANTIMONY	5.00	N.D.
ARSENIC	0.25	2.00
BERYLLIUM	1.00	N.D.
CADMIUM	1.00	N.D.
CHROMIUM	1.00	22.5
COPPER	1.00	4.27
LEAD	5.00	18.0
MERCURY	0.10	N.D.
NICKEL	5.00	N.D.
SELENIUM	0.25	0.52
SILVER	1.00	N.D.
THALLIUM	1.00	N.D.
ZINC	1.00	20.2

### 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

job number	US ARMY FT, MONMOUTH NJ	MATRIX	Soil
Sample Number	A1259	DILUTION FACTOR	1.00
CLIENT ID	SITE F BLDG 750	Qa Batch	
data file	>A1107	date analyzed	03/24/93

COMPOUND	UG/KG	MDL	Compound	UG/KG
*======================================	3222222222	********	***************************************	**********
Acrolein	ND	56	Bromodichloromethane	ND
Acrylonitrile	ND	56	2-Chloroethylvinylether	ND
Chloromethane	ND	11	2-Hexanone	ND
Bromomethane	ND	11	trans-1,3-Dichloropropene	ND
Vinyl Chloride	ND	11	Toluene	NÐ
Chloroethane	ND	11	cis-1,3-Dichloropropene	ND
Acetone	9.8 JE	3 11	1,1,2,2-Tetrachloroethane	ND
1,1-Dichloroethene	ND	6	1,1,2-Trichloroethane	ND
Carbon Disulfide	ND	11	4-Methyl-2-pentanone	NÐ
Methylene Chloride	ND E	36	Tetrachloroethene	ND
1,2-Dichloroethene(trans)	ND	6	Dibromochloromethane	ND
1,1-Dichloroethane	ND	6	Chlorobenzene	ND
Vinyl Acetate	ND	6	Ethylbenzene	ND
2-Butanone	NÐ	11	m&p-Xylenes	ND
Chloroform	ND	6	o-Xylene	ND
1,1,1-Trichloroethane	ND	6	Styrene	ND
Carbon Tetrachloride	ND	6	Bromoform	ND
1,2-Dichloroethane	ND	6	m-Dichlorobenzene	ND
Benzene	ND	6	p-Dichlorobenzene	ND
Trichloroethene	ND	6	o-Dichlorobenzene	ND
1,2-Dichloropropane	ND	6	•	

SURROGATE COMPOUNDS	* RECOVERY	LIMITS	STATUS
1,2-Dichloroethane-d4	107	70 - 121	OK
Toluene-d8	98.3	81 - 117	OK
Bromofluorobenzene	97.9	74 - 121	OK

Percent Solid of 89.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

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#### 21ST CENTURY Environmental SEMIVOLATILE ANALYSIS DATA

JOB NUMBER	US ARMY, FT. MONMOUTH, NJ	MATRIX	Soil
Sample Number	A1259	DILUTION FACTOR	1.00
CLIENT ID	BLDG 750, SITE F	QA BATCH	
data file	>C0769	date analyzed	03/22/93

Compound	UG/KG	MDL	COMPOUND	UG/KG		MDI
	*======= ND	==== <b>=</b> == 370	Arenanhthene	======== NA	= = = = =	====== 37(
Phenol	ND	370	2 4-Dinitronhanol	ND		190
bis(-2-Chloroethul)Ether	ND	370	4-Nitconbenol	ND		1900
2-Cholorophenol	ND	370	Dibenzofuran	ND		37
1.3-Dichlorobenzene	ND	370	2.4-Dinitrotoluene	ND		37
1.4-Dichlorobenzene	ND	370	2.6-Dinitrotoluene	ND		37
Benzvi Alcohol	ND	370	Diethylphthalate	ND		37
1.2-Dichlorobenzene	ND	370	4-Chlorophenul-open luether	ND		37
2-Methylphenol	ND	370	Fluorene	ND		371
bis(2-chloroisopropyl)Ether	ND	370	4-Nitroaniline	ND		180
4-Methylphenol	ND	370	4.6-Dinitro-2-Methylohenol	ND		1801
N-Nitroso-Di-n-Propylamine	ND	370	N-Nitrosodinhenvlamine	ND		37
Hexachloroethane	ND	370	4-Bromonhenvi-ohenviether	ND		371
Nitrobenzene	ND	370	Hexachlorobenzene	ND		37
Isophorone	ND	370	Pentachlorophenol	ND		1801
2-Nitrophenol	ND	370	Phenanthrene	ND		37
2,4-Dimethylphenol	ND	370	Anthracene	ND		371
Benzoic Acid	ND	1800	Di-n-Butvlohthalate	ND		371
bis(-2-Chloroethoxy)Methane	ND	370	Fluoranthene	ND		371
2,4-Dichlorophenol	ND	370	Purene	39	J	371
1,2,4-Trichlorobenzene	ND	370	Butvlbenzvlohthalate	ND	-	370
Naphthalene	ND	370	3.3'-Dichlorobenzidine	ND		74
4-Chloroaniline	ND	370		ND		370
Hexachlorobutadiene	ND	370	Bis(2-Ethylhexyl)Phthalate	49	J	370
4-Chloro-3-Methylphenol	ND	370	Chrysene	ND		378
2-Methylnaphthalene	ND	370	Di-n-Octvl Phthalate	ND		370
lexachlorocyclopentadiene	ND	370	Benzo(b)Fluoranthene	ND		370
2,4,6-Trichlorophenol	ND	370	Benzo(k)Fluoranthene	ND		370
2,4.5-Trichlorophenol	ND	1800	Benzo(a)Purene	ND		370
2-Chloronaphthalene	ND	370	Indeno(1,2,3-cd)Pyrene	ND		370
2-Nitroaniline	ND	1800	Dibenzo(a,h)Anthracene	ND		370
Dimethyl Phthalate	ND	370	Benzo(g.h.i)Pervlene	ND		370
Acenaphthylene	ND	370	Benzidine	ND		740
S-Nitroaniline	ND	1800				

Percent Solid of 89.0 is used for all Target compounds.

(J) Indicates detected below MDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

	SITE F			++
Client ID:	US ARMY	FORT MONMOUTH,	NJ UST-BLG 750	I A1259 I
Lab Name :	21ST CENTURY	ENVIRONMENTAL		Lab Sample ID: !

#### PESTICIDE ORGANICS ANALYSIS DATA SHEET

#### Pesticides/PCBs

Concentration:LowMedium(Circle One)GPC CleanupYesNoDate Extracted/Prepared:03/15/93-Separatory Funnel ExtractionYesDate Analyzed:03/16/93 22:05Continu.cus Liquid-Liquid ExtractionYesConc/Dil Factor:10.01g/10mlPercent Moisture:11

C.A.S.	uq∕L or
Number	ug/Kg

319-84-6	Alpha-BHC 5.6	IJ
319-87-7	Beta-BHC 5.6	IJ
319-86-8	Delta-BHC	IJ
58-89-9	Gamma-BHC (Lindane) 5.6	0
76-44-8	Heptachlor 5.6	IJ
309-00-2	Aldrin 5.6	U
1024-57-3	Heptachlor Epoxide 5.6	U
959-98-8	Endosulfan I 5.6	U
60-57-1	Dieldrin 5.6	IJ
72-55-9	4,4'-DDE 5.6	U
72-20-8	Endrin 5.6	U
33213-65-9	Endosulfan II 11	IJ
72-54-8	4,4'-DDD 11	IJ
1031-07-8	Endosulfan Sulfate 11	3
50-29-3	4,4'-DDT 11	9
72-43-5	Methoxychlor	0
7421-93-4	Endrin Aldehyde 11	Ċ
57-74-9	Chlordane	U
8001-35-2	Toxaphene	U
12674-11-2	Arochlor-1016	Ľ
11104-28-2	Arochlor-1221	÷
11141-16-5	Arochlor-1232 280	U
53469-21-9	Arochlor-1242	U
12672-29-6	Arochlor-1248	
11097-69-1	Arochlor-1254 280	Ŀ.
11096-82-5	Arochlor-1260 280	U

U Undetected

J Estimated value below detection level

Form 1

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TENTATIVELY IDENTIFIED COMP	ATA SHEET POUNDS I I I I SITE F I
	۰ <u>ـــــ</u> ۲
Client Name: US ARMY FT. MONMOUTH, NJ	Client ID: BLDG 750
Matrix: (soil/water) Soil	Lab Sample ID: A1259
Sample wt/vol: 5 (g/mL)g .	Lab File ID: >A1107
Level: (low/med) LOW	Date Received: 03/15/93
% Moisture: 11	Date Analyzed: 03/24/93
Column: DB-624	Dilution Factor: 1
CON Number TICs found: 0 (ug	NCENTRATION UNITS:
I I CAS NUMBER I COMPOUND NAME	I RT I EST. CONC. I Q
II_No Unknowns	······································
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۱ <u> </u>	iiiiiii
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I   CAS NUMBER   I   COMPOUND NAME     I   I   I   I     I   I   I   I     I   I   I   I     I   I   I   I     I   I   I   I     I   I   I   I     I   I   I   I     I   I   I   I     I   I   I   I	RT   EST. CONC.   Q

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#### EPA SAMPLE NUMBER

semi-VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

۱		I
ł	SITE F	1
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Matrix: (soil/water) SOIL Lab Sample ID: A1259 Client: US Army, Ft. Monmouth, NJ Client ID: Bldg 750 Sample wt/vol: 30 (g/mL) GM Lab File ID: >C0769 Level: LOW Date Received: NA % Moisture: 11 Date Analyzed 03/22/93 Extraction: (Sepf/Cont/Sonc) SONC Date Extracted 03/19/93 GPC ( Y or N ): N Column: DB-5 Dilution Factor: 1 CONCENTRATION UNITS

Number TICs Found 7

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

I ICAS NUMBI	I ER I COMPOUND NAME	I I IRTIEST I I	CONC I
1 79    2   3   4 79:   5   6   7 	I 305   Ethane, 1,1,2-trichloro- (8CI9CI)   UNKNOWN I UNKNOWN   UNKNOWN   UNKNOWN   UNKNOWN   UNKNOWN   UNKNOWN   UNKNOWN	   4.58    5.17    6.01    8.13   27.09   29.28   30.60	150   490   490   490   220   410   190

#### 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

job Number Sample Number Client ID Data File	US ARMY FT A1260 TRIP BLANK >A1058	8LDG 750		Hatrix _ Dilution Factor _ Qa Batch _ Date Analyzed _	Water 1.00 03/16/93		
Compound		us/l	MDL	Compound		UG/L	MOL
Acrolein		••••••••••••••••••••••••••••••••••••••	50	Bromodichlorometha	1292### <b>####</b> ############################	ND	•======= 5
Acrylonitrile		ND	50	2-Chloroethylvinyl	ether	ND	10
Chloromethane		ND	10	2-Hexanone		ND	10
Bromomethane		ND	10	trans-1,3-Dichloro	propene	ND	5
Vinyl Chloride		ND	10	Toluene		ND	5
Chloroethane		ND	10	cis-1,3-Dichloropr	opene	ND	5
Acetone		6.3 JB	10	1,1,2,2-Tetrachlor	oethane	ND	5
1,1-Dichloroeth	ene	ND	5	1,1,2-Trichloroeth	ane	ND	5
Carbon Disulfid	8	ND	10	4-Methyl-2-pentano	ne	ND	10
Methylene Chlor	ide	3.4 J	5	Tetrachloroethene		NO	5
1,2-Dichloroeth	ene(trans)	ND	5	Dibromochlorometha	ne	NÐ	5
1,1-Dichloroeth	ane	ND	5	Chlorobenzene		ND	5
Vinyl Acetate		NÐ	5	Ethylbenzene		ND	5
2-Butanone		ND	10	m&p-Xylenes		ND	5
Chloroform		ND	5	o-Xylene		NÐ	5
1,1,1-Trichloro	ethane	ND	5	Styrene		ND	5
Carbon Tetrachle	oride	ND	5	Bromoform		ND	5
1,2-Dichloroeth	ane	ND	5	m-Dichlorobenzene		ND	5
Benzene	- •	ND	5	p-Dichlorobenzene		ND	5
Trichloroethene		ND	5	o-Dichlorobenzene		ND	5
1,2-Dichloropro	pane	ND	5				

SURROGATE COMPOUNDS	X RECOVERY	LIMITS	<u>STATUS</u>
1,2-Dichloroethane-d4	103	76 - 114	OK
Toluene-d8	100	88 - 110	OK
Bromofluorobenzene	99.1	86 - 115	OK

(J) Indicates detected below MDL

(8) Indicates also present in blank

(ND) Indicates compound not detected

1E VOLATILE ORGANICS ANALYSIS DATA	SHEET	EPA SAMPLE	NO.
TENTATIVELY IDENTIFIED COMPOU Lab Name:21st Century Environmental	NDS	TRIP BLANK	   
Client Name: US ARMY FT. MONMOUTH, NJ	Client ID: BL	DG 750	
Matrix: (soil/water) Water	Lab Sample ID:	A1260	
Sample wt/vol: 5 (g/mL) mL	Lab File ID:	>A1058	
Level: (low/med) LOW	Date Received:	03/15/93	
% Moisture: NA	Date Analyzed:	03/16/93	
Column: DB-624	Dilution Facto	or: 1	
Number TICs found: 0 (ug/L	NTRATION UNITS: or ug/Kg0 ug/L	$\supset$	
I CAS NUMBER I COMPOUND NAME	I I I RT I ES	ST. CONC. I	
II_No Unknowns	-! <u></u> ! <u></u>		!
	-	 !	
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	-!!	!	!

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

# US ARMY FORT MONMOUTH, NJ UST-BLDG 161

#### CERTIFICATE OF ANALYSIS

ANALYSIS NO: A 1265

CLIENT ID: Field Blank

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

# US ARMY FORT MONMOUTH, NJ UST-BLDG 161

#### CERTIFICATE OF ANALYSIS

# PRIORITY POLLUTANT LIST

.

ANALYSIS	NO:	Α	1265
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CLIENT ID: Field Blank

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

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# 21st Century Environmental Inc. VOLATILE ORGANIC ANALYSIS DATA

JOB NUMBER US ARMY FT. MONHOUTH NJ   SAMPLE NUMBER A1265   CLIENT ID FIELD BLANK BLDG 161   DATA FILE >A1059			HatrixH Dilution Factor1 QA Batch	<u>Water</u> 1.00	
			date analyzed0	3/16/93	6/93
COMPOUND	UG/L	HOL	COMPOUND	UG/1.	MDL
Acrolein	ND	<b>5</b> 0	Bromodichloromethane	ND	18282221 Ş
Acrylonitrile	ND	50	2-Chloroethylvinylether	ND	10
Chloromethane	ND	10	2-Hexanone	ND	10
Bromomethan <del>e</del>	ND	10	trans-1,3-Dichloroproper	ne NØ	5
Vinyl Chloride	ND	10	Toluene	ND	5
Chloroethane	ND	10	cis-1,3-Dichloropropene	ND	5
Acetone	6.2 JB	10	1,1,2,2-Tetrachloroethar	ie ND	5
1,1-Dichloroethene	ND	5	1,1,2-Trichloroethane	ND	5
Carbon Disulfide	ND	10	4-Methyl-2-pentanone	ND	10
Methylene Chloride	3.5 J	5	Tetrachloroethene	ND	5
1,2-Dichloroethene(trans)	ND	5	Dibromochloromethane	ND	5
1,1-Dichloroethane	ND	5	Chlorobenzene	ND	5
Vinyl Acetate	NÐ	5	Ethylbenzene	ND	5
2-Butanone	ND	10	m&p-Xylenes	ND	5
Chloroform	ND	5	o-Xylene	ND	5
1,1,1-Trichloroethane	ND	5	Styrene	ND	5
Carbon Tetrachloride	ND	5	Bromoform	ND	5
1,2-Dichloroethane	ND	5	n-Dichlorobenzene	ND	5
Benzene	ND	5	p-Dichlorobenzene	ND	5
Trichloroethene	ND	5	o-Dichlorobenzene	ND	5
1.2-Dichloropropane	ND	5			

SURRUGATE COMPOUNDS	<u> * RECOVERY</u>	LIMITS	STATUS
1,2-Dichloroethane-d4	110	76 - 114	OK
Toluene-d8	101	<b>88 - 110</b>	OK
Bromofluorobenzene	100	86 - 115	OK

(J) Indicates detected below MDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

#### 21ST CENTURY Environmental SEMIVOLATILE ANALYSIS DATA

Job Number	US ARMY: FT. MONMOUTH, NJ
Sample Number	A1265
CLIENT ID	BLDG 750 FIELD BLANK
Data file	>C0733

NATRIX _	Water	
DILUTION FACTOR	1.00	
qa Batch		
DATE ANALYZED	03/16/93	

_____

			*****************
LUTPUUND	UG/L	MOL .	COMPOUND
		*******	
Dhene 1	NU ND	10	Acenaphthene
Filengi big( 2 Chlosophul)Chb	NU	10	2,4-Uinitrophenol
2 Chalassahanal	NU	10	4-Nitrophenol
	NU	10	Dibenzofuran
1,2-DichloroBenzene	NU	10	2,4-Dinitrotoluen
1,4~Uichiorobenzene	NU	10	2,6-Dinitrotoluen
Benzyl Hiconol	ND	10	Diethylphthalate
1,2-UlchloroDenzene	ND	10	4-Chlorophenyl-ph
2-nethylphenol	ND	10	Fluorene
Dist2-chloroisopropylJEthe	nr ND	10	4-Nitroaniline
4-flethylphenol	ND	10	4,6-Dinitro-2-Met
N-Nitroso-Ul-n-Propylamine	ND	10	N-Nitrosodiphenyl
Hexachloroethane	ND	10	4-Bromophenyl-phe
Nitrobenzene	ND	10	Hexachlorobenzene
Isophorone	ND	10	Pentachlorophenol
2-Nitrophenol	ND	10	Phenanthrene
2,4-Dimethylphenol	ND	10	Anthracene
Benzoic Acid	ND	50	Di-n-Butylphthala
bis(-2-Chloroethoxy)Methan	e ND	10	Fluoranthene
2,4-Dichlorophenol	ND	10	Pyrene
1,2,4-Trichlorobenzene	ND	10	Butylbenzylphthala
Naphthalene	ND	10	3,3'-Dichlorobenz
4-Chloroaniline	ND	10	Benzo(a)Anthracen
Hexachlorobutadiene	ND	10	Bis(2-Ethylhexyl)
4-Chloro-3-Methylphenol	ND	10	Chrysene
2-Methylnaphthalene	ND	10	Di-n-Octyl Phthala
Hexachlorocyclopentadiene	ND	10	Benzo(b)Fluoranthe
2,4,6-Trichlorophenol	ND	10	Benzo(k)Fluoranthe
2,4.5-Trichlorophenol	ND	50	Benzo(a)Pyrene
2-Chloronaphthalene	ND	10	Indeno(1.2.3-cd)Pv
2-Nitroaniline	ND	50	Dibenzo(a.h)Anthra
Dimethyl Phthalate	ND	10	Benzo(a.h.i)Perule
Acenaphthylene	ND	10	Benzidine
3-Nitroaniline	ND	50	

---------UG/L MOL. ..... ND 10 ND 50 ND 50 ND 10 ND 10 e 1e ND 10 NÐ 10 enlyether ND 10 NÐ 10 ND 50 hylphenol ND 50 lamine ND 10 nylether ND 10 ND 10 ND 50 ND 10 ND 10 ND ite 10 ND 10 ND 10 ate NĐ 10 idine ND 20 ND 10 e Phthalate ND 10 ND 10 ND ate 10 ND 10 ene ene ND 10 NÐ 10 yrene ND 10 ND 10 acene ND 10 ene ND 20

(J) Indicates detected below MDL

(B) Indicates also present in blank

(ND) Indicates compound not detected

+				- +
!	Lab	Sample	ID:	۱
1		A1265		I
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#### Lab Name: 21ST Century Environmental Client ID: US ARMY FORT MONMOUTH, NJ UST-BLG 1 FIELD BLANK

#### PESTICIDE ORGANICS ANALYSIS DATA SHEET

#### Pesticides/PCBs

Concentration: (Low Medium GPC Cleanup <u>Yes No</u> Seo. Funnel Extraction <u>Y</u>es (Circle One) Date Extracted/Prepared: 03/16/93 Date Analyzed: 03/17/93 03:42 Conc/Dil Factor: 100mL/5mL Percent Moisture: N/A

Continuous Lig-Lig Ext. __Yes

C.A.S. Number



319-84-6	Alpha-BHC.	0.25	Li
319-87-7	Beta-8∺C	0.25	U
319-86-8	Delta-SHC	0.25	IJ
58-89-9	Gamma-BHC (Lindane)	0.25	IJ
76-44-8	Heptachlor	0.25	U
309-00-2	Aldrin	0.25	IJ
1024-57-3	Heptachlor Epoxide	9.25	U
959-98-8	Endosulfan I	0.25	U
60-57-1	Dieldrin	0.25	U
72-55-9	4,4'-DDE	0.25	IJ
72-20-8	Endrin	0.25	U
33213-65-9	Endosulfan II	ê.5	IJ
72-54-8	4,4'-DDD	0.5	8
1031-07-8	Endosulfan Sulfate	0.5	U
50-29-3	4,4'-DDT	0.5	9
72-43-5	Methoxychler	13	U
7421-93-4	Endrin Aldehyde	0.5	U
57-74-9	Chlordane	15	IJ
8091-35-2	Toxaphere	25	U
12674-11-2	Arachler-1016.	13	U
11104-28-2	Arochior-1221	13	U
11141-16-5	Arochlor-1232	13	U
53469-21-9	Arochlor-1242.	13	IJ
12672-29-6	Arochlar-1248	13	IJ
11097-69-1	Arochlor-1254.	13	U
11096-32-5	Arochler-1260.	13	IJ

U Undetected

J Estimated value below detection level

Form 1

VOL T Lab Name:21st Cen	1E ATILE ORGANICS ANALYSIS D ENTATIVELY IDENTIFIED COM tury Environmental	IPOUNDS I	EPA SAMPLE NO.
Client Name: US A	RMY FT. MONMOUTH, NJ	Client ID: BLDG	5 161
Matrix: (soil/wat	er) Water	Lab Sample ID:	A1265
Sample wt/vol:	5 (g∕mL)mL	Lab File ID:	>A1059
Level: (low/med	) LOW	Date Received:	03/15/93
% Moisture: NA		Date Analyzed:	03/16/93
Column: DB-624		Dilution Factor	: 1
Number TICs foun	CO d: 0 (u	NCENTRATION UNITS	)
I I CAS NUMBER	I COMPOUND NAME	I RT I EST	CONC.   Q
	No Unknowns		

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semi-VOLATILE ORGANICS ANALYS TENTATIVELY IDENTIFIED COMP	IS DATA SHEET OUNDS   FIELD     BLANK   
Matrix: (soil/water) SOIL	Lab Sample ID: A1265
Client: US Army, Ft.Monmouth, NJ	Client ID: Bldg 750
Sample wt∕vol: 1000 (g∕mL) ML	Lab File ID: >C0733
Level: LOW	Date Received: NA
% Moisture: 100	Date Analyzed 03/16/93
Extraction: (Sepf/Cont/Sonc) SEPF	Date Extracted 03/15/93
GPC ( Y or N ): N	
Column: DB-5	Dilution Factor: 1
Number TICs Found 0	CONCENTRATION UNITS (ug/L or ug/Kg UG/L

I ICAS NUMBER	I I COMPOUND NAME I	   	RT	I IEST CONC I	1
422222222222	I I NO UNKNOWN COMPOUNDS IDENTIFIED	= = =     		=======     !	     

E1 EPA SAMPLE NUMBER

# APPENDIX E

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# TANK RECLAMATION CERTIFICATE



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# ATTACHMENT G

UST 750D File Review and Analyses



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

Date: August 26, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: <b>750D</b>	Registration ID: None
Recommended Status of Site: Change to	Case Closed
Based on the file review, were there indicat	ions of a contaminant release? [ X ] Yes [ ] No
NJDEP Release No. or DICAR (If applicable):	<u>09-06-11-1309-09</u>
Did NJDEP approve No Further Action (NFA)	for this site? [ ] Yes [ X ] No [ ] Not Applicable
Tank Description: [X] Steel [] Fiberglass	Size: <u>1000 gals.</u> Contents: <u>No. 2 Fuel Oil</u>
[X] Residential [] Commercial/Indu	istrial
Tank Removed?[X]Yes [ ] No   If "yes,	" removal date: <u>6/11/2009</u>
Were closure soil samples taken? [ X ] Yes	[ ] No Analyses: <u>TPH</u>
Comparison criteria: <u>5,100 mg/kg TPH</u>	
Were closure soil sample results less than c	omparison criteria? [X]Yes []No

### **Brief Narrative**

UST 750D was initially identified as anomaly P51_47 in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_47 location, a steel tank was uncovered on 6/11/09 and fuel oil contamination was observed. Initial soil samples (750D N, 750D E, 750D S, and 750D W) were collected using a Geoprobe on 6/15/09, and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH), in an attempt to predict the extent of impacted soil prior to additional excavation. TPH in these initial soil samples ranged in concentration from not detected (ND) to 1,250 milligrams per kilogram (mg/kg), with the highest concentration encountered in the boring to the east of the tank.

The tank was subsequently removed along with approximately 4 cubic yards of contaminated soil. Multiple holes were observed in the tank, and an oily sheen was observed on the groundwater in the tank excavation (groundwater was observed at 6.5 feet below ground surface). Soil samples (750 D-1 through 750 D-4) were collected from the excavation side walls on 6/17/09; these results ranged from 888 mg/kg to 26,511 mg/kg for TPH. The highest concentrations of TPH were encountered in the south side wall.

An additional 60 cubic yards of petroleum contaminated soil was removed from the tank excavation, and post-excavation samples were collected on 6/23/09 and 6/25/09 from the four side walls and excavation bottom (750-D PX-1 through 750-D PX-5). These results ranged from ND to 227 J mg/kg. 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 soil sampling or remedial action was warranted.

A field duplicate sample labeled as "750-D DUPLICATE" in Analytical Data Report 90265 was incorrectly assigned to 750D on the title page and TPH results sheet; instead this duplicate was associated with 750 E as stated on the Field Duplicate Identification page. This correction is also consistent with the sample times in the Chain of Custody, field PID results and resulting TPH concentrations.

Monitor well 750MW05 was installed in the vicinity of UST 750D on 10/15/09 to assess the potential for contamination of groundwater. This well was sampled on 11/3/09 and 11/17/09, and the samples were analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), plus VOC and SVOC tentatively identified compounds (TICs). As noted in the analytical data reports (see the sheet preceding the Chain of Custody Form), well 750MW05 was initially designated as "750MW01A". The VOCs 1,1-dichloroethene and methyl-*tert*-butyl ether (MTBE) were detected but at concentrations well below the respective Class IIA Ground Water Quality Criteria (GWQC). No SVOCs were detected in the primary samples, although bis(2-ethylhexyl)phthalate was detected at 3.2 ug/L (GWQC = 3 ug/L) in one field duplicate. Since phthalates are commonly encountered as field or laboratory contamination in environmental samples, and since this compound was not detected in the primary sample of either sampling round, bis(2-ethylhexyl)phthalate is not considered a contaminant of concern in UST 750D groundwater. Therefore, there is no indication of a release to groundwater at UST 750D.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): <u>Change to "Case Closed", request NFA from NJDEP</u>

Signed:

Kent A. Friesen, Parsons

# Fort Monmouth UST Status Summary Report

# **UST REGISTRATION INFORMATION SUMMARY**

LOCATION: 750 D NJDEP REG ID:

**RESIDENTIAL?** YES

# **UST CONSTRUCTION INFORMATION SUMMARY**

SIZE (GALLONS):	1000	CONSTRUCTION:	STEEL
PRODUCT:	#2 FUEL OIL	YEAR INSTALLED:	0

# **UST REMOVAL/INVESTIGATION SUMMARY**

REMOVAL DATE:	6/11/2009	REMOVAL CONTRACTOR: TVS Inc.
SRF SEND DATE:	NA	<i>TMS:</i> NA
DICAR NO.	090611130909	LEAK DETECT:
REMEDIATION COMMENTS:	Need to assess cover material.	
REGISTRATION COMMENTS:	Not reg. as per BRAC Office det was done	termination, found in motorpool parking lot, GPR
SAS DONE:	NO	CONSULTANT:
MWs NEEDED:	TBD	MONITORING WELLS:
SUB-SURFACE EVALUATOR:	C. Appleby	

# **CURRENT UST STATUS**

UST STATUS: REMOVED RI ON-GOING	CASE STATUS:	Case Open
SUBMITTAL DATE:	APPROVAL DATE:	

US ARMY, SELFM-PW-EV	
DAILY UST SUBSURFACE REMOVAL LOG	
BLDG. #: 750-0 REG. #: N/A DATE: TOA: TOD: SSE: Accols( NJDEP CERT. #:	
ACTIVITY	YES/ NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	V
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	ý
ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E.G. 29CFR)	·Ύ
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	N/A:
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	У
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (877)927-6337), CASE# $O = O - O - 1 - 1305 - 03$	У
PHOTOS HAVE UST#, BLDG, # DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	
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)	Ϋ́Υ
IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 2005 August	$\mathbf{Y}$
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7:26E-3.6 et seq.	X
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	<u> </u>
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1'' ABOVE GROUNDWATER)AND A BACKFILL AUTH. LTR. IS ATTACHED	2
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, LEAV	E NO BLAN
certify under penalty of law that tank decommissioning activities were per- n compliance with N.J.A.C. 7:14B-9.2(b)3 and 7:26 et seq I am aware that	Eormed there

are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

Subsurface Evaluator(print Name):_____ Date:_____

SIGNATURE: _____

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ca\ms\ust\removal\sitess1s499.doc

- extensive soil/GW imported Tark removed u/ muttiple hales - tank excavation redo to

be expanded. - 6W whe be folletted regionally 144ds of soils along u/ tank removed som site

-

DAILY UST SUBSURFACE REMOVAL LOG	
BLDG. #: 750 DATE: $6 \cdot 9 \cdot 0$ TO $6 \cdot 70 \circ 9$ SSE: FRAME ACCORSI REMOVAL CONTRACTOR: TVS Inc. PWS-007 CLOSURE SUPERVISOR: FRAME ACCORSI WEATHER: CCOURT IFT LOW 80'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	-4
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	Ŷ
A DISCHARGE WAS REPORTED BY THE DPW TO THE NJDEP (609-292-7172), CASE#	Y
PHOTOS HAVE UST#, BLDG # ADATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	V SY
GROUNDWATER WAS: ENCOUNTERED AT 6,5 FEET BG, A SHEEN WAS NOT OBSERVED ON GW	× Y
IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	÷γ.
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	Yim
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7 26E-3.6 et seg.	Yar
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	Visio
THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1" ABOVE GROUNDWATER)AND A BACKFILL AUTH. LTR. IS ATTACHED	ŇA
ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	<u>. Y</u>
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	5
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)	Ŭ Ĭ

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:	6-29-09
STONATURE	-	Frank	1 Aprop	21		`

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# US ARMY, FORT MONMOUTH DAILY UST CLOSURE LOG

BLDG.#: <u>750</u> REG.#:	
DATE: <u>611 630-09</u> TOA: TOD: CLOSURE TECH: FRANK ACCORSI NJDEP CERT. #: 00/004.2	
PERSONNEL: FRANK ACCORSI ANTHONY FORGIONE MARC TAYLOR	
ACTIVITY	YES/ NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	V Y
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Ϋ́·
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	Ý
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	:MA
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 CHEANED AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	· 4
THE UST WAS PLACED, ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Ŷ
5 DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	ŀ.
5 drums of waste were transported to the $69$ , cw, ev) hwsa $8,482$	·U L
GALLONS OFWASTE WERE REMOVED (MANIFEST#:)	<u>Y</u> ii
60. CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS	i
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) C. APPLER	.7
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 FOR DISPOSAL (ATTACH SCRAP TICKET)	7
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 Find acrossi DATE: <u>6-29-09</u> SIGNATURE:

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# FORT MONYIOUTHENVIRONMENTAL TESTING LABORATORY

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



# ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

Diug. 750D (051)								
Field Sample Location	Laboratory	Matrix	Date and Time	Date				
	Sample ID#		of Collection	Received				
750D N 6.5-7.0'	9023901	Soil	15-June-09 15:45	06/15/09				
750D E 6.5-7.0'	9023902	Soil	15-June-09 15:50	06/15/09				
750D S 6.5-7.0'	9023903	Soil	15-June-09 15:55	06/15/09				
750D W 6.5-7.0'	9023904	Soil	15-June-09 16:00	06/15/09				

# Bldg. 750D (UST)

### ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

1103 Jacqueline Hamer/Date A/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.



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# CHAIN OF CUSTODY

Customer: $C_{i}$	AppRox	Project No:						Ana	lysis l	Param	eters			Comments:
Phone #: X & Q(	()Other:	Location: 750	DCU	ST)		Q								
Samplers Name / Co	mpany:			Sample	#	12								
LIMS/Work Order #	Sample Location	Date	Time	Туре	bottles	1								Remarks / Preservation Method
9423401	750 D N 6.5-70	6/15/09	1545	Scil	/	$\bigvee$		ļ. <u> </u>				 		
	750DF 6.5-7.0	0	1550		1	ΙV,								
	750DS 6.57.0	11	1.555	11		V		 						
4 14	750DW 6.5-7.0	17	16.00	11	/									· · · · · · · · · · · · · · · · · · ·
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	<u> </u>	·	:	_										
Relinquished by (signate	ure): Date/Time:	Received by	(signature):		Relin	quished	l by (si	gnature	):	Date	/Time:	Recei	ived by	(signature):

,

Page ____ of ____

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# SAMPLE RECEIPT FORM

ŧ,

Date Received: <u><i>U-15-04</i></u>	Work Order ID#: <u>1239</u>
Site/Proj. Name: <u>750/457</u>	Cooler Temp (°C): <u>ICE</u>
Received By: <u>J. Unnunn</u>	Sign: J. Uerquirt
(rinchane) Check the approp	riate hox
1 Did the complex come in a cooler?	
2. Were samples rec'd in good condition?	ves لا no
3. Was the chain of custody filled out correctly a	nd legibly? 🖉 yes 🗆 no
4. Was the chain of custody signed in the approp	priate place? 🛛 🛛 yęs 🖾 no
5. Did the labels agree with the chain of custody	? 🛛 🖉 yes 🗆 no
6. Were the correct containers/preservatives use	d? 🖉 yeş 🗌 no
7. Was a sufficient amount of sample supplied?	yes 🛛 no
8. Were air bubbles present in VOA vials?	yes no prin/a
9. Were samples received on ice?	

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	рН	Preservative	Sample ID	рН	Preservative
				,	
				1	

# Comments:_____



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# GPS COORDINATED



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#### BUILDING 750 - UST 'D'

#### SOIL SAMPLING/SOIL BORING GPS POSITIONS & COORDINATES

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

#### (IN US SURVEY FEET)

#### SAMPLE POINTS

POSITION/DESCRIPTION	<u>Y COORDINATE (NORTHING)</u>	X COORDINATE (EASTING)
750D.1 NORTH WALL UST	538036.216	617707.165
750D.2 SOUTH WALL UST	538017.936	617720.277
750D.3 EAST WALL UST	538030.24	617717.602
750D.4 WEST WALL UST	538023.481	617706.854
750D NORTH BORING	538041.281	617703.508
750D SOUTH BORING	538011.721	617725.166
750D EAST BORING	538035.402	617722.038
750D WEST BORING	538014.124	617704.482
750 MP1	538060.456	617769.397
750 MP2	537917.165	617507.988

# METHOD SUMMARY

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# 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.

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# CONFORMANCE/ NON-CONFORMANCE SUMMARY

# **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

		Indicate Yes, No, N/A
	Method Detection Limits Provided	Les
	Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	_00_
	Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	<u> </u>
	Duplicate Results Summary Meet Criteria	<u>-4es</u> -
•	IR Spectra submitted for standards, blanks and samples	_UA_
	Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	yes
	Analysis holding time met (If not met, list number of days exceeded for each sample)	-yes

Additional comments: <u>90</u> <u>NO QZZIZ</u> 1000 ppm nver  $\neg \neg \neg \neg$ 

_ Date: _ 9 10 09 Laboratory Manager: <u>mon</u>  $\gamma_{ii}$
## TOTAL PETROLEUM HYDROCARBONS

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

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Client:	U.S. Army		Project #:	
	DPW SELFM-PW-EV		Location:	750 D (UST)
	Bidg. 173		ECP:	
	Ft. Monmouth, NJ 07703		Work Order:	
Analysis:	OQA-QAM-025	L	Date Received:	15-Jun-09
Matrix:	Soil		Date Extracted:	16-Jun-09
Inst. ID:	GC TPHC INST. #1		Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m		Analysis Complete:	17-Jun-09
Injection Volume:	1 uL		Analyst:	Robert Szot
Blank Conc.:	0.00			

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	lii
MB06160901	MB06160901	1.00	15.00	100.00	7	100	0.00	
LCS06160901	LCS06160901	1.00	15.00	100.00	7	100	793.13	
9023901	750 DN 6.5-7.0	1.00	16.00	84.15	8	111	0.00	
9023902	750 DE 6.5-7.0	1.00	15.94	81.92	8	115	1250.50	
9023903	750 DS 6.5-7.0	1.00	15.95	83.94	8	112	0.00	
9023904	750 DW 6.5-7.0	1.00	15.66	82.80	· 8	116	0.00	

Qualifiers:

MDL = Method Detection Limit

RL = Reporting Limit

*E* = *Exceeds* calibration limit

J = Estimated value, concentration is between MDL and RL

*D* = Concentration from dilution



### LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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#### 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.	V
2.	Table of Contents submitted.	$\checkmark$
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	_
4.	Document paginated and legible.	
5.	Chain of Custody submitted.	<u> </u>
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.	<u>~</u>
10.	Method Detection Limits submitted.	
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	$\nu$

Laboratory Manager or Environmental Consultant's Signature	aner	uline H	Rimo-
Date: <u>9110101</u>	$\overline{\Lambda}$	,	

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.

acqueline/Hamer QA/QC Supervisor



## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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

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## ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received					
750-D1, North Wall	9024301	Soil	17-June-09 14:40	06/17/09					
750-D2, South Wall	9024302	Soil	17-June-09 15:00	06/17/09					
750-D3, East Wall	9024303	Soil	17-June-09 15:15	06/17/09					
750-D4, West Wall	9024304	Soil	17-June-09 15:35	06/17/09					
750-D, Duplicate	9024305	Soil	17-June-09 15:00	06/17/09					

## Bldg. 750D (Motor Pool)

## ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

acqueline Hamer/Date QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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# CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

Tell (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

stody Record	nents:				ks / Preservation Method	ICE !				-20-					e):	e):	
Chain of Cu	sters Comn		wJJ 1)	20 <u>H</u> lk	C I I Keman	6-6:5 25	6-65 206	6-6.5 40	665 22	6-65 160					Time: Received by (signatur	Time: Received by (signatur	
us.army.mil	Analysis Param									-					1 by (signature): Date/	l by (signature): Date/	
tth, NJ 07703 Iail:jacqueline.hamer@	-	ese as	- 252-D)	Sample #	Type bottles	5016 1 X	X   /	X   1   1   -		X 1 X					i Relinquished	: Relinquisher	Q
Р.WЕV, Fort Monmot Fax (732)532-6263 EM tion #13461	Project No:	Location: BLNC, Z	151) 7001 YOLOW	RS1 / TUS	Date Time	6-17-09 1440	1500	1515	1. 1535	V. 1500			-		Received by (signature)	Received by (signature)	cen / non-certified, ()ED) )ASAP VerbalHrs.
E BIOG. 173, SELFM Tel (732)532-4359 NJDEP Certifica	APLEBY	2	)ther:	DY: FRANK ACCO	Sample Location	50-0 1, NORTH WALL	0-02, SOUTH WALL	0-03, EAST WALL	0-04, WEST WALL	D-D. DUPLICATE					Date/Time:	Date/Time:	uced, ()Standard, ()Scr 13 wks, (&Rush / Wk.,_(
	Customer: CHUCK	Phone #: X2629-	DERA ()OMA (x)C	Samplers Name / Compa	LIMS/Work Order #	1/10 CHEAD	22 77	U.5.75	RY 751	9-15 B			-	 •	Relinquished by (signature): The Mult Und	Relinquished by (signature):	keport Type: ()Full, (پيروط استعتound time: ()Standard

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Page / of /

## **SAMPLE RECEIPT FORM**

Date Received: <u>le -11-09</u>	Work Order ID#: <u>40243</u>
Site/Proj. Name: 750D/AM. P.	Cooler Temp (°C): 410
Received By: J. UUNOULNA	Sign: Julu MM
(Print name)	
Check the appropriate the appropriate the second se	riate box
1. Did the samples come in a cooler?	🛛 yeş 🗖 no 🗋 n/a
2. Were samples rec'd in good condition?	yes □ no
3. Was the chain of custody filled out correctly ar	nd legibly? 🗇 yes 🗆 no
4. Was the chain of custody signed in the approp	riate place? 🗇 yes 🗆 no
5. Did the labels agree with the chain of custody?	?
6. Were the correct containers/preservatives use	d? 🛛 🖉 yes 🗆 no
7. Was a sufficient amount of sample supplied?	j⊒ 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  $\Box$  yes  $\Box$  no  $\Box$  n/a

## Fill out the following table for each sample bottle

Lims ID	рН	Preservative	Sample ID	рН	Preservative
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		······································			· · · · · · · · · · · · · · · · · · ·
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## Comments:_____

## GPS COORDINATED

### U.S. ARMY - FT. MONMOUTH, NJ

## BUILDING 750 - UST 'D'

## SOIL SAMPLING/SOIL BORING 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)

- control pacorin from		
750D.1 NORTH WALL UST	538036.216	617707.165
750D.2 SOUTH WALL UST	538017.936	617720.277
750D.3 EAST WALL UST	538030.24	617717.602
750D.4 WEST WALL UST	538023.481	617706.854
750D NORTH BORING	538041.281	617703.508
750D SOUTH BORING	538011.721	617725.166
750D EAST BORING	538035.402	617722.038
750D WEST BORING	538014,124	617704.482
750 MP1	538060.456	617769.397
750 MP2	537917.165	617507.988

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# FIELD DUPLICATE IDENTIFICATION



## **Field Duplicate Identification**

Lab ID: 90243

Site: Bldg. 750D Motor Pool

The Field Duplicate was performed on 750-D2, South Wall (Lab ID 9024302).



## 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 CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

	Indicate Yes, No, N/A
Method Detection Limits Provided	yes
Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	<u>_UO</u>
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	yes
Duplicate Results Summary Meet Criteria KPD Q - 21.06	µo
IR Spectra submitted for standards, blanks and samples	NA
Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	
Analysis holding time met (If not met, list number of days exceeded for each sample)	yes_

Additional comments: 2010 21000 ppm 24302,04 and OS No A dd 25 5

0 9 Laboratory Manager: two t Date: Q Jun

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	
	DPW. SELFM-PW-EV	Location: BLD	G. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	17-Jun-09
Matrix:	Soil	Date Extracted:	18-Jun-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	19-Jun-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

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Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB06180901	MB06180901	1.00	15.00	100.00	7	100	0.00	
LCS06180901	LCS06180901	1.00	15.00	100.00	7	100	823.14	
9024301	750 D-1 NORTH WALL	1.00	15.86	80.25	8	118	1574.08	
9024302	750 D-2 SOUTH WALL	1.00	16.20	79.23	8	117	20788.27	E
9024303	750 D-3 EAST WALL	1.00	15.58	77.60	9	124	888.84	
9024304	750 D-4 WEST WALL	1.00	15.76	81.00	8	118	1408.23	
9024305	750 D DUPLICATE	1.00	15.49	80.07	8	121	22568.48	E
9024302	750 D-2 SOUTH WALL	10.00	16.20	79.23	82	1169	26511.89	D
9024305	750 D DUPLICATE	10.00	15.49	80.07	85	1209	26425.15	D,

### 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.	_1/_
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.	<u> </u>
6.	Samples submitted to lab within 48 hours of sample collection.	
7.	Methodology Summary submitted.	~
8.	Laboratory Chronicle and Holding Time Check submitted.	v
9.	Results submitted on a dry weight basis.	<u> </u>
10.	Method Detection Limits submitted.	<u></u>
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: <u> </u>	\ /	assinge	Ļ	hoc	ten	<u>vo</u>
Laboratory Certification # 13461	U	/				

000046

Laboratory Certification # 13461

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

## **Laboratory Authentication Statement**

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

Jacqueline Hamer QA/QC Supervisor

## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



## ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

	ALLE, IJUL	(TAROCON)	I OOI)	
Field Sample Location	Laboratory	Matrix	Date and Time	Date
	Sample ID#		of Collection	Received
750-D, PX-1, South Wall	9025801	Soil	23-June-09 09:00	06/23/09
750-D, PX-2 East Wall	9025802	Soil	23-June-09 13:30	06/23/09
750-D, PX-3 Bottom	9025803	Soil	23-June-09 14:40	06/23/09
750-D, PX Duplicate	9025804	Soil	23-June-09 13:30	06/23/09

## Bldg. 750D (Motor Pool)

### ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

911/09 Jacqueline Hamer/Date QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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Total Petroleum Hydrocarbons Result Summary Calibration Summary Surrogate Results Summary MS/MSD Results Summary LCS Results Summary Raw Sample Data	12 13 14-20 21 22 23 24-33
Laboratory Deliverable Checklist	34
Laboratory Authentication Statement	35

# CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

に設定

Tel (732)532-4359 Fax (73 )532-4359 Fax (73	32)532-6263 EMa <b>3461</b>	il:jacqueline.ha	mer@us.army.mil	Ch	ain of Custody Record
Customer: CHARLES APPLEBY Projec	ct No:		Analysis	Parameters	Comments:
<b>Phone #:</b> $\chi \mathcal{Z} \mathcal{E} \mathcal{Z} \mathcal{P} \mathcal{Z}$ Locati	on: 8206, 75	Valon-a	*	Ć	
( )DERA ( )OMA ( ∕)Other:	10 , UST#750	0-0	H	180)	Ð
Samplers Name / Company: FRANK ADCORS	1 1 TUS	Sample #	ð		11/0
LIMS/Work Order # Sample Location Da	ate Time	Type bottle	4		Remarks / Preservation Method
CHO255 CM 750-D. PX-1. 50474 6-2	3-09 0900	50k 1	×	0	6.5-7 ICE
1 12120-0, PX-2, EATT	1330	·	X	2.6	9657
U3750-0. PX-3, BOTOM	1440		X		8.5%
CV 750-0, PX DUPLICATE	1330	·/ 🛉	X	1 Cal	V (5.5-7)
Relinquished by (signature): Date/Time: Reclei	ived by (signature):	INN Reli	aquished by (signature):	Date/Time: Re	ceived by (signature):
Relinquished by (signature): Date/Time: Recei	ived by (signature):	Reli	aquished by (signature):	Date/Time: Re	ceived by (signature):
Report Type: UFull, XXReduced, UStandard, UScreen / no Turnaround time: UStandard 3 wks, XXrush XXX, _UASAP	m-certified, ()EDD • VerbalHrs.		* contintent	But and	11= TPH > 1,000 PM.
じみやら print legibly		Page / c	ff <u>'</u>		new cocXLS6/2/2009

NHUUSK

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## SAMPLE RECEIPT FORM

: , · · 3

Date Received: <u>0-23-09</u>	Work Order ID#: <u>10258</u>
Site/Proj. Name: Bloky 150/M.P.	Cooler Temp (°C): $4iG^{ac}$
Received By:	Sign: Jelly MM
(Print name) /	// X ·
<u>Check the approp</u>	<u>riate bőx</u> / /
<ol> <li>Did the samples come in a cooler?</li> </ol>	yes 🗆 nd 🗔 n/a
2. Were samples rec'd in good condition?	yes 🗆 no
3. Was the chain of custody filled out correctly ar	nd legibly? 🗍 yes 🗆 no
4. Was the chain of custody signed in the approp	riate place? 🗍 yes 🗌 no
5. Did the labels agree with the chain of custody?	P ∽ 🖓 yes 🗍 no
6. Were the correct containers/preservatives use	d? ↓ yes □ no
7. Was a sufficient amount of sample supplied?	🗇 yes 🗆 no
8. Were air bubbles present in VOA vials?	í □ yes □ no 🖉 n/a

- 8. Were air bubbles present in VOA vials?
- 9. Were samples received on ice?

10. Were analyze-immediately tests perform within 15 minutes  $\Box$  yes  $\Box$  no  $\Box$  n/a

## Fill out the following table for each sample bottle

Lims ID	pН	Preservative	Sample ID	рН	Preservative
			·		
			- 14-		· · · · · · · · · · · · · · · · · · ·
			· · · · · · · · · · · · · · · · · · ·		
				-	
			· · · · · · · · · · · · · · · · · · ·		
			<u> </u>		
			····		

## Comments:_____

000003

yes 🗆 no

## **GPS COORDINATED**

2月20月4

#### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 - UST 'D'

#### 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)

750D PX1 SOUTH WALL 750D PX2 EAST WALL 750D PX3 BOTTOM 750D PX4 NORTH WALL 750D PX5 WEST WALL DRDINATE (NORT 538007.026 538029.338 538020.697 538039.11 538015.389

617721.234 617728.036 617713.203 617705.835 617703.925

## **MADD5**

## FIELD DUPLICATE IDENTIFICATION

## Field Duplicate Identification

Lab ID: 90258

Site: Bldg. 750D Motor Pool

The Field Duplicate was performed on 750-D, PX-2, East Wall (Lab ID 9025802).

## 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 CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Method Detection Limits Provided Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	-yes
Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	NO. Yes
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	yes
Duplicate Results Summary Meet Criteria	425
IR Spectra submitted for standards, blanks and samples	ACA
Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	yes
Analysis holding time met (If not met, list number of days exceeded for each sample)	yes

Additional comments:

Instamon Date: 9/11/09 Laboratory Manager:

•

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	
	DPW. SELFM-PW-EV	Location: BLDG	. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	23-Jun-09
Matrix:	Soil	Date Extracted:	24-Jun-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	25-Jun-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00	-	

Lab ID	Field ID	Dilution	Weight	%	MDL	RL.	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB06240901	MB06240901	1.00	15.04	100.00	23	332	0.00	
LCS06240901	LCS06240901	1.00	15.00	100.00	23	333	966.33	
9025801	750 D, PX-1 SOUTH WALL	1.00	15.92	82.64	27	380	0.00	
9025802	750 D, PX-2 EAST WALL	1.00	15.89	81.69	27	385	107.70	J
9025803	750 D, PX-3 BOTTOM	1.00	15.68	83.24	27	383	0.00	
9025804	750 D, DUPLICATE	1.00	15.44	81.82	28	396	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 heid 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.	$\underline{\vee}$
5.	Chain of Custody submitted.	
6.	Samples submitted to lab within 48 hours of sample collection.	$\checkmark$
7.	Methodology Summary submitted.	
8.	Laboratory Chronicle and Holding Time Check submitted.	<u> </u>
9.	Results submitted on a dry weight basis.	$\leq$
10.	Method Detection Limits submitted.	$\underline{}$
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	Ume	لير	hud	-an	10-
Date: $9/11/09$	(		)		5

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.

anon 1/11/08 acqueline Hamer DA/QC Supervisor

## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



#### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

	iug. / 50 1910		IUDI LI	
Field Sample Location	Laboratory	Matrix	Date and Time	Date
	Sample ID#		of Collection	Received
750-E-1, North Wall	9026501	Soil	25-June-09 14:00	06/25/09
750-E-2, South Wall	9026502	Soil	25-June-09 14:20	06/25/09
750-E-3, East Wall	9026503	Soil	25-June-09 14:35	06/25/09
750-E-4, West Wall	9026504	Soil	25-June-09 14:55	06/25/09
750-D-PX4, North Wall	9026505	Soil	25-June-09 09:30	06/25/09
750-D-PX5, West Wall	9026506	Soil	25-June-09 11:00	06/25/09
750-D, Duplicate	9026507	Soil	25-June-09 14:55	06/25/09

#### Bldg. 750 Motor Pool/UST E

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

Men 9/17/09 Jacqueline Hamer/Date QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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# CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

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Bldg. 173, SELFM-PW-EV, Fort Mommouth, NJ 07703 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

Chain of Custody Record

Tel (732)532-4359.	Fax (732)532 tion #1 <b>3461</b>	-6263 EMai	l:jacquelin	e.hamer(	@us.arm	ljm.y		Chai	n of Cust	tody Record	
Customer: CHUCK APLEBY	Project No:	09-1236	06			Analysi	s Parameters		Comme	nts:	anterez.
<b>Phone #:</b> $\chi \mathcal{I} \mathcal{C} \mathcal{Z} \mathcal{P} \mathcal{Z}$	Location: <i>SL</i>	PC. 75D.	- MOTOR P	30 T P00	9			(1	6		1.0102000
()DERA ()OMA (%Other:	UST# B	C+ _=		2 T	017			1) 7	1/1		
Samplers Name / Company: FRANK ACC	Joks 1	TUS	Sample	7.0-	QS []] ]			41d	) a		
LIMS/Work Order # Sample Location	Date	Time	Type b	ottles	20			7(J	V Remarks	/ Preservation Method	
AD 205 01 750-5-1, NREAT WALL	6-25-09	1400	5012	1	$\times$			55-6	2	108	1.
Ud 750-E-2, 5007H WALL		1420		~	X			5.5-6	0		-
US 750-E-3, CAST WALL		1435			×			5.5-6	2/0		1
14 750-E-4, WEST WALL		1455			X			556	210		-
15750-D-PX4, NORTH WALL		0860			X		·	775	~~		1
[10 750-D-PX5, WEST WALL		0011			X			2.7.5	0/		1
M 750-D. DuplichTE	A	1455	*		X			5.5-6 :	00		1
	-										
											1
											T
											1000 C
Relinquished by (signature): 6-25-09 Date/Time: 1600/	Received by	(signature): UVU	110	Relinquis	hed by (s	ignature):	Date/Time:	Receiv	ed by (signature)		
Relinquished by (signature): Date/Time:	Received by	(signature):	~	Relinquis	hed by (s	signature):	Date/Time:	Receiv	ed by (signature)		
Report Type: ()Full, ()Reduced, ()Standard, ()Scre Turnaround time: ()Standard 3 wks, ( <b>X</b> )Rush <b>3</b> ^{WMK,,_()}	een / non-certif )ASAP Verbal	ied, UEDD			*	TPH C	LING				
Drint legibly			Page	of	]				č	w cocXLS6/2/2009	1

000002

SAMPLE RECEIPT FORM							
Date Received: $1-25-09$	Work Order ID#: <u>402005</u>						
Site/Proj. Name: DIU TOM.M	Cooler Temp (°C):						
Received By: V. Verguna	Sign: pullipud						
Check the approp	riate 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 a	nd legibly? 🖉 yes 🗆 no						
4. Was the chain of custody signed in the approp	priate place? 🔤 yes 🗌 no						
5. Did the labels agree with the chain of custody	? . ∠ yes 🗆 no						
6. Were the correct containers/preservatives use	ed? yes □ no						
7. Was a sufficient amount of sample supplied?	ves 🗆 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 with	hin 15 minutes 🗆 yes 🗌 no 🖵 n/a						

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
			· ·	`	
· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·
<u></u>					
		•	•		

Comments:_____

## **GPS COORDINATED**



#### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 - UST 'E'

#### 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)**

750E NORTH WALL 750E SOUTH WALL 750E EAST WALL 750E WEST WALL 537999.109 537982.744 537992.64 537988.742 617635.673 617644.25 617643.534 617634.674

#### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 - UST 'D'

#### 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)

750D PX1 SOUTH WALL 750D PX2 EAST WALL 750D PX3 BOTTOM 750D PX4 NORTH WALL 750D PX5 WEST WALL

538007.026	
538029.338	
538020.697	
538039.11	
538015.389	

617721.234 617728.036 617713.203 617705.835 617703.925

# FIELD DUPLICATE IDENTIFICATION



## **Field Duplicate Identification**

Lab ID: 90265

Site: Bldg. 750 Motor Pool

The Field Duplicate was performed on 750-E-4, West Wall (Lab ID 9026504).

## 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 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	<u></u>
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	<u>yes</u>
7.	Analysis holding time met (If not met, list number of days exceeded for each sample)	yes
Additi 	atory Manager: ] multiple Only Manager: ] multiple On Hall	alblusez
	Contraction of	

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDC	G. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	25-Jun-09
Matrix:	Soil	Date Extracted:	26-Jun-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type: 👘	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	1-Jul-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB06260901	MB06260901	1.00	15.00	100.00	23	333	0.00	
LCS06260901	LCS06260901	1.00	15.00	100.00	23	333	843.67	
9026501	750-E-1 NORTH WALL	1.00	15.53	83.50	27	386	128.33	J
9026502	750-E-2 SOUTH WALL	1.00	15.76	83.20	27	381	0.00	
9026503	750-E-3 EAST WALL	1.00	15.60	83.70	27	383	13089.23	E -
9026503	750-E-3 EAST WALL	5.00	15.60	83.70	134	1915	14133.35	D
9026504	750-E-4 WEST WALL	1.00	15.83	82.70	27	382	3218.94	
9026505	750-D-PX4 NORTH WALL	1.00	15.73	81.10	27	392	0.00	
9026506	750-D-PX5 WEST WALL	1.00	15.67	83.20	27	384	227.02	J
9026507	750-D DUPLICATE	1.00	15.38	82.50	28	394	2824.77	

#### 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.	_V_
2.	Table of Contents submitted.	$\underline{\mathcal{V}}$
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	<u> </u>
4.	Document paginated and legible.	<u></u>
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.	V
9.	Results submitted on a dry weight basis.	$\underline{\vee}$
10.	Method Detection Limits submitted.	
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	V

Laboratory Manager or Environmental Consultant's Signature		aurizi Que Hame
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1.1

000046

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.

91603 acquèline Hamer A/QC Supervisor

## FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

DIRECTORATE OF PUBLIC WORKS PHONE: (732)532-6224 FAX: (732)532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING



ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

PROJECT: UST/ Monitoring Program

#### SAMPLE LOCATION AND IDENTIFICATION

<u>SITE</u>: 750

LABORATORY	MONITOR	NJDEP WELL ID#	SAMPLE
ID #	WELL#		DATE
9043404	750MW01**	29-28992	11/03/09
9043405	750MW02	29-28993	11/03/09
9043406	750MW03	29-28994	11/03/09
9043407	750MW04	29-28995	11/03/09
9043408	750MW01A***		11/03/09
9043409	750MW02A*	فت تن تين بن برا بب اب ال ال	11/03/09
9043410	750MW03A*		11/03/09
9043411	750MW04A*		11/03/09

*New Wells Round I

**Duplicate Sample for VOA and TAL Metals is 9043404.

*** Duplicate Sample for BN is 9043408.

NJDEP Laboratory Certification #13461

20/10 Dean Tardiff/Date:

Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

Seantural 3/15/10

Dean Tardiff

SAMPLING

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		is Paramete																		Date/Tir	Date/Tir		
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	ort Monmou 32-6263 EN <b>31</b>		<b>4</b> 戸 4	DR WELL.	/TVS	, Time	20,'b 6	9 12:20	6	9 15:30	3 1500	9 15:70	9 15:2	7 12:30	3 12:50	3 17.00	9 13:20	12:30	 	by (signature)	by (signature)	tified, ()EDI balHrs.	
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	Bidg. 173, SELFN Tel (732)532-435 NJDEP Certific:	ron-	6223	1	WACTER	imple Location	TRIPBIANK	TECD B/ANK	DUP	10#mm	MW #02	MW #03	MW #04	NW#4014	WW#02A	MW #03 A	MW#041	MWHOHD		Date/Time:	Date/Time:	, WStandard, ()Sc ks, ()Rush Wk.,_(	
		TOE FAL	2-532-	MA () Other	e / Company: (	der# Sa	01 920-	02 7SBF	03 720	04 750	05 750	06.72	07 753	08 753	09 780	10/750	. 11 770	12 750	 	laterature): []	(signature):	'ull, UReduced, Wetandard 3 wl	
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new coc._1.XLS8/18/2009

## SAMPLE RECEIPT FORM

Date Received: 11-4-09	Work Order ID#: <u>404-34</u>
Site/Proj. Name:	Cooler Temp (°C): <u>3.0</u>
Received By: J. URiguit	Sign: plugeline
(Print name)	
<u>Check the appropriate the appropriate the appropriate the second /u>	<u>riate box</u>
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 ar	nd legibly? 🔄 yes 🗆 no
4. Was the chain of custody signed in the approp	riate place? 🖉 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes □ no
6. Were the correct containers/preservatives used	d? 🖉 yes 🗆 no
7. Was a sufficient amount of sample supplied?	yes 🗆 no
8. Were air bubbles present in VOA vials?	🗌 yeş 🖉 no 🗌 n/a
9. Were samples received on ice?	yes 🗌 no
10. Were analyze-immediately tests perform with	iin 15 minutes □ yes□ no ☑ n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
1049411-11	NHA	HCL			
· · · · · · · · · · · · · · · · · · ·	7				
			•		
					·
· · · · · · · · · · · · · · · · · · ·					
	-				
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Comments:_____

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	Fort M		uth E	'nvi	ronm	ental T	esting	Laboratory	7
	Bldg. 173, SELFM	-PW-EV, Fort Fax (732)532- tion #13461	Monmouth, -6263 EMail	NJ 0770 Ljacqueli	3 ae.hamer@u	s.army.mil		, Chain of Custod	y Record
Customer: Jacquel	ine Hamer	Project No:				Analvsis	Parameters	Comments:	Γ
Phone #: (732)532-435	6	Location: 75	0						
()DERA ()OMA (	)Other:								
Samplers Name / Con	ıpany:			Sample	<b>; I</b> +				
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles <b>BX</b>			Remarks / Prese	rrvation Method
9043402	Field Blank	11/3/2009	12:20	AQ	۲ ۲				
9043408	750MW01A	11/3/2009	12:30	AQ	1 X				
9043408DUP.	750MW01A	11/3/2009	12:30	AQ	1 X				
9043409	750MW02A	11/3/2009	12:50	AQ	1 X				
9043410	750MW03A	11/3/2009	13:00	AQ	1 X				e
9043411	750MW04A	11/3/2009	13:20	AQ	1 X				
					-				
			/	0					
Relinquished by (signatur	:e): Date/Time: 11-4/00/1410	Received by	sjensture): ZM/w	J)	Relinquished	by (signature):	Date/Time:	Received by (signature):	-
Relinquished by (signatu	:e): Date/Time:	Received by (	signature):		Relinquished	by (signature):	Date/Time:	Received by (signature):	
Report Type: UFull, Ul	Reduced, (X)Standard, ()Scr	een / non-certifi	led, ()EDD		Comn	tents: DK9/2009	-389 (PO C	99-20650)	
Turnaround time: (X)Stan	dard 3 wks, ()Rush Wk,_(	)ASAP Verbal	Hrs.						
print legibly	T			age	of /		No se	.A / new coc. 1.	(LS11/4/2009

### US ARMY FORT MONMOUTH MONITOR WELL SAMPLING

LOCATION: 750A MW #:01A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09	COM-VINNELL S	Sampling C Accordance SAM ERVICES	Conducted in with TVS SOP I-0205
WEATHER: Sunny and cool. TIDE: N/A			
			TDOW-21.38
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2 Purge Method: Peristaltic Pump/C Purge Rate: Not to Exceed Well I Purge Data: Start Time of Purging: 10:37 End Time of Purging: 12:26	2" well or 0.65 for Other (Specify) Oraw Down of 0.5	4" well) x 3 = 5 25/109	8.87 ft 21.38 ft 12.51 ft 0.00 ppm 25 Gal. 24.39 Gal/Min.
pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	Initial Value 3.65 su 17.03 (°C) 16939 us/cm 244 mv 1.12 mg/L 17.74 ft 17.88 ft 12:30 12:39	Pre-Sample 4.10 su 17.52 ( °C) 18333 us/cm 184 mv 1.63 mg/L	Post-Sample 3.88 su 17.40 ( °C) 19969 us/cm 211 mv 1.46 mg/L
Comments: DUP. here. For BN or	nly.		

## CONFORMANCE/ NON-CONFORMANCE SUMMARY



#### GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
·1.	Chromatograms labe (Field samples a	led/Compounds identified nd method blanks)	<u>Yes</u>
2.	Retention times for c	hromatograms provided	Yes
3.	GC/MS Tune Specif	ications	
	a. b.	BFB Meet Criteria DFTPP Meet Criteria	<u>Yes</u> <u>NA</u>
4.	GC/MS Tuning Freq series and 12 hours f	uency – Performed every 24 hours for 600 or 8000 series	Yes
5.	GC/MS Calibration - analysis and continui sample analysis for 6	- Initial Calibration performed before sample ing calibration performed within 24 hours of 00 series and 12 hours for 8000 series	Yes
6.	GC/MS Calibration	equirements	
	a. b.	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	<u>Yes</u> Yes
7.	Blank Contamination	- If yes, List compounds and concentrations in each blank:	No
	a.	VOA Fraction	
	b.	B/N Fraction NA	
	с.	Acid Fraction <u>NA</u>	
8.	Surrogate Recoveries	Meet Criteria	Yes
	If not met, list th outside the accep	ose compounds and their recoveries, which fall otable range:	
	а	VOA Fraction	
	ц. b.	B/N Fraction NA	
	c.	Acid Fraction <u>NA</u>	
	If not met, were as "estimated"?	the calculations checked and the results qualified	
0	Matrix Snike/Matrix	Snike Dunlicate Recoveries Meet Criteria	No
	(If not met. list those	compounds and their recoveries, which fall	
	outside the acceptable	e range).	
	a.	VOA Fraction: <u>Several compounds have high recoveries</u> , see summary form	
	b.	B/N Fraction <u>NA</u>	

c. Acid Fraction <u>NA</u>

			Indicate Yes, No, N/A
10.	Internal Standard (If not met, list th	Area/Retention Time Shift Meet Criteria ose compounds, which fall outside the acceptable range)	Yes
	a.	VOA Fraction	
	b.	B/N Fraction <u>NA</u>	
	с.	Acid Fraction <u>NA</u>	
11.	Extraction Holdir	ng Time Met	<u>NA</u>
	If not met, list the	number of days exceeded for each sample:	
12.	Analysis Holding	Time Met	<u>Yes</u>
	If not met, list the	number of days exceeded for each sample:	
Ađđ	itional Comments:		
•			
Lab	pratory Manager: _	Scantenary Date: 1/20/10	

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



N

#### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Fort Monmouth Environmental Testing Lab.

Job No JA33317

**Report Date** 

12/6/2009 6:26:47 PM

Site: 750

On 11/18/2009, 5 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.5 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA33317 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:	OP41049		

* All samples were extracted within the recommended method holding time.

* All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JA33267-2MS, JA33267-2MSD were used as the QC samples indicated.

- Blank Spike Recovery(s) for Atrazine are outside control limits.
- Matrix Spike Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Sample(s) OP41049-MSD have surrogates outside control limits. Probable cause due to matrix interference.

#### Extractables by GCMS By Method SW846 8270C BY SIM

Γ	Matrix AQ	Batch ID: OP41049	A
101	All samples were extracted within	the recommended method holding ti	me.

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA33267-2MS were used as the QC samples indicated.

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

Sunday, December 06, 2009



#### METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Lab ID:	90434	Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2	ICP Interference Check Sample Results Meet Criteria	Yes
3	Serial Dilutions Meet Criteria	Yes
4	Laboratory Control Samples Meet Criteria	Yes
5	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank	No
6	Spike Sample Recoveries Meet Criteria 9043103: Al = 55.9%	Yes
7	Duplicates Meet Criteria	Yes
8	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes
	Additional Comments:	
	Laboratory Manager: Dean Tandid Date:	120/10

METHOD SUMMARY



#### Method Summary

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

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

#### EPA Method 3510/8270 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.

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

#### Milestone MLS 1200 MEGA

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

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

#### Perkin Elmer OPTIMA 3000 DV

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

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

#### Varian SpectrAA-640, VGA-77

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

## LABORATORY CHRONICLE


# **Laboratory Chronicle**

Lab ID: 90447

Site: 750 LTM

	Date	Hold Time
Date Sampled	11/03/09	NA
Receipt/Refrigeration	11/03/09	NA

#### Analyses

Volatiles	11/14,15/09	14 Days
Base Neutral	11/11,17/09	7 Days
TAL Metals	11/10/09	6 Months
Arsenic	11/17/09	6 Months
Mercury	11/13/09	28 Days
Thallium	11/16/09	6 Months
	Volatiles Base Neutral TAL Metals Arsenic Mercury Thallium	Volatiles       11/14,15/09         Base Neutral       11/11,17/09         TAL Metals       11/10/09         Arsenic       11/17/09         Mercury       11/13/09         Thallium       11/16/09

000021

# **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	VA4841.D		Sample Name	MB11040902
Operator	ROBERTS		Field ID	METHOD 624 11/04/09
Date Acquired	4 Nov 2009	7:26 pm	Sample Multiplier	1

CAS#	Compound Name	RТ	Resnanse	Result		Regulatory Level (ug/l)*	MDL	$\mathbf{RL}$	Oualifiers
107028	Acrolein			pot	detected	5	2.09 ug	/L 5.00 ug/L	
107131	Acrylonitrile	1		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	1		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 1.00 ug/L	
74-87-3	Chloromethane	1		not	detected	nle	0.10 ug	/L 1.00 ug/L	
75-01-4	Vinyl Chloride	1		not	detected	1	0.22 ug	/L 1.00 ug/L	
74-83-9	Bromomethane	1		not	detected	10	0.25 ug	/L 1.00 ug/L	
75-00-3	Chloroethane			not	detected	пle	0,22 ug	/L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug	/L 1.00 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	Vinvl Acetate			not	detected	7000 ·	0.20 ug	/L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug	/L 1.00 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	1		not	detected	1	0.16 ug	/L 0.50 ug/L	
107-06-2	1 2-Dichioroethane			not	detected	2	0.19 ug	/L 0.50 ug/L	
79-01-6	Trichloroethene			not	detected	I	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	I	0.14 ug	/L 0.50 ug/L	
110-75-8	2-Chloroethyl vinvl ether .			not	detected	nle	0,25 ug	/L 1.00 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 1,00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug	/L 0.50 ug/L	
10061-02-6	trans-1 3-Dichloronropene			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	Ethylhenzene			not	detected	700	0.16 ug	/L 0.50 ug/L	
630-20-6	1 1 1 2-tetrachloroethane			not	detected	j	0.15 ug	/L 0.50 ug/L	
1330-20-7	m+p-Xvlenes			not	detected	nle	0.27 ug	/L 1.00 ug/L	
1330-20-7	o-Xvlene			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 1.00 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-Dichlorohenzene			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



VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

		TENTATI	VELY IDEN	TIFIED COMP	POUND	S <u>.</u>	ND44040	
Lab Name:	FMETL		Contract:					
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS	No.:	S	DG No.: 90434	1 .
Matrix: (soil/v	vater)	WATER	-	¢	Lab Sa	mple ID:	MB11040902	
Sample wt/vo	ol:	5.0	(g/ml) ML		Lab File	e ID:	VA4841.D	_
Level: (low/n	ned)	LOW	-		Date R	eceived:	11/3/2009	
% Moisture: r	not dec.				Date A	nalyzed:	11/4/2009	
GC Column:	RTX-V	<u>M</u> ID: <u>0.2</u>	2 <u>5</u> (mm)		Dilution	Factor:	1.0 ·	
Soil Extract V	olume:		(uL)		Soil Ali	quot Volu	Ime:	_ (uL)
Number TICs	found:	0	_	CONCENTF (ug/L or ug/l	RATION Kg)	UNITS: UG/L		
CAS NO.		COMPOU	ND NAME		R	r es	ST. CONC.	Q

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

Regulatory Level (ug/l)*

Data File Operator Date Acquired	VA4843.D ROBERTS 4 Nov 2009	8:28 pm	Sample Name Field ID Sample Multiplier	9043401 750 TRIP BLANK 1	

CAS#	Compound Name	вт	Resnanse	Result	ł	Regulatory Level (ug/l)*	MDL	RL	Oualifiers
107028	Acrolein			not	detected	5	2.09 ug/	L 5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.64 ug/	( 5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	001	1.89 ug/	L 5.00 ug/L	
1634044	Methyl-tert-Butyl ether		<u></u>	not	detected	70	0.18 ug/	L 0.50 ug/L	
108203	Di-isopronyl ether			not	detected	20000	0.12 ug/	L 0,50 ug/L	,
75718	Dichlorodifluoromethane	1		not	detected	1000	0,22 ug/	L 1.00 ug/L	
74-87-3	Chloromethane		· · · · · · · · · · · · · · · · · · ·	not	detected	nle	0,10 ug/	L 1.00 ug/L	
75-01-4	Vinvi Chloride			not	detected	1	0.22 ug/	L 1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25 ug/	L 1.00 ug/L	
75-00-3	Chloroethane	1		not	detected	ole	0.22 ug/	L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/	L 1,00 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	1		not	detected	. 700	0.18 ug/	L 0.50 ug/L	
75-09-2	Methylene Chloride	1		not	detected	3	0.16 ug/	L 0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene	1	-	not	detected	100	0.20 ug/	L 0.50 ug/L	
75-35-3	1.1-Dichloroethane	1		not	detected	50	0,19 ug/	L 0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.20 ug/	L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/	L 1.00 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	1		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 1.00 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 1.00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug/	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 ug/	0.50 ug/L	
79-00-5	1.1.2-Trichloroethane			not	detected	3	0.14 ug/	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	1	0.18 ug/	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14 ug/	0.50_ug/L	
108-90-7	Chlorobenzene			not	detected	50	0.15 ug/	. 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		0.15 ug/	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27 ug/l	_ <u>1.00 ug/L</u>	
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/J	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.12 ug/	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/	<u>0.50 ug/L</u>	
95-50-1	1,2-Dichlorobenzene			not	detected	600	0.12 ug/l	<u>  0.50 ug/L</u>	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

#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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		TENTATI	VELY IDEN	TIFIED COMPOU	NDS		
Lab Name:	FMETL			Contract:		750 TRIP BL	ANK
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS No.		SDG No.: 90434	
Matrix: (soil/v	vater)	WATER	_	Lab	Sample II	D: 9043401	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab	File ID:	VA4843.D	_
Level: (low/n	ned)	LOW	_	Date	e Receive	d: <u>11/3/2009</u>	-
% Moisture: r	not dec.		<u></u>	Date	e Analyzeo	d: <u>11/4/2009</u>	_
GC Column:	RTX-V	<u>/M_</u> ID; <u>0.2</u>	25 (mm)	Dilu	tion Facto	r: <u>1.0</u>	_
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	. (uL)
				CONCENTRATI		S:	
Number TICs	s found:	0	<u> </u>	(ug/L or ug/Kg)	UG/L		
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q

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3/90 000027

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

Data File	VA4844.D	Sample Name	9043402
Operator	ROBERTS	Field ID	750 FIELD BLANK
Date Acquired	4 Nov 2009 8:59 pm	Sample Multiplier	1

<u> </u>		5.00	<b>D</b>	Decult		Regulatory Level (ug/l)*	MDI		рĭ	Qualifiers
CAS#	Compound Name	<u>R.1.</u>	Response	Result	datastad		2 00	11 <i>m</i> /T	5.00 ug/f	Quanners
107028	Acrolein			not	detected		1.64	<u>цель</u> ма/Г	5.00 ug/L	
107131	Acrylonitrile			not	detected	- 2	1.04	ug/L ug/T	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100	0.19		0.50 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.10	ид/С	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12	ug/L va/T	0.00 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22	<u>ug/L</u>	1.00 ug/L	····
74-87-3	Chloromethane			not	detected	nle	0.10	ug/L /r	1.00 ug/L	· · · · - ·
75-01-4	Vinyl Chloride			not	detected		0.22	ug/L	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25	ид/ш	1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22	ug/L	1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.10	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	0,10	ug/L væ/T	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	700	0,16	ug/L ua/T	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	3	0.10	ugyr.	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20	ugyr.	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	0.50 ug/L	1
78-93-3	2-Butanone			not	detected	300	0.10	ug/L	1.00 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	defected		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 Tetrachioride			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	I	0,18	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane	-		not	detected		0.16	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle.	0.25	ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0,16	ug/L	0.50 ug/L	···
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0,26	ug/L	<u>1.00 ug/L</u>	
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		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	nie	0.27	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	nie	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	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.1 <u>2</u>	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	ļ
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

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						750 FIFL D BLANK	
Lab Name:	FMETL			Contract:			DEANN
Lab Code:	13461	Ca	se No.: MW	SAS No.	:	SDG No.: 90	)434
Matrix: (soil/v	vater)	WATER	-	Lab	Sample II	D: 9043402	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4844.D	
Level: (low/n	ned)	LOW	_	Dat	e Receive	d: <u>11/3/2009</u>	
% Moisture: r	not dec.			Dat	e Analyzeo	d: <u>11/4/2009</u>	
GC Column:	RTX-V	/ <u>M_</u> ID: <u>0.2</u>	25(mm)	Dilu	ition Facto	r: <u>1.0</u>	
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	(uL)
Number TICs	s found:	0	_	CONCENTRAT (ug/L or ug/Kg)	ION UNIT	S:	
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q



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

Data File	VA4850.D	Sample Name	9043408
Operator	ROBERTS	Field ID	750 MW#01A
Date Acquired	5 Nov 2009 12:06 am	Sample Multiplier	1

~ ~ ~ ~	<i>a</i>	0.00	Description	Desult		Regulatory Level (ug/l)*	MDI	Dĭ	Onalifiers
CAS#	Compound Name	<u> </u>	Response	Result	datastad		2 001	10/1 5 00 110/1	Quanners
107028	Acrolein			101	detected	3	1.64	ug/L = 5.00 ug/L	
10/131	Acrylonitrite	· · · ·		liot	detected	100	1.04	ug/L 5:00 ug/L	
/2020	tert-Butyl alcohol	0.00	0805	101	uelecteu	100	0.19	ид 0.50 ид 1	Ţ
1634044	Methyl-tert-Butyl ether	8,33	9805	0.34	ug/L detected	70	0.10	ug/L 0.50 ug/L	<u>v</u>
108203	Di-isopropyl ether			not	detected	20000	0.12	ug/L 1.00 ug/L	
/5/18	Dichlorodifiuoromethane			not	detected	1000	0.22	ug/L 1.00 ug/L	
/4-87-3	Chloromethane			not	detected	nie	0.10		
75-01-4	Vinyl Chloride			HOL	detected	10	0.22	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.23	ag/I 1.00 ug/I	
75-00-3	Chloroethane			not	detected	2000	0.22	ng/I 1.00 ug/I	
75-69-4	Trichlorofluoromethane	· · ·		not	detected	2000	0.10	ng/L 0.50 11g/L	
/3-33-4	1,1-Dichloroethene			not	detected	6000	0.18	ng/L 0.50 mg/L	
07-04-1	Acetone		· · ·	not	detected	200	0,10	$\frac{ug/L}{100} = 0.50 \ ug/L$	
/5-15-0	Carbon Disulfide		· · · ·	not	detected	700	0.16	ug/I 0.50 ug/I	
/5-09-2	Methylene Chloride			not	detected	100	0.10	ug/L 0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene	0.01	7079	0.41		100	0.20	ug/L 0.50 ug/L	I.I.I
75-35-3	1,1-Dichloroethane	9.01	12/8	0.41	detected	3000	0.12	ug/L 0.50 ug/L	· · · · · ·
108-05-4	Vinyl Acetate			101	detected	7000	0.16	ug/I 1.00 ug/I	
78-93-3	2-Butanone	·····		not	detected	300	0.10	ug/L 0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene				datastad	70	0.14	$10^{1}$ 0.50 $10^{1}$	····
67-66-3	Chloroform				detected	70	0.21	ug/L 0.50 ug/L	<u> </u>
75-55-6	1.1,1-Trichloroethane			not	detected	. 30	0.27	$\frac{ug/L}{100} = \frac{0.50 \ ug/L}{1000}$	
56-23-5	Carbon Tetrachloride			1101	detected	-1	0.16	ug/L 0.50 ug/L	
71-43-2	Benzene				detected		0.10	ug/I 0.50 ug/I	
107-06-2	1.2-Dichloroethane				detected	.4	0.12	ug/I 0.50 ug/I	
79-01-6	Trichloroethene			not	detected	1	0.16	ug/I 0.50 ug/I	
78-87-5	1,2-Dichloropropane		<del>-</del>	1101	detected		0.14	ug/L = 0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		0.25	ug/L 1.00 ug/L	· · · · · · · · · · · · · · · · · · ·
110-75-8	2-Chloroethyl vinyl ether		· · ·	not	detected	1 1116	0.16	ng/L 0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene		···· ·	not	detected		0.26	ng/L 1.00 ng/L	
108-10-1	4-Methyl-2-Pentanone	· <b> -</b>		not	detected	1000	0.15	ng/L 0.50 ug/L	
108-88-3	Toluene			not	detected	1000	0.12	ng/L 0.50 ng/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected		0.14	ug/L 0.50 ug/L	
/9-00-5	1,1,2-1 richloroethane			1100	detected		0.18	ug/L 0.50 ug/L	
127-18-4	l'etrachioroethene			not	detected		0.20	ng/L 0.50 ng/L	
106 49 1	Z-Hexanone		-	not	detected	1110	0.14	ng/L 0.50 ug/L	
120-48-1	Dibromochloromethane		·		detected	50	015	ug/L 0.50 ug/L	
108-90-7	Chlorobenzene		··· ·	not	detected	700	0.16	ng/L 0.50 ug/L	
100-41-4	Bthylbenzene			not	detected		015	ug/L 0.50 ug/L	
1220-00-7	1,1,1,2-tetrachioroethane		··· ·	not	detected		0.27	ng/L 1.00 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nie	0.14	ug/L 0.50 ug/L	
1330-20-7	o-Xylene	· · ·		not	detected	100	0.12	ug/L 0.50 ug/L	····
100-42-5	Styrene			not	detected	100	0 14	ug/L 1.00 ug/L	
13-23-2				not	detected	1	012	up/L 0.50 up/L	
541 72 1	1,1,2,2-1 etrachioroethane			not	detected	600	0.12	ug/L 0.50 ug/L	
106 46 7	1,3-Dichlorobenzene	·		not	detected	75	0.12	ug/L 0.50 ug/L	
100-40-7	1.3 Distigration			not	detected	600	0.12	ug/L 0.50 ug/L	
1-06-66	1,Z-LICHIOFOUCHZCHC	F		101	140100104	1	ו••**		

*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



VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

3/90

000041

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		TENTATIVELY IDENTIFIED COMPOUNDS						B <i>A</i> 13 <i>14</i> 04 A	
Lab Name:	FMETL			Contrac	ct:		/50	WIWW#U1A	۱ ۱
Lab Code:	13461	Cas	se No.: MW	SAS	No.:	S	DG No.:	90434	
Matrix: (soil/w	vater)	WATER	•		Lab S	ample ID:	9043408		<b>,</b>
Sample wt/vo	ol:	5.0	(g/ml) ML		Lab Fi	le ID:	VA4850.	D	
Level: (low/n	ned)	LOW	_		Date F	Received:	11/3/200	9	
% Moisture: r	not dec.				Date /	Analyzed:	11/5/200	9	
GC Column:	RTX-V	<u>M</u> ID: <u>0.2</u>	25(mm)		Dilutio	n Factor:	1.0		
Soil Extract V	/olume:		_ (uL)		Soll A	liquot Volu	me:		(uL)
Number TICs	s found:	O.	_	CONCENTF (ug/L or ug/l	RATIO <g)< td=""><td>N UNITS: UG/L</td><td></td><td></td><td></td></g)<>	N UNITS: UG/L			
CAS NO.		COMPOU	ND NAME		F	T ES	ST. CONC	. C	2

# SEMI-VOLATILE ORGANICS

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	Report of Analysis								
Client Sample ID:9043402 FIELD BLALab Sample ID:JA32053-1Matrix:AQ - Field Blank WaMethod:SW846 8270CProject:750			ANK nter 346 3510C	NK Date Sampled: 11/03/09 er Date Received: 11/04/09 16 3510C Percent Solids: n/a					
Run #1 Run #2	File ID 3E23002.D	DF 1	Analyzed 11/17/09	By OYA	Prep D 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045	
Run #1 Run #2	Initial Volume 1000 ml	Final Volu 1.0 ml	me						
BN TCL42	! List								
CAS No.	Compound		Result	RL	MDL	Units	Q		
98-86-2 1912-24-9	Acetophenone Atrazine		ND ND	5.0 5.0	0.40 0.39	ug/l ug/l			• •
100-52-7 101-55-3	Benzaldehyde 4-Bromophenyl Butch harmed al	phenyl ethe	ND r ND ND	5.0 2.0 2.0	0.40	ug/1 ug/1 ug/1			
85-68-7 92-52-4	1,1'-Biphenyl		ND ND	2.0	0.42	ug/l ug/l			
91-38-7 106-47-8	4-Chloroaniline	)	ND	5.0 2.0	0.25	ug/l			
105-60-2	Carbazole Caprolactam	oral mothan	ND	2.0	0.20	ug/l		·	
111-91-1	bis(2-Chloroeth	iyl)ether	ND	2.0	0.31	ug/l			
108-60-1 7005-72-3	4-Chloropheny	propyitemer I phenyl ethe	r ND	2.0	0.35	ug/l			
121-14-2 606-20-2	2,4-Dinitrotolu 2,6-Dinitrotolu	ene	ND	2.0	0.22	ug/l		<u>~</u>	
91-94-1 132-64-9	3,3'-Dichlorob Dibenzofuran	enzidine	ND	5.0 5.0	0.30	ug/1			
84-74-2 117-84-0	Di-n-butyl phth Di-n-octyl phth	alate alate	ND ND	2.0 2.0	0.19	ug/l ug/l			
84-66-2 131-11-3	Diethyl phthala Dimethyl phtha	ite ilate	ND ND	2.0 2.0	$\begin{array}{c} 0.17 \\ 0.23 \end{array}$	ug/l ug/l			
117-81-7 87-68-3	bis(2-Ethylhex Hexachlorobut	yl)phthalate adiene	ND ND	2.0 1.0	0.33 0.37	ug/l ug/l			
77-47-4 67-72-1	Hexachlorocyc Hexachloroeth:	lopentadiene ane	ND ND	20 5.0	$0.67 \\ 0.26$	ug/l ug/l			
78-59-1 91-57-6	Isophorone 2-Methylnapht	halene	ND ND	2.0 2.0	0.25 0.66	ug/l ug/l			
88-74-4 99-09-2	2-Nitroaniline 3-Nitroaniline		ND ND	$\begin{array}{c} 5.0\\ 5.0\end{array}$	0.24 0.29	ug/l ug/l			
100-01-6 98-95-3	4-Nitroaniline Nitrobenzene	`	ND ND	5.0 2.0	0.18 0.25	ug/l ug/l			

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blankN = Indicates presumptive evidence of a compound



Report of Analysis										Page 2 of		
Client Sample ID: Lab Sample ID: Matrix: Method: Project:		9043402 FIELD BLAI JA32053-1 AQ - Field Blank Wate SW846 8270C SW84 750		Date S Date F Percei	ampled: Acceived at Solids	: 11/( : 11/( : n/a	03/09 04/09					
BN TCL42	List					-						
CAS No.	Compo	ound	Result	RL	MDL	Units	Q					
621-64-7 86-30-6	N-Nitr N-Nitr	oso-di-n-propylamine osodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l						
CAS No.	Surrog	gate Recoveries	Run# 1	Run# 2	Lim	its						
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14		79% 78% 79%	25-112% 31-106% 14-122%								
CAS No. Tentatively Identified Comp		tively Identified Comp	ounds	R.T.	Est.	Conc.	Units	Q				
Internal standard added for SIM test Total TIC, Semi-Volatile		11.50	4.3 0		ug/l ug/l	J						

MDL - Method Detection Limit ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range

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Page 2 of 2

	Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043402 FIELD B e ID: JA32053-1 AQ - Field Blank SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date Sa Date R Percent	ampled: eceived: t Solids:	11/03/09 11/04/09 n/a	
Run #1 Run #2	File ID         DF           4M13243.D         1	Analyzed 11/11/09	By NAP	Prep Da 11/09/09	te )	Prep Batch OP40821A	Analytical Batch E4M610
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluorene	ND ND ND ND ND ND ND ND ND ND	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.10\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.10\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\ 0.20\\$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.023 0.024 0.027 0.0090	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND	0.020 0.10 0.10 0.10 0.10	0.0099 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its		<b>_</b>
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	90% 77% 73%		18-1 18-1 13-1	19% 04% 09%		

MDL - Method Detection Limit ND = Not detected

RL = Reporting LimitE = 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





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		Repo	rt of A	nalysis			Page 1 of 2
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9043408 750MW01A le ID: JA32053-2 AQ - Ground Water SW846 8270C SW8 750	Date Sampled: 11/03/09 Date Received: 11/04/09 46 3510C Percent Solids: n/a					
Run #1 Run #2	File ID DF 3E23003.D 1	Analyzed 11/17/09	By OYA	Prep D 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	me		· ·			
BN TCL42	2 List						
CAS No.	Compound	Result	RL	MDL	Units	Q	
98-86-2 1912-24-9 100-52-7 101-55-3 85-68-7 92-52-4 91-58-7	Acetophenone Atrazine Benzaldehyde 4-Bromophenyl phenyl ether Butyl benzyl phthalate 1,1'-Biphenyl 2-Chloronaphthalene	ND ND ND ND ND ND	5.0 5.0 2.0 2.0 2.0 2.0 5.0	0.40 0.39 0.40 0.35 0.25 0.42 0.42	ug/l ug/l ug/l ug/l ug/l ug/l		
106-47-8 86-74-8 105-60-2 111-91-1 111-44-4 108-60-1	4-Chloroaniline Carbazole Caprolactam bis(2-Chloroethoxy)methane bis(2-Chloroethyl)ether bis(2-Chloroisopropyl)ether	ND ND ND ND ND ND	5.0 2.0 2.0 2.0 2.0 2.0 2.0	0.23 0.17 0.20 0.25 0.31 0.39 0.35	ug/1 ug/1 ug/1 ug/1 ug/1 ug/1		
7005-72-3 1-21-14-2 606-20-2 91-94-1 132-64-9 84-74-2	<ul> <li>4-Chlorophenyl phenyl euler</li> <li>2,4-Dinitrotoluene</li> <li>2,6-Dinitrotoluene</li> <li>3,3'-Dichlorobenzidine</li> <li>Dibenzofuran</li> <li>Di-n-hutyl nhthalate</li> </ul>	ND ND ND ND ND ND	2.0 2.0 5.0 5.0 2.0	0.33 0.22 0.33 0.30 0.30 0.19	ug/1 ug/1 ug/1 ug/1 ug/1 ug/1		
117-84-0 84-66-2 131-11-3 117-81-7	Di-n-octyl phthalate Diethyl phthalate Dimethyl phthalate bis(2-Ethylhexyl)phthalate	ND ND ND ND ND	2.0 2.0 2.0 2.0 1.0	0.40 0.17 0.23 0.33 0.37	ug/l ug/l ug/l ug/l ug/l		
67-08-3 77-47-4 67-72-1 78-59-1 91-57-6	Hexachlorocyclopentadiene Hexachloroethane Isophorone 2-Methylnaphthalene	ND ND ND ND	20 5.0 2.0 2.0 5.0	0.67 0.26 0.25 0.66 0.24	ug/l ug/l ug/l ug/l	·	
88-74-4 99-09-2 100-01-6 98-95-3	2-Nitroaniline 3-Nitroaniline 4-Nitroaniline Nitrobenzene	ND ND ND	5.0 5.0 2.0	0.24 0.29 0.18 0.25	ug/l ug/l ug/l		

MDL - Method Detection Limit ND = Not detected

- RL = Reporting LimitE = 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





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### Report of Analysis

Client Sample ID:9043408 750MW01ALab Sample ID:JA32053-2Matrix:AQ - Ground WaterMethod:SW846 8270CProject:750		. <b>6 3510C</b>		Date S Date F Percer	Sampled Received at Solids	: 11/ l: 11/ s: n/a	03/09 04/09			
BN TCL42	List								•	
CAS No.	Comp	ound	Result	RL	MDL	Units	Q			
621-64-7	N-Nit	roso-di-n-propylamine	ND	2.0	0.44	ug/l				
86-30-6	N-Nit	rosodiphenylamine	ND	5.0	0.22	ug/I				
CAS No.	Surro	gate Recoveries	Run# 1	Run# 2	Lim	its				
4165 60 0	Nitrol	penzene-d5	72%		25-1	12%				
4103-00-0	2 Elm	prohinkenvl	72%		31-1	06%				
341-00-0	Z-riu Toroh	onvi d14	74%		14-1	22%				
1/18-31-0	rerpn	enyi-ur4	,1,0							
CAS No.	Tenta	tively Identified Comp	ounds	R.T.	Est.	Conc.	Units	Q		
	Intern Total	al standard added for SI TIČ, Semi-Volatile	M test	11.50	4.3 [°] 0		ug/l ug/l	l		

ND = Not detected MDL - Method Detection Limit RL = Reporting LimitE = Indicates value exceeds calibration range J = Indicates an estimated value

 $\tilde{B}$  = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





Page 2 of 2

### Report of Analysis

Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043408 750MW0 le ID: JA32053-2 AQ - Ground Wate SW846 8270C BY 750	1A er SIM SW846	3510C	Date S Date R Percen	ampled: .eceived t Solids	11/03/09 : 11/04/09 : n/a	
Run #1 Run #2	File ID DF 4M13244.D 1	Analyzed 11/11/09	By NAP	Prep Da 11/09/09	1te 9	Prep Batch OP40821A	Analytical Batch E4M610
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound.	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	·	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its		
4165-60-0 321-60-8 1718-51-0	– Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	84% 71% 67%		18-1 18-1 13-1	19% 04% 09%		

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

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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

Page 1 of 1





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Report of Analysis						Page 1 of 2		
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043408 750MW01A e ID: JA32053-2 AQ - Ground Water SW846 8270C SW8 750	46 3510C		Date S Date R Percer	ampled: leceived: it Solids:	11/03/09 : 11/04/09 : n/a		
Run #1 Run #2	File ID         DF           3E23003.D         1	Analyzed 11/17/09	By OYA	Prep D 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045	
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	ne .						
BN TCL42	List							
CAS No.	Compound	Result	RL	MDL	Units	Q		
98-86-2	Acetophenone	ND	5.0	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/I			
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.35	ug/1			
85-68-7	Butyl benzyl phthalate	ND	2.0	0.25	ug/t			
92-52-4	1,1'-Biphenyl	ND	2.0	0.42	ug/i			
91-58-7	2-Chloronaphthalene	ND	5.0	0.42	ug/I			
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/I			
86-74-8	Carbazole	ND	2.0	0.17	ug/I			
105-60-2	Caprolactam	ND	2.0	0.20	ug/1			
111-91-1	bis(2-Chloroethoxy)methane	ND	2.0	0.20	ug/1			
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/1			
108-60-1	bis(2-Chloroisopropyl)ether		2.0	0.39	ug/I			
7005-72-3	4-Chlorophenyl phenyl etner		2.0	0.00 0.00	ug/1 ug/1			
121-14-2	2,4-Dinitrotolilene	UVI)	2.0	0.22	ug/1 9/1			
606-20-2	2,6-Dinitrotoldene		2.0 5 0	0.33	ug/1 ug/1			
91-94-1	3,3'-Dichlorobenzialite		5.0	0.30	ug/1 ug/1			
132-04-9	Dipenzoruran Di a hutul ahthalata	ND	2.0	0.00	ug/1 110/1			
84-/4-2	Di a cotul philialate	ND	2.0	0.10	110/I			
117-04-0	Di-fi-ociyi philialate	ND	2.0	0.40	110/1			
04-00-2	Dimethyl philialate	ND	2.0	0.23	110/1			
101-11-0	bic(2 Ethylhovyl)nhthalata	ND	2.0	0.33	ug/1			
07 60 2	Hevechlorobutadiene	ND	1.0	0.37	ug/l			
01-00-0 77:47.4	Hexachlorocyclonentadiene	ND	20	0.67	ug/l			
67_72_1	Hexachloroethane	ND	5.0	0.26	ug/l			
78-59-1	Isophorope	ND	2.0	0.25	ug/l			
91-57-6	2-Methylnaphthalene	ND	2.0	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			
00-00-0	THUODORDORO				- <del>0</del>			

MDL - Method Detection Limit ND = Not detected

RL = Reporting LimitE = 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



Client Samp Lab Sampk Matrix: Method: Project:	ple ID: e ID:	9043408 750MW01A JA32053-2 AQ - Ground Water SW846 8270C SW84 750	6 3510C		Date S Date F Percer	ampled Received at Solids	: 11/ l: 11/ s: n/a	03/09 04/09	
BN TCL42	List								
CAS No.	Comp	ound	Result	RL	MDL	Units	Q		
621-64-7	N-Nit	roso-di-n-propylamine	ND	2.0	0.44	ug/l			
86-30-6	N-Nit	rosodiphenylamine	ND	5.0	0.22	ug/l			
CAS No.	Surro	gate Recoveries	Run# 1	Run# 2	Lim	its			
4165-60-0	Nitrol	enzene-đ5	72%		25-1	.12%			
321-60-8	2-Flu	orobiohenyl	72%		31-1	.06%			
1718-51-0	Terph	enyl-d14	74%		14-1	22%			
CAS No.	Tenta	tively Identified Comp	ounds	R.T.	Est.	Conc.	Units	Q	
	Intern	al standard added for Sl	M test	11.50	4.3		ug/l	J	

Report of Analysis

Total TIC, Semi-Volatile

 $\begin{array}{ll} ND = Not \ detected & MDL - \ Method \ Detection \ Limit \\ RL = Reporting \ Limit \\ E = \ Indicates \ value \ exceeds \ calibration \ range \end{array}$ 

J = Indicates an estimated value

ug/l

0

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





Report of Analysis							Page 1 of 1		
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9043408 750MW0 le ID: JA32053-2 AQ - Ground Wate SW846 8270C BY 750	1A er SIM SW846	3510C	Date S Date R Percen	ampled: eceived: t Solids:	11/03/09 : 11/04/09 : n/a			
Run #1 Run #2	File ID DF 4M13244.D 1	Analyzed 11/11/09	By NAP	Prep Da 11/09/0	ate 9	Prep Batch OP40821A	Analytical Batch E4M610		
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume				······			
CAS No.	Compound	Result	RL	MDL	Units	Q			
83-32-9 208-96-8 120-12-7	Acenaphthene Acenaphthylene Anthracene	ND ND ND	0.10 0.10 0.10	0.029 0.039 0.026	ug/l ug/l ug/l				
56-55-3 50-32-8 205-99-2	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene	ND ND ND	0.10 0.10 0.10	0.024 0.031 0.036	ug/l ug/l ug/l				
191-24-2 207-08-9 218-01-9	Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	ND ND ND	0.10 0.10 0.10	0.029 0.028 0.022	ug/l ug/l ug/l	,			
53-70-3 206-44-0	Dibenzo(a,h)anthracene Fluoranthene	ND ND	0.10 0.10 0.10	0.023 0.024 0.027	ug/l ug/l				
86-73-7 118-74-1 193-39-5	Huorene Hexachlorobenzene Indeno(1,2,3-cd)pyrene	ND ND ND	0.020 0.10	0.0099 0.029	ug/l ug/l				
91-20-3 85-01-8 129-00-0	Naphthalene Phenanthrene Pyrene	ND ND ND	0.10 0.10 0.10	0.019 0.036 0.022	ug/l ug/l ug/l				
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its				
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	84% 71% 67%		18-1 18-1 13-1	19% 04% 09%				

MDL - Method Detection Limit ND = Not detected

E = Indicates value exceeds calibration range

RL = Reporting Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Report of Analysis							Page 1 of 2		
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043408DUP 750MW e ID: JA32053-3 AQ - Ground Water SW846 8270C SW84 750	01A 16 3510C		Date S Date R Percen	ampled: teceived t Solids	11/03/09 11/04/09 n/a			
Run #1 Run #2	File ID         DF         A           3E23004.D         1         1	nalyzed 1/17/09	By OYA	Prep Da 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045		
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	10							
BN TCL42	List								
CAS No.	Compound	Result	RL	MDL	Units	Q			
98-86-2 1912-24-9 100-52-7 101-55-3	Acetophenone Atrazine Benzaldehyde 4-Bromophenyl phenyl ether	ND ND ND ND	5.0 5.0 5.0 2.0	$0.40 \\ 0.39 \\ 0.40 \\ 0.35$	ug/l ug/l ug/l ug/l				
85-68-7 92-52-4 91-58-7 106-47-8	Butyl benzyl phthalate 1,1'-Biphenyl 2-Chloronaphthalene 4-Chloroaniline	ND ND ND ND	2.0 2.0 5.0 5.0	0.25 0.42 0.42 0.25	ug/l ug/l ug/l ug/l				
86-74-8 105-60-2 111-91-1	Carbazole Caprolactam bis(2-Chloroethoxy)methane	ND ND ND	2.0 2.0 2.0	0.17 0.20 0.25 0.21	ug/l ug/l ug/l				
111-44-4 108-60-1 7005-72-3 121-14-2	bis(2-Chloroisopropyl)ether 4-Chlorophenyl phenyl ether 2,4-Dinitrotoluene	ND ND ND ND	2.0 2.0 2.0 2.0	0.31 0.39 0.35 0.22	ug/l ug/l ug/l ug/l				
606-20-2 91-94-1 132-64-9	2,6-Dinitrotoluene 3,3'-Dichlorobenzidine Dibenzofuran Di a butul abthalata	ND ND ND ND	2.0 5.0 5.0 2.0	0.33 0.30 0.30 0.19	ug/l ug/l ug/l ug/l				
84-74-2 117-84-0 84-66-2 131-11-3	Di-n-octyl phthalate Diethyl phthalate Dimethyl phthalate	ND ND ND	2.0 2.0 2.0	0.40 0.17 0.23	ug/1 ug/1 ug/1				
117-81-7 87-68-3 77-47-4	bis(2-Ethylhexyl)phthalate Hexachlorobutadiene Hexachlorocyclopentadiene	3.2 ND ND	2.0 1.0 20	0.33 0.37 0.67 0.26	ug/l ug/l ug/l ug/l				
67-72-1 78-59-1 91-57-6 88-74-4	Hexachloroethane Isophorone 2-Methylnaphthalene 2-Nitroaniline	ND ND ND ND	5.0 2.0 2.0 5.0	0.26 0.25 0.66 0.24	ug/1 ug/l ug/l ug/l				
99-09-2 100-01-6 98-95-3	3-Nitroaniline 4-Nitroaniline Nitrobenzene	ND ND ND	5.0 5.0 2.0	0.29 0.18 0.25	ug/l ug/l ug/l				

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

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E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $\tilde{B}$  = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

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ACCUTEST. JA32053 Laboratories



		Report of Analysis						
Client Sample ID:9043408DUP 750MVLab Sample ID:JA32053-3Matrix:AQ - Ground WaterMethod:SW846 8270CProject:750		/01A 46 3510C		Date S Date I Percer	Sampled: Received nt Solids	11/ 11/ n/a	03/09 04/09	
BN TCL42	List							
CAS No.	Compound	Result	RL	MDL	Units	Q		
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l			
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its			
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	65% 65% 66%		25-1 31-1 14-1	12% 06% 122%			
CAS No.	Tentatively Identified Com	ounds	R.T.	Est.	Conc.	Units	Q	
	Internal standard added for S Internal standard added for S Total TIC, Semi-Volatile	IM test IM test	11.49 14.94	4.4 4.2 0		ug/l ug/l ug/l	] ]	

MDL - Method Detection Limit ND = Not detectedRL = 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

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Report of Analysis							Page 1 of 1		
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9043408DUP 750M le ID: JA32053-3 AQ - Ground Wate SW846 8270C BY 750	1W01A r SIM SW846	3510C	Date Sa Date R Percen	ampled: eceived t Solids	11/03/09 : 11/04/09 : n/a			
Run #1 Run #2	File ID DF 4M13245.D 1	Analyzed 11/11/09	By NAP	Prep Da 11/09/09	ite }	Prep Batch OP40821A	Analytical Batch E4M610		
Run #1 Run #2	Initial Volume Final Vol 1000 ml 1.0 ml	ume	· · · · · · · · · · · · · · · · · · ·						
CAS No.	Compound	Result	RL	MDL	Units	Q			
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene	ND ND ND ND ND ND ND ND ND ND ND ND ND	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.019 0.036	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		·		
129-00-0 CAS No.	Pyrene Surrogate Recoveries	ND Run# 1	0.10 Run# 2	0.022 Limi	ug/I				
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	76% 66% 62%		18-11 18-10 13-10	19% 04% 09%				

ND = Not detectedMDL - Method Detection Limit

RL = Reporting Limit

J = Indicates an estimated value

E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound







#### LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

Laboratory Manager or Environmental Consultant's Signature Date: 1 / 10/ 10

ian laro

()(M):34

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.

relio

Dean Tardiff Laboratory Manager

Excerpts for 750MW05 only

# FORT MONMOUTH ENVIRONMENTAL

TESTING LABORATORY DIRECTORATE OF PUBLIC WORKS

PHONE: (732)532-6224 FAX: (732)532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING



### ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

#### PROJECT: UST/ Monitoring Program New Wells Round II

### SAMPLE LOCATION AND IDENTIFICATION

SITE: 750

LABORATORY ID #	MONITOR WELL#	NJDEP WELL ID#	SAMPLE DÅTE
9044704	750MW01A**		11/17/09
9044705	750MW02A		11/17/09
9044706	750MW03A		11/17/09
9044707	750MW04A		11/17/09

*New Wells Round II **DUP. Sample is 9044704.

NJDEP Laboratory Certification # 13461

120/1

Dean Tardiff/Date: Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

3/15/10 Secularly

Dean Tardiff

# SAMPLING

 Fort Monmouth Environmental Testing Laboratory

 Elds. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.ml

 Chain of Custody

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8 #<u>11</u>

**Chain of Custody Record** 

NJDEP Certifica	tion #13461						
Customer: JOE FALLON	Project No:			Analysis F	arameters		Comments:
Phone #: 732-532-6223	Location: 2 ND	Courd Security	0				
( )DERA ( )OMA ( )Other:		, ] 	11	51			
Samplers Name / Company: しとんしてじん F	UNIC/ TVS	Sample	ΨO #	+0			
LIMS/Work Order # Sample Location	Date Ti	me - Type b	ttles	B			Remarks / Preservation Method
GUNNT . OI 750 TRIP BLANK	50-LI-11	00 AQ	Z Z				
102 750 FELD TLANK	111 60.21.11	00 AQ	3 X	X			
,03 750 DUP.		0 H T	ЗЗ				
A)0HUM *051 40,	111 50-61-11	0 AQ	2	X			
105 750 MW#02A	111 60-21-11	20 AQ	3 X	X			
A 106 750 mu #03A	111 60-61-11	30 A Q	З X	X			
07 750 mm #04p	11-17-09 11	50 99	З Х	X			-
,							
							-
						<u>.</u>	
Relinguished the (standature) Date/Time:	Roceived by (signa	durre): d. M. A.	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Relinquished by (signature): Date/Time:	Received by (sign	truje):	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Report Type: ()Full, ()Reduced, ()Standard, ()S Turnaround time: ()Standard 3 wks, ()Rush Wk.,_	creen / non-certified, ( ()ASAP Verbal	JEDD Hrs.	Com	lents:			
		Βοπο					1 VI 2410/000

## SAMPLE RECEIPT FORM

Date Received: _//-17-064	Work Order ID#:
Site/Proj. Name: 150/17/ 012-04	Cooler Temp (°C): 350C
Received By: J. U. MUM	Sign: Achulun
(Print name)	
<u>Check the approp</u>	priate box
<ol> <li>Did the samples come in a cooler?</li> </ol>	yes ∐ vo/ ∐ n/a
2. Were samples rec'd in good condition?	yes 🗌 no
3. Was the chain of custody filled out correctly a	Ind legibly?
4. Was the chain of custody signed in the approp	priate place? yes no
5. Did the labels agree with the chain of custody	/? Lyes I no
6. Were the correct containers/preservatives use	ed? ∠d 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 wit	hin 15 minutes □ yes□ no □ n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
POULA-1-	NA	ACL.			
	-7.				
					,
·					
				<u> </u>	
					· · · · · · · · · · · · · · · · · · ·
·					
		·			
·					

Comments:_____

Fort Monmouth Environmental Testing Laboratory

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Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

Chain of Custody Record

	Tel (732)532-4359 ]	Fax (732)532-( ion #13461	5263 EMail;	jacquelir	e.hame	r@us.army.mil	C	hain of Custody Record	
Customer: Jacqueli	ine Hamer	Project No:				Analys	is Parameters	Comments:	
2hone #: (732)532-4359	ó	Location: 750	New Wells	Rd. II					
)DERA ()OMA (	)Other:								
Samplers Name / Com	ıpany:			Sample	#	<u></u>			
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles	BN		Remarks / Preservation Method	
9044702	Field Blank	11/17/2009	11:00	AQ	~	×			
9044703	DUP.	11/17/2009	11:10	AQ		×		-	
9044704	750MW01A	11/17/2009	11:10	AQ		×			
9044705	750MW02A	11/17/2009	11:20	AQ	~	×			
9044706	750MW03A	11/17/2009	11:30	AQ	-	×			
9044707	750MW04A	11/17/2009	0.80625	AQ	1	×			7
					   .				
									j
Refinquished by (signatu	rre): Date/Time:	Received by	Ksignaturef:	J.J	Reling	uished by (signature):	Date/Time:	Received by (signature):	
Relinquished by (signath	rre): Date/Time:	Received by	(sígnature):		Relinc	uished by (signature):	: Date/Time:	Received by (signature):	
Report Type: ()Full, ( Turnaround time: (X)Sta	)Reduced, (X)Standard, ()Sc ndard 3 wks, ()Rush Wk.,_	rreen / non-certi ()ASAP Verba	fied, (JEDD 1Hrs.			Comments: C09-2	20650		
print legibly				Page_	∕_ of	-1 V	15e4/ ~	750 COC. 1.XLS11/18/2009	

000004

print legibly

## US ARMY FORT MONMOUTH MONITOR WELL SAMPLING

LOCATION: 750A MW #:01A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/17/09 WEATHER: Sunny and cool. TIDE: High	OM-VINNELL S	Sampling C Accordance SAM ERVICES	conducted in with TVS SOP -0205
	<u></u>		TDOW-21.40
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2 Purge Method: Peristaltic Pump/O Purge Rate: Not to Exceed Well D	" well or 0.65 for ther (Specify) raw Down of 0.5	- 4" well) x 3 = 5' 25/109	9.01 ft 21.40 ft 12.39 ft 0.00 ppm 25 Gal. 24.16 Gal/Min.
Purge Data: Start Time of Purging: 09:12			
End Time of Purging: 11:01	Initial Value	Dro Somolo	Post Sample
pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	3.83 su 16.14 ( °C) 14616 us/cm 178 mv 2.06 mg/L 16.45 ft 16.58 ft 11:10 11:16	3.73 su 17.00 ( °C) 17888 us/cm 154 mv 1.92 mg/L	3.64 su 16.82 ( °C) 19303 us/cm 137 mv 1.44 mg/L
Comments: DUP. here.			
	······	·····	······································

# CONFORMANCE/ NON-CONFORMANCE SUMMARY

# 90447 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
2	GC/MS Tune Specifications	
5.		405
	<ul><li>a. BFB Meet Criteria</li><li>b. DFTPP Meet Criteria</li></ul>	NIA
4.	GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series	425 ·
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	
	e du st. Cl. 1 Channen de Mont Critoria	Yes
	a. Calibration Check Compounds Meet Criteria b. System Performance Check Compounds Meet Criteria	Yel
7.	Blank Contamination – If yes, List compounds and concentrations in each blank:	Na
	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:	
	VOA Fraction	
	b B/N Fraction	
	c. Acid Fraction	,
	If not met, were the calculations checked and the results qualified as "estimated"?	
	A Contract Spiles Duplicate Recoveries Meet Criteria	No
9.	Main's Spike/Main's Spike Duplicate recoveries most contain a	
	outside the acceptable range)	
	WOA Fraction Several Combunds have high recoveries due t	o matrix in terference
	b B/N Fraction	
	c. Acid Fraction	
# GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate Yes, No, N/A

Yej

Yes

000011

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

a.		VOA Fraction	 	
ь.	•	B/N Fraction		
c.		Acid Fraction	 	

11: Extraction Holding Time Met

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

12. Analysis Holding Time Met

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

Additional Comments:

Scanlard 1/20/10 Date: Laboratory Manager:____

11/30/09

# METHOD SUMMARY

# **Method Summary**

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

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

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

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

# LABORATORY CHRONICLE

# Laboratory Chronicle

Lab ID: 90447

Site: 750

	Date	Hold Time
Date Sampled	11/17/09	NA
Receipt/Refrigeration	11/17/09	NA

#### Analyses

1.	Volatilės	11/25/09	14 Days
2.	Semi-Volatiles	11/24-12/02/09	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.

000017

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

VA4992.D Data File Operator Date Acquired

ROBERTS 25 Nov 2009 1:36 pm Sample Name Field ID Sample Multiplier 1

MB11250901 METHOD 624 11/25/09

C1 8#	Compound Name	рт	Resnanse	Result		Regulatory Level (agr)*	MDL		RL	Qualifiers
107029	Aoroloin		Response	not	detected	5	2.09	ug/L	5.00 ug/L	
107028	Acsolenitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	tert Butul sloopol			not	detected	100	1.89	ug/L	5.00 ug/L	
1634044	Method tert-Bubyl ether	<del>_</del>		not	detected	70	0.18	ug/L	0.50 ug/L	
109203	Di-isonronyl ether			not	detected	20000	0.12	ug/L	0.50 ug/L	
75719	Disblorodifluoromethane			not	detected	1000	0.22	ug/L	0.50 ug/L	
74 97 2	Chloromethene			not	detected	nle	0.10	ug/L	0.50 ug/L	
75-01-4	Winyl 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	m		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-Dichlomethane			not	detected	50	0.19	ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20	ug/L	0.50 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	<u> </u>
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	<u>.</u>
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	<u> </u>	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		L

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

J= Estimated concentration, value fails between R.L. and M.D.L.

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

11/30/2009 3:10 PM 000018

	EPA SAMPLE NO.							
•		TENTA	TIVELY IDENT	IFIED COMPOUNDS		MB11250901		
Lab Name:	FMETL							
Lab Code:	<b>1</b> 3461	(	Case No.: <u>MW</u>	SAS No.:	S	DG No.: 90447		
Matrix: (soil/v	water)	WATER	<u> </u>	Lab San	nple ID:	MB11250901		
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab File	ID:	VA4992.D	-	
Level: (low/r	ned)	LOW		Date Re	ceived:	11/17/2009	-	
% Moisture:	not dec.	. <u></u>		Date An	alyzed:	11/25/2009	-	
GC Column:	RTX-V	<u>M</u> ID:	<u>0.25</u> (mm)	Dilution	Factor:	1.0		
Soil Extract V	/olume:		(uL)	Soil Aliq	uot Volu	ime:	. (uL)	
					UNITS:			
Number TICs	s found:	0		(ug/L or ug/Kg)			<u> </u>	
CAS NO.		COMP	OUND NAME	RT	ES	ST. CONC.	Q	

#### FORM I VOA-TIC



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

VA4998.D Data File ROBERTS Operator Date Acquired

25 Nov 2009 5:45 pm

Sample Name Field ID Sample Multiplier 1

9044701 750 TRIP BLANK

Regulatory Launt (unlikt

C'A 8#	Compound Name	R.T.	Response	Result		Regulatory Detai (up)	MDL		Qualifiers
107028	Aorolein			not	detected	5	2.09 ug/L	5.00 ug/L	
107028	Acrolonitrile			not	detected	2	1.64 ug/L	5.00 ug/L	
75650	tert-Butul alcohol		· · · ·	. not	detected	100	1.89 ug/L	5.00 ug/L	
1634.044	Methyd_tert_Butyl ether			not	detected	70	0.18 ug/L	0.50 ug/L	
108203	Di iconronul ether			not	detected	20000	0.12 ug/L	0.50 ug/L	
75718	Dichlorodifuoromethane			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	nie	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	<u>0.20 ug/L</u>	0.50 ug/L	
75-35-3	1.1-Dichloroethane			not	detected	50	0.19 ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20 ug/L	0.50 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		0.17 ug/L	0.50 ug/L	<u></u>
56-23-5	Carbon Tetrachloride			not	detected	1	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	I	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		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/1	<u> </u>
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	<u> </u>	0.18 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/L		
126-48-1	Dibromochloromethane			not	detected		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			<u> </u>	detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.2/lug/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	U.12 ug/L	0.50 ug/L	
75-25-2	Bromoform			not	detected	4 .	U.14 ug/L		
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	<b>1</b>	0.12[ug/L		
541-73-1	1,3-Dichlorobenzene			not	detected	600	0.12 ug/L		
106-46-7	1,4-Dichlorobenzene			not	detected			0.50 ug/L	
95-50-1	1.2-Dichlorohenzene			not	detected	600	0.12 ug/L		L

*Results between MDL and RL are estimated values

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

Qualifiers

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

J= Estimated concentration, value falls between R.L. and M.D.L.

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

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	1E VOLATILE ORGANICS	EPA SAMPLE	E NO.					
	TENTATIVELY IDEN	TENTATIVELY IDENTIFIED COMPOUNDS						
Lab Name: FMET	L	Contract:						
Lab Code: 13461	Case No.: MW	SAS No.: S	SDG No.: <u>90447</u>					
Matrix: (soil/water)	WATER	Lab Sample ID:	9044701	<u> </u>				
Sample wt/vol:	5.0 (g/ml) <u>ML</u>	Lab File ID:	VA4998.D	-				
Level: (low/med)	LOW	Date Received:	11/17/2009	-				
% Moisture: not dec.		Date Analyzed:	11/25/2009	<b>→</b>				
GC Column: RTX	-VM_ID: <u>0.25</u> (mm)	Dilution Factor:	1.0	_				
Soil Extract Volume:	(uL)	Soil Aliquot Vol	ume:	_ (uL)				
		CONCENTRATION UNITS	· ·					
Number TICs found:	0	(ug/L or ug/Kg) UG/L						
CAS NO.	COMPOUND NAME	RT E	ST. CONC.	Q				

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

VA4999.D Data File ROBERTS Operator 25 Nov 2009 6:16 pm Date Acquired

Sample Name Field ID Sample Multiplier 1

9044702 750 FIELD BLANK

CASH	Compaund 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	
107028	Acrulonitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	fort Butul alashai	•••		not	detected	100	1,89	ug/L	5.00 ug/L	
1624044	Nethed fort But d other			not	detected	70	0,18	ug/L	0.50 ug/L	
1024044	Di inappanul other			not	detected	20000	0.12	ug/L	0.50 ug/L	
108205	Di-Isopropyl euler			not	detected	1000	0.22	ug/L	0.50 ug/L	
73718	Clinerashan			not	detected	nle	0,10	ug/L	0.50 ug/L	
74-87-3	Chioroinemane			not	detected	1	0,22	ug/L	0.50 ug/L	
/5-01-4	Vinyi Chionde			not	detected	10	0,25	ug/L	0.50 ug/L	
74-83-9	Bromomethane	<u>-</u>		not	detected	nle	0.22	ug/L	0.50 ug/L	
75-00-3				not	detected	2000	0.18	ug/L	0.50 ug/L	
75-69-4	Inchlorofluoromethane			not	detected	1	0,20	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene		·	not not	detected	6000	0.18	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	700	0.18	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	100	0.16	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride	•		not	detected	100	0.20	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	50	0.19	ug/L	0.50 ug/L	·
75-35-3	1,1-Dichloroethane	· · · · ·		not	detected	7000	0.20	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	/ 200	0.16	ng/I.	0.50 ug/L	
78-93-3	2-Butanone			not	detected	70	0.14	110/1.	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene		<u>.</u>	not	detected	70	0.21	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected		0.17	ng/L	0.50 ug/1.	
75-55-6	1,1,1-Trichioroethane	·			delected		0.27	ug/1	0.50 ug/L	
56-23-5	Carbon Tetrachloride	<u> </u>		not	delected		0.16	ug/f	050 ug/L	
71-43-2	Benzene	<del>.</del>		not	detected		0.10	ug/L	050 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	²	0.12	ug/L	0.50 ug/1	
79-01-6	Trichloroethene			not	detected		0.16	ug/I	0.50 ug/l	
78-87-5	1,2-Dichloropropane			not	detected		0.10	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane		<i></i>	not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether	<u></u> .		not	detected	nie	0.16	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0.10		0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone	<u></u>		not	detected	nle	0.20		0.50 ug/L	
108-88-3	Toluene	<u> </u>		not	detected	1000	0.13	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	_ <u>_</u>	0.12	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	Tetrachioroethene			not	detected		. 0,18	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20		0.50 ug/L	
126-48-1	Dibromochloromethane		'	not	detected	<u>I</u>	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		0.15	ug/L	<u>0.50 ug/1.</u>	
1330-20-7	m+p-Xylenes		ļl	not	detected	nle	0.27	ug/L	1.00 ug/L	ļ
1330-20-7	o-Xylene			not	detected	nle	0,14	ug/L	0.50 ug/L	<u> </u>
100-42-5	Styrene			not	detected	100	0.12	ug/L	0.50 ug/L	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		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-Dichlombenzene			not	detected	600	0.12	lug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

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

11/30/2009 3:06 PM 000022

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#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

						750 FIFLD BL	ANK
Lab Name:	FMETL			Contract:			
Lab Code:	13461	C:	ase No.: <u>MW</u>	SAS No.	: 8	DG No.: <u>90447</u>	
Matrix: (soil/v	vater)	WATER		Lab	Sample ID:	9044702	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4999.D	_
Level: (low/n	ned)	LOW		Dat	e Received:	11/17/2009	
% Moisture: 1	not dec.			Date	e Analyzed:	11/25/2009	_
GC Column:	RTX-V	/ <u>M</u> ID: <u>0</u>	.25 (mm)	Dilu	tion Factor:	1.0	-
Soil Extract V	/olume:		(uL)	Soil	Aliquot Volu	.me:	_ (uL)
					ON UNITS:		
Number TICs	s found:	0	- <u></u>	(ug/L of ug/itg)			
CAS NO.		COMPO	UND NAME		RT E	ST. CONC.	Q

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EPA SAMPLE NO.

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

Data File	VA5000.D		Sample Name	9044703
Operator	ROBERTS		Field ID	750 DUP
Date Acquired	25 Nov 2009	6:47 pm	Sample Multiplier	1

<b>a</b> 1 (94	Common d Nama	ኮጥ	Response	Result		Regulatory Level (ug/l)*	MDL	RL.	Qualifiers
L07039	Compound Ivanie		Kesponse	not	detected	5	2.09 ug/L	5.00 ug/L	
107028	Acrolett			not	detected	2	1.64 ug/L	5.00 ug/L	
10/131	Acrylonitrite		· · · · · · · · · · · · · · · · · · ·	not	detected	100	1,89 ug/L	5.00 ug/L	
10000	Ten-Butyr alconor	0.24	20437	0.59	ne/L	70	0.18 ug/L	0.50 ug/L	
102002	Methyl-ten-Baryl etner	0.54	20157		detected	20000	0,12 ug/L	0.50 ug/L	
108203	Di-isopropyl ether		·	not	detected	1000	0,22 ug/L	0.50 ug/L	
/5/18	Dichlorodiluoromethane	···-		not	detected	nle	0.10 ug/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected .	1	0.22 ug/L	0.50 ug/L	
75-01-4	Vinyl Chionde			not	detected	10	0.25 ug/L	0.50 ug/L	
/4-83-9	Bromomethane	<u> </u>		not	detected	nle	0.22 ug/L	0.50 ug/L	
75-00-3	Chloroetnane			not	detected	2000	0.18 ug/L	0.50 ug/L	
75-69-4	Trichlorofluoromethane	<del></del>		not	detected	1	0.20 ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	6000	0.18 ug/L	0.50 ug/L	
67-64-1	Acetone	<u> </u>		not	detected	700	0.18 ug/L	0.50 ug/L	
75-15-0	Carbon Disuttide			not	detected	3	0.16 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
75-09-2	Methylene Chloride	<u></u>		not	detected	100	0.20 ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene	0.00	11515	0.53	uelected	50	0.19 µg/L	0.50 ug/L	
75-35-3	1,1-Dichloroethane	9,02		0.55	detected	7000	0 20 ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	1000	0.16 vg/L	0.50 ug/L	
78-93-3	2-Butanone		· · · · · · · · · · · · · · · · · · ·	not	detected	300	0.14 µg/1.	0.50 ug/L	`
156-59-2	cis-1,2-Dichloroethene			not	detected	70 70	0.21 ug/L	0.50 ug/L	
67-66-3	Chloroform		·	EIOL	detected	20	0.17 ug/L	0.50 ug/L	
75-55-6	1,1,1-Trichloroethane				detected	30	0.27 ug/L	0.50 ug/I	
56-23-5	Carbon Tetrachloride	·			delected		0.16 ug/I	0.50 ug/1	
71-43-2	Benzene			nou	detected		0.10/ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			not	detected		0.19 ug/L	0.50 µg/I	
79-01-6	Trichloroethene	<u> </u>		not	detected		0.16 ug/l	0.50 ug/L	
78-8 <u>7-5</u>	1,2-Dichloropropane	ļ. <u></u>		not	detected		0.10 ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		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/1	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0.10 ug/L	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone			not	detected	· nle	0.20 ug/L	0.50 ug/L	
108-88-3	Toluene	L	· · · · · · · · · · · · · · · · · · ·	not	detected	1000	0.13 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene	Ļ	<b></b>	not	detected		0.12/ug/L	0.50 ug/L	
79-00-5	1,1,2-Trichloroethane	ļ		not	detected	3	0.14 ug/L	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	<u> </u> +	0.18 ug/L	0.30 ug/L	
591-78-6	2-Hexanone			not	detected		0.20 ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane	L		not	detected	1	0.14 ug/L	0.50 ug/L	
108-90-7	Chlorobenzene	ļ		not	detected	50	0.15 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			not	detected	700	0.10 ug/L	0.50 ug/L	
630-20-6	1,1,1,2-tetrachloroethane			not	detected	<u> </u>	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	0.14jug/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	<b></b>
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.12 ug/L	0.50 ug/L	ļ
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	15	0.12 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
05 50 1	1.2 Dichlorobenzene			not	detected	600	0.12 ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

. . . . . . . .

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

	VOL	ATILE ORGAN	1E ICS A	NALYSIS DA	ATA SHEET		EPA SA	MPLE	NO.
	Τł	ENTATIVELY II	DENT	TIFIED COMF	POUNDS	,	75	0 DUP	
Lab Name: F	METL	=	<u>.</u>	Contra	ct:		- L		
Lab Code: <u>1</u>	3461	Case No.:	MW	SAS	No.:	S	DG No.:	90447	
Matrix: (soil/wa	iter) <u>W</u> A	TER			Lab Sample	D:	9044703		
Sample wt/vol:	5.0	(g/ml)	ML		Lab File ID:		VA5000.	D	-
Level: (low/me	ed) <u>LO</u>	W			Date Receiv	/ed:	11/17/20	09	_
% Moisture: no	t dec.				Date Analyz	ed:	11/25/20	09	-
GC Column:	RTX-VM	ID: <u>0.25</u> (n	זm)		Dilution Fac	tor:	1.0		•
Soil Extract Vol	lume:	(uL)			Soil Aliquot	Volu	me:		. (uL)
				CONCENT	RATION UNI	ITS:			
Number TICs fo	ound:	0		(ug/L or ug/l	Kg) UG	/L			
CAS NO.	СС	DMPOUND NA	ME		RT	ES	T. CONC	•	Q

#### FORM I VOA-TIC



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

VA4994.D . Data File Operator ROBERTS 25 Nov 2009 3:42 pm Date Acquired

9044704 Sample Name Field ID

750 MW#01A Sample Multiplier 1

						Regulatory Level (ug/l)*				0
CAS#	Compound Name	<u> </u>	Response	Result		·	MDL		<u>RL</u>	Quanners
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	8,34	25591	0.71	ug/L	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	Vinvl 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 t-Dichlomethene			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	Carhon Disulfide			not	detected	700	0.18	ug/L	0.50 ug/L	<u>.</u> .
75-09-2	Methylene Chloride			not	detected	3	0.16	ug/L	0.50 ug/L	
156-60-5	trans 1.2 Disbloroethene			not	detected	100	0.20	ug/L	0.50 ug/L	
75-35-3	L L Dichlomethane			not	detected	50	0.19	ug/L	0.50 ug/L	
102 05 4	Vind Acatate			not	detected	7000	0.20	ug/L	0.50 ug/L	1
70 02 2	2 Dutenone			not	detected	300	0.16	ug/L	0.50 ug/L	
156 60 2	z-Bulanone			not	detected	70	0.14	ug/L	0.50 ug/L	
130-39-2	CIS-1,2-DICHOROGOGUIEILE			not	detected	70	0.21	ug/L	0.50 ug/L	
07-00-3				not	detected	30	0.17	ug/L	0.50 ug/L	
/3-33-0	1,1,1-1richlordethane			not	detected	1	0.27	ug/L	0,50 ug/L	
56-23-5	Carbon Tetrachioride			not	detected	1	0.16	ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	2	0.19	ug/L	0.50 ug/L	
107-06-2	1,2-Dichloroethane			100	detected	1	0.18	ug/L	0.50 ug/L	
79-01-6	Trichloroethene			100	detected		0.16	100/1.	0.50 ug/L	
78-87-5	1,2-Dichloropropane		<u> </u>	not	detected		0.14	110/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		0.25	110/I.	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether		<u>-</u> .	not	detected	nie	0.16	110/1.	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected	-1	0.10	<u>ир</u> 119/Л	0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone	<u> </u>		not	detected	BIE	0.20	ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	1000	0.13	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene		<b>_</b>	not	detected		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	0.10	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nie	0.20	ug/L	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected		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	<u> </u>	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	l I	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-Dichlorobenzeae			not	detected	75	0.12	ug/L	0.50 ug/L	
05-50-1	1 2-Dichlombenzene			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

000026

#### 1E . VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EST. CONC.

		TENTATIVEETIDE		00100			
Lab Name:	FMETL		Contrac	st:		50 IV(VV#01 	
Lab Code:	13461	Case No.: M	IW SAS	No.:	SDG No	.: 90447	
Matrix: (soil/v	water)	WATER		Lab Sample I	D: <u>90447</u>	04	<b>,</b>
Sample wt/vo	ol:	<u>5.0</u> (g/ml) <u>N</u>	/IL	Lab File ID:	VA499	)4.D	_
Level: (low/n	ned)	LOW	i	Date Receive	d: <u>11/17/</u>	2009	_
% Moisture: r	not dec.	<b>_</b>		Date Analyze	d: <u>11/25/</u>	2009	
GC Column:	RTX-\	/M_ID: <u>0.25</u> (mm	i) i	Dilution Facto	or: <u>1.0</u>		
Soil Extract V	/olume:	(uL)	Ş	Soil Aliquot Vo	olume: _.		(uL)
			CONCENTR		S:		
Number TICs	found:	· 0	(ug/L or ug/K	ig) <u>UG/L</u>			
CAS NO.				RT	EST. CON	۱C.	Q

CAS NO.

# SEMI-VOLATILE ORGANICS

000068

	<i>.</i>	Repo	rt of A	nalysis			Page 1 of
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044702 FIELD BLA e ID: JA33317-1 AQ - Field Blank Wa SW846 8270C SW8 750	ANK .ter 46 3510C		Date S Date F Percer	Sampled: Received: nt Solids:	11/17/09 11/18/09 n/a	
Run #1 Run #2	File ID DF R75635.D 1	Analyzed 12/02/09	By VN	Prep D 11/20/0	ate 19	Prep Batch OP41049	Analytical Batch ER2857
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	ne	•				
BN TCL42	List						
CAS No.	Compound	Result	RĹ	MDL	Units	Q	
98-86-2	Acetophenone	ND	5.0	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'-Biphenvl	ND	2.0	0.42	ug/l		
91-58-7	2-Chloronanhthalene	ND	5.0	0.42	ug/l		
106-47-8	· 4-Chloroaniline	ND	5.0	0.25	ug/l		
86-74-8	Carbazole	ND	2.0	0.17	ˈug/l		
105-60-2	Caprolactam	ND	2.0	0.20	ug/l		
111-91-1	his(2-Chloroethoxy)methane	ND	2.0	0.25	ug/l		
111-44-4	his(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/I		
87-68-3	Hexachlorobutadiene	ND	1.0	0.37	ug/I		
77-47-4	Hexachlorocyclopentadiene	ND	20	0.67	ug/l		
67-72-1	Hexachloroethane	ND	5.0	0.26	ug/l		
78-59-1	Isophorone	ND	2.0	0.25	ug/I		
91-57-6	2-Methylnaphthalene	ND	2.0	0.66	ug/I		
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		
08-05-3	Nitrobenzene	ND	2.0	0.25	ug/l		

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

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ACCUTEST. JA33317 Laboritorios



#### Accutest Laboratories

## Report of Analysis

Client Samp Lab Sample Matrix: Method: Project:	ole ID: 9044702 FIELD BLA D: JA33317-1 AQ - Field Blank Wa SW846 8270C SW8 750	ANK ater 846 3510C		Date S Date I Percer	Sampleo Received at Solid	l: 11/ 1: 11/ s: n/a	17/09 18/09		
BN TCL42	List							•	
CAS No.	Compound	Result	RL	MDL	Units	Q			
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l				
CAS No.	Surrogate Recoveries	Run# 1	Run#2	Lim	its				
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	79% 71% 66%	·	25-1 31-1 14-1	12% 06% 22%				
CAS No.	Tentatively Identified Com	pounds	R.T.	Est.	Conc.	Units	Q		
	system artifact/aldol-conden Internal standard added for Total TIC, Semi-Volatile	sation SIM test	4.53 8.48	4.1 4.1 0		ug/l ug/l 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



Page 2 of 2

Accutest Laboratories

•		Repor	rt of An	alysis			Page 1 of 1
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9044702 FIELD B le ID: JA33317-1 AQ - Field Blank V SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date S Date R Percen	ampled: eceived t Solids	11/17/09 : 11/18/09 : n/a	
Run #1 Run #2	File ID DF   4M13629.D 1	Analyzed 11/24/09	By NAP	Prep Da 11/20/09	ate 9	Prep Batch OP41049A	Analytical Batch E4M623
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo (a)anthracene Benzo (a)pyrene Benzo (b)fluoranthene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno (1,2,3-cd) pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	·	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	88% 79% 74%		18-1 18-1 13-1	19% 04% 09%	• •	

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

 $\begin{array}{l} J = \mbox{ Indicates an estimated value} \\ B = \mbox{ Indicates analyte found in associated method blank} \\ N = \mbox{ Indicates presumptive evidence of a compound} \end{array}$ 

(4) ***



Accutest Laboratories Page 1 of 2 **Report of Analysis** 9044703 DUP. Client Sample ID: Date Sampled: 11/17/09 JA33317-2 Lab Sample ID: Date Received: 11/18/09 AQ - Ground Water Matrix: Percent Solids: n/a SW846 8270C SW846 3510C Method: 750 Project: Prep Batch Analytical Batch Prep Date Analyzed By File ID DF ER2857 OP41049 11/20/09 VN 12/02/09 R75636.D 1 Run #1 Run #2 Final Volume Initial Volume 1.0 ml 1000 ml Run #1 Run #2 BN TCL42 List Q MDL Units RL Result Compound CAS No. ug/l ND 5.00.40Acetophenone 98-86-2 0.39 ug/l ND 5.0 Atrazine 1912-24-9 0.40 ug/l ND 5.0 Benzaldehyde 100-52-7 ug/l ND 2.00.35 4-Bromophenyl phenyl ether 101-55-3 ND 2.0 0.25 ug/l Butyl benzyl phthalate 85-68-7 ND 2.0 0.42 ug/l 1,1'-Biphenyl 92-52-4 ug/l ND 5.0 0.42 2-Chloronaphthalene 91-58-7 ug/l 0.25 ND 5.0 4-Chloroaniline 106-47-8 0.17 ug/l 2.0ND Carbazole 86-74-8 ug/l 0,20 ND 2.0Caprolactam 105-60-2 0.25 ug/l bis (2-Chloroethoxy) methane ND 2.0 111-91-1 ug/l ND 2.0 0.31 bis(2-Chloroethyl)ether 111-44-4 0.39 ug/l ND 2.0 bis(2-Chloroisopropyl)ether 108-60-1 0.35 ug/l 4-Chlorophenyl phenyl ether 2.0 ND 7005-72-3 ug/l 0.22 ND 2.02,4-Dinitrotoluene 121-14-2 0.33 ug/l ND 2.0606-20-2 2.6-Dinitrotoluene 0.30 ug/l 5.0 3,3'-Dichlorobenzidine ND 91-94-1 0.30 ug/l 5.0ND Dibenzofuran 132-64-9 ug/l 2.00.19 Di-n-butyl phthalate ND 84-74-2 2.00.40 ug/l ND Di-n-octyl phthalate 117-84-0 ug/I 0.17ND 2.0Diethyl phthalate 84-66-2 ug/l 0.23 ND 2.0Dimethyl phthalate 131-11-3 0.33ug/l bis(2-Ethylhexyl)phthalate ND 2.0117-81-7 ug/l 1.0 0.37 ND Hexachlorobutadiene 87-68-3 20 0.67ug/l ND Hexachlorocyclopentadiene 77-47-4 5.0 0.26ug/l ND Hexachloroethane 67-72-1 2.0 0.25 ug/l ND Isophorone 78-59-1 2.00.66 ug/l ND 2-Methylnaphthalene 91-57-6 0.24 ug/I ND 5.0 2-Nitroaniline 88-74-4 0.29 ug/l ND 5.03-Nitroaniline 99-09-2 0.18 ug/l 5.0 ND 100-01-6 4-Nitroaniline 0.25 ug/l 2.0ND 98-95-3 Nitrobenzene

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

] = Indicates an estimated value

B = Indicates analyte found in associated method blank

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JA33317 Labo

N = Indicates presumptive evidence of a compound



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Accutest Laboratories

	•	Repor	t of An	alysis	<u>.</u>			Page 2	; ot
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044703 DUP. e ID: JA33317-2 AQ - Ground Water SW846 8270C SW8 750	346 3510C		Date S Date I Percer	Sampled: Received at Solids	: 11/1 : 11/1 : n/a	7/09 8/09		
BN TCL42	List								
CAS No.	Compound	Result	RL	MDL	Units	Q			
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l				
CAS No.	Surrogate Recoveries	Run# 1	Run#2	Lim	its				
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	79% 67% 39%		25-1 31-1 14-1	12% 06% 22%				
CAS No.	Tentatively Identified Com	pounds	R.T.	Est.	Conc.	Units	Q		
	Internal standard added for S Total TIC, Semi-Volatile	SIM test	12.68	4.2 0		ug/l ug/l	Ĵ		

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



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Accutest Laboratories Page 1 of 1 Report of Analysis 9044703 DUP. Client Sample ID: Date Sampled: 11/17/09 Lab Sample ID: JA33317-2 Date Received: 11/18/09 AQ - Ground Water Matrix: Percent Solids: n/a SW846 8270C BY SIM SW846 3510C Method: 750 Project: Analytical Batch Prep Batch Prep Date  $\mathbf{DF}$ Analyzed By File ID E4M623 OP41049A 11/20/09 NAP 11/24/09 1 4M13630.D Run #1 Run #2 Final Volume Initial Volume 1.0 ml 1000 ml Run #1 Run #2 Units Q MDL RL Result CAS No. Compound ug/l 0.029 ND 0.10 Acenaphthene 83-32-9 ug/l 0.039 0.10 ND Acenaphthylene 208-96-8 ug/l 0.026 0.10 ND Anthracene 120-12-7 0.024 ug/l 0.10Benzo(a)anthracene ND 56-55-3 0.031 ug/l 0.10Benzo(a)pyrene ND 50-32-8 0.036 ug/l 0.10 Benzo(b)fluoranthene ND 205-99-2 0.029 ug/l Benzo(g,h,i)perylene ND 0.10191-24-2 ug/l 0.10 0.028Benzo(k)fluoranthene ND 207-08-9 ug/l 0.022 0.10 ND Chrysene 218-01-9 0.023 ug/l 0.10 Dibenzo(a,h)anthracene ND 53-70-3 0.024 ug/l ND 0.10 Fluoranthene 206-44-0 ug/l 0.10 0.027 Fluorene ND 86-73-7 0.020 0.0099 ug/l ND Hexachlorobenzene 118-74-1 0.029 ug/l 0.10 Indeno(1,2,3-cd)pyrene ND 193-39-5 0.019 ug/l 0.10 ND Naphthalene 91-20-3 0.036 ug/l 0.10 ND Phenanthrene 85-01-8 0.022 ug/l 0.10 ND Pyrene 129-00-0 Run#2 Limits Run#1 Surrogate Recoveries CAS No. 18-119% 87% Nitrobenzene-d5 4165-60-0 18-104% 78% 321-60-8 2-Fluorobiphenyl 13-109% 45% Terphenyl-d14 1718-51-0

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

eporting Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound



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Accutest Laboratories

		Repo	rt of A1	nalysis			Page 1 of 2
Client Samp Lab Sample Matrix: Method: Project:	ble ID: 9044704 750MW01A DI: JA33317-3 AQ - Ground Water SW846 8270C SW84 750	6 3510C		Date S Date F Percer	Sampled: Received nt Solids	11/17/09 : 11/18/09 : n/a	
Run #1 Run #2	File ID DF A R75637.D 1 1	nalyzed 2/02/09	By VN	Prep D 11/20/0	ate 9	Prep Batch OP41049	Analytical Batch ER2857
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	e					
BN TCL42	List				•		
CAS No.	Compound	Result	RL	MDL	Units	Q	
98-86-2	Acetophenone	ND ND	$5.0 \\ 5.0$	0.40 0.39	ug/l ug/l		
1912-24-9	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 ¹ -Biphenyl	ND	2.0	0.42	ug/I		•
91-58-7	2-Chloronaphthalene	ND	5.0	0.42	ug/l		
106-47-8	4-Chloroaniline	ND .	5.0	0.25	ug/I		
86-74-8	Carbazole	ND	2.0	0.17	ug/1		
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/I		
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/I		,
606-20-2	2,6-Dinitrotoluene	ND	2.0	0.33	ug/I		
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.30	ug/1		
132-64-9	Dibenzofuran	NÐ	5.0	0.30	ug/I		
84-74-2	Di-n-butyl phthalate	ND	2.0	0.19	ug/I		
117-84-0	Di-n-octyl phthalate	ND	2.0	0.40	ug/1		
84-66-2	Diethyl phthalate	ND	2.0	0.17	ug/1		
131-11-3	Dimethyl phthalate	ND	2.0	0.23	ug/1		
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.33 0.27	ug/1		
87-68-3	Hexachlorobutadiene	ND	. E.U	0.37	ug/1		
77-47-4	Hexachlorocyclopentadiene	ND	20	0.07	ug/1		
67-72-1	Hexachloroethane	ND	5.0	0.20	ug/1		
78-59-1	Isophorone	ND .	4.U 2.0	U.20 0.60	ug/1 11/1		
91-57-6	2-Methylnaphthalene		4.U r o	00.0	ug/1 uc/1		
88-74-4	2-Nitroaniline		0.0	U.24 0.20	ug/1		
99-09-2	3-Nitroaniline	ND -	5.0	0.29	ug/1		
100-01-6	4-Nitroaniline	ND	0.U 4.0	0.10	ug/1		
98-95-3	Nitrobenzene	ND	2.0	0.23	ug/1		

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

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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

Client Sam Lab Sample Matrix: Method: Project:	ple ID: e ID:	9044704 750MW01A JA33317-3 AQ - Ground Water SW846 8270C SW84 750	6 3510C		Date I Date I Perce	Sampled Received nt Solids	: 11/ l: 11/ s: n/a	(17/09 (18/09	
BN TCL42	List	 							
CAS No.	Comp	oound	Result	RL	MDL	Units	Q		
621-64-7 86-30-6	N-Nit N-Nit	roso-di-n-propylamine rosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l			
CAS No.	Surro	gate Recoveries	Run# 1	Run#2	Lin	nits			
4165-60-0 321-60-8 1718-51-0	Nitrol 2-Flue Terph	penzene-d5 probiphenyl jenyl-d14	78% 71% 40%	·	25- 31- 14-	112% 106% 122%			
CAS No.	Tenta	tively Identified Comp	ounds	R.T.	Est	. Conc.	Units	Q	
	syster Intern Intern Total	n artifact/aldol-condensa al standard added for Sl al standard added for Sl TIC, Semi-Volatile	ation M test M test	4.52 12.68 18.37	4.4 4.2 4 0		ug/l ug/l ug/l ug/l	] J J	

Report of Analysis

MDL - Method Detection Limit ND = Not detectedRL = 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





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#### Raw Data: KIKEBADIN

Accutest Laboratories

•	· .	Repor	t of An	alysis	Page 1 of		
Client San Lab Samp Matrix: Method: Project:	nple ID: 9044704 750MW0 le ID: JA33317-3 AQ - Ground Wate SW846 8270C BY 750	1A er SIM SW846	3510C	Date S Date R Percen	ampled: teceived it Solids	11/17/09 11/18/09 n/a	
Run #1 Run #2	File ID DF 4M13631.D 1	Analyzed 11/24/09	By NAP	Prep Da 11/20/0	ate 9	Prep Batch OP41049A	Analytical Batch E4M623
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume				· · · · · · · · · · · · · · · · · · ·	
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9	Acenaphthene	ND	0.10	0.029	ug/I		
208-96-8	Acenaphthylene	ND	0.10	0.039	ug/I		
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- <b>7</b> ′	Fluorene	ND	0.10	0.027	ug/l		
118-74-1	Hexachlorobenzene	ND	0.020	0.0099	ug/I		
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.029	ug/I		
91-20-3	Naphthalene	ND	0.10	0.019	ug/I		
85-01-8	Phenanthrene	ND	0.10	0.036	ug/I		
129-00-0	Pyrene	ND	0.10	0.022	ug/I		
CAS No.	-Surrogate Recoveries	Run# 1	Run#2	Limi	ts		
4165-60-0	Nitrobenzene-d5	89%		18-11	19%		
321-60-8	2-Fluorobiphenyl	81%		18-10	04%		
1718-51-0	Terphenyl-d14	44%		13-1(	09%		

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

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 heid 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: _/ _/ 20/_/D

<u>el</u>u M

(111)2

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.

and 1/2 1/21/10

Dean Tardiff Laboratory Manager

### ATTACHMENT H

UST 750E File Review and Analyses



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

Date: August 30, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: <b>750E</b>	Registration ID: None
Recommended Status of Site: Change to	Case Closed
Based on the file review, were there indicat	ions of a contaminant release? [ X ] Yes [ ] No
NJDEP Release No. or DICAR (If applicable):	<u>09-06-22-1402-58</u>
Did NJDEP approve No Further Action (NFA)	for this site? [ ] Yes [ X ] No [ ] Not Applicable
Tank Description: [X] Steel [] Fiberglass	Size: <u>1000 gals.</u> Contents: <u>No. 2 Fuel Oil</u>
[X] Residential [] Commercial/Indu	istrial
Tank Removed?[X]Yes [ ] No   If "yes,	" removal date: <u>6/19/2009</u>
Were closure soil samples taken? [X] Yes	[ ] No Analyses: <u>TPH</u>
Comparison criteria: <u>5,100 mg/kg TPH</u>	
Were closure soil sample results less than c	omparison criteria? [X]Yes []No

#### **Brief Narrative**

UST 750E was initially identified as anomaly P51_42 in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_42 location, a steel tank was located and removed on 6/19/09 and fuel oil contamination was observed. A hole was observed in the tank, and an oily sheen was observed on the groundwater in the tank excavation (groundwater was observed at 5.5 feet below ground surface). Initial soil samples (750-E-1 through 750-E-4) were collected from the excavation side walls on 6/25/09, and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). TPH in these initial soil samples ranged in concentration from not detected (ND) to 14,133 milligrams per kilogram (mg/kg), with the highest concentration encountered in the east side wall.

Petroleum contaminated soil was subsequently removed from the tank excavation, and initial post-excavation samples 750-E PX1 through PX3 were collected on 7/9/09 from the east and west side walls and excavation bottom. These results ranged from ND to 1232 mg/kg, with the slightly elevated TPH concentration located on the east side wall. Additional soil excavation was performed, and post-excavation samples 750-E PX4 through PX6 were collected from the east side wall on 7/14/09 and 7/16/09; TPH concentrations were all ND. In total, approximately 24 cubic yards of petroleum contaminated soil was removed from the tank excavation. 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 soil sampling or remedial action was warranted.

Monitor well 750MW06 was installed in the vicinity of UST 750E on 10/14/09 to assess the potential for contamination of groundwater. This well was sampled on 11/3/09 and 11/17/09, and the samples were analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), plus VOC and SVOC tentatively identified compounds (TICs). As noted in the analytical data reports (see the sheet preceding the Chain of Custody Form), well 750MW06 was initially designated as "750MW02A". No VOCs or SVOCs were detected in the groundwater



samples from well 750MW06. Therefore, there is no indication of a release to groundwater at UST 750E.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): <u>Change to "Case Closed", request NFA from NJDEP</u>

0 Signed:

Kent A. Friesen, Parsons



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🔬 🛹 US ARMY, SELFM-PW-EV ADAILY UST SUBSURFACE REMOVAL LOG (-23-09 750 E REG # TOA TOD DATE SSE <u>iChine Apple / Femer Arune 1' NJDEP CERT # 9474 CA</u> REMOVAL CONTRACTOR TVS Inc PWS-007 CLOSURE SUPERVISOR Fromk Areas NJDEP CERT # WEATHER Obly Com 1 - Room over backal ATT YES/ ACTIVITY ' NO THE TECHNICIAN (CLOSURE CERT ) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES RANK ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REQUIREMENTS (E G 29CFR) 405 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) 10903 Steel WST CA 475 09-06221402-58 # 2 hel pl. CASE# Site 750 E PHOTOS HAVE UST# -BLDG 5#, DATE, TIME NAME OF SSE AND DESCR WRITTEN ON BACK CA GROUNDWATER WAS ENCOUNTERED AT 4.4. FEET BG A SHEEN AWAS WAS NOT OBSERVED ON GW CA 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 <u>425</u> THE DPW SSE AUTHORIZED BACKFILLING THE EXCAVATION (STONE TO 1 ABOVE GROUNDWATER) AND A BACKFILL AUTH ILTR 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 45 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') "PHOTOGRAPH'S (UST' EXCAVATION SAMPLING POINTS) Von 14 - 12 · ~~~~~ CHECK ALL BOXES LEAVE NO BLANKS 11 210 I certify under penalty of lawythat tank decommissioning activities were performed in compliance with NJAC 7 14B-9 2(b)3 and 7 26 et seq I am aware that there significant penalties for submitting false, inaccurate or incomplete are information, including fires and/or imprisonment Subsurface Evaluator (print Name) (hout Broing Date 6-21-09 SIGNATURE  $\cap$ ca\ms\ust\removal\sitessls499 doc

ca (ms (usc (removar (sitessis4)

5) 6-22-0 CA. - 750 E - Clear orabonda bister - Can't Soil, moved 166 Part ጉ - tank take to 108 yand for a - hole in UST int. - Chuck Called B. To Visuely determine of Discharg Needs to whe Reported Stor NJDEP Bardon Visul observition (Siter) A discharge CA. in hos called " # 2 Feel oil 1000 gal Stree

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BLDG # 750 REG # UST E	
DATE <u>7-13-09</u> SSE <u>FRANK ACCORSI</u> REMOVAL CONTRACTOR TVS Inc PWS-007 CLOSURE SUPERVISOR <u>FRANK ACCORSI</u> WEATHER <u>PRT, CLOUD, 80's</u>	
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
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	7
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (609-292-7172)	Y
PFOTOS HAVE UST#, BLDG # DATE TIME NAME OF SSE AND DESCR WRITTEN ON BACK	Y
ROUNDWATER WAS ENCOUNTERED AT 5.5 FEET BG A SHEEN (WAS/WAS NOT) OBSERVED ON GW	Y
F 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	Ý
LL SAMPLING WAS BIASED TOWARD HIGHEST OVA/PID RECORDED SITES IAW 7 26E-3 6 et seg	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	V
ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	V
THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY (CIRCLE EACH)	
CRAP TICKET CSE PERMIT ACCIDENT REPORT HAZ WASTE MANIFEST <u>DAILY UST CLOSURE LOG</u> CALED SITE MAP (SAMPLING) SRF CLOSURE <u>CHAIN OF CUSTODY SOIL ANALYTICAL RESULTS</u> CLEAN TILL TICKETS(IN YDS ³ ) PHOTOGRAPHS (UST EXCAVATION SAMPLING POINTS)	Ŷ

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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	7-13-09
SIGNATURE _	Frank	Aunsi			\$, <b>4</b> ,30 <b>\$</b>

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j.
## US ARMY, FORT MONMOUTH DAILY UST CLOSURE LOG

BLDG. #: 750 DATE: 7-1-09 TO 7-13-09 TOA: TOD: TOD:	
CLOSURE TECH: <u>FRANK ACCORST</u> NJDEP CERT. #: <u>0010042</u> PERSONNEL: <u>ANTHONY FORGIONE, MARC TAYLOR</u>	۸.
ACTIVITY	YES/ NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Ý
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. (15) 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	NAY
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	Y
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	μA
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
6 DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	Y
6 DRUMS OF WASTE WERE TRANSPORTED TO THE GD CW, EV) HWSA 8,482 + 6.1132	۲
GALLONS OF WASTE WERE REMOVED (MANIFEST#:)	NA
24 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. APPLE BY	Ĭ
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 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,	<b>/</b> * •
·	

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	ACCORST	
SIGNATURE:	Frank ann	rei	DATE:	7-13-09

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## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



## ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

	iug. / 50 1910		IUDI LI	
Field Sample Location	Laboratory	Matrix	Date and Time	Date
	Sample ID#		of Collection	Received
750-E-1, North Wall	9026501	Soil	25-June-09 14:00	06/25/09
750-E-2, South Wall	9026502	Soil	25-June-09 14:20	06/25/09
750-E-3, East Wall	9026503	Soil	25-June-09 14:35	06/25/09
750-E-4, West Wall	9026504	Soil	25-June-09 14:55	06/25/09
750-D-PX4, North Wall	9026505	Soil	25-June-09 09:30	06/25/09
750-D-PX5, West Wall	9026506	Soil	25-June-09 11:00	06/25/09
750-D, Duplicate	9026507	Soil	25-June-09 14:55	06/25/09

## Bldg. 750 Motor Pool/UST E

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

Men 9/17/09 Jacqueline Hamer/Date QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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Conformance/Non-Conformance Summary	11-12
Total Petroleum Hydrocarbons Result Summary Calibration Summary Surrogate Results Summary MS/MSD Results Summary LCS Results Summary Raw Sample Data	13 14 15-24 25 26 27 28-45
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Laboratory Authentication Statement	47

# CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

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Bldg. 173, SELFM-PW-EV, Fort Mommouth, NJ 07703 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

Chain of Custody Record

Tel (732)532-4359.	Fax (732)532 tion #1 <b>3461</b>	-6263 EMai	l:jacquelin	e.hamer(	@us.arm	ljm.y		Chai	n of Cust	tody Record	
Customer: CHUCK APLEBY	Project No:	09-1236	06			Analysi	s Parameters		Comme	nts:	anterez.
<b>Phone #:</b> $\chi \mathcal{I} \mathcal{C} \mathcal{Z} \mathcal{P} \mathcal{Z}$	Location: <i>SL</i>	PC. 75D.	- MOTOR P	30 T P00	9			(1	6		1.0102000
()DERA ()OMA (%Other:	UST# B	C+ -=		2 T	017			1) 7	1/1		
Samplers Name / Company: FRANK ACC	Joks 1	TUS	Sample	7.0-	QS []] ]			41d	) a		
LIMS/Work Order # Sample Location	Date	Time	Type b	ottles	20			7(J	V Remarks	/ Preservation Method	
AD DUS UN 750-E-1, NREAT WALL	6-25-09	1400	5012	1	$\times$			55-6	2	108	1.
Ud 750-E-2, 500TH WALL		1420		~	X			5.5-6	0		-
US 750-E-3, CAST WALL		1435			×			5.5-6	2/0		1
14 750-E-4, WEST WALL		1455			X			556	210		-
15750-D-PX4, NORTH WALL		0860			X		·	775	~~		1
[10 750-D-PX5, WEST WALL		0011			X			2.7.5	0/		1
M 750-D. DuplichTE	A	1455	*		X			5.5-6 :	00		1
	-										
											1
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											1000 C
Relinquished by (signature): 6-25-09 Date/Time: 1600/	Received by	(signature): UVU	110	Relinquis	hed by (s	ignature):	Date/Time:	Receiv	ed by (signature)		
Relinquished by (signature): Date/Time:	Received by	(signature):	~	Relinquis	hed by (s	signature):	Date/Time:	Receiv	ed by (signature)		
Report Type: ()Full, ()Reduced, ()Standard, ()Scre Turnaround time: ()Standard 3 wks, ( <b>X</b> )Rush <b>3</b> ^{WMK,,_()}	een / non-certif )ASAP Verbal	ied, UEDD			*	TPH C	LING				
Drint legibly			Page	of	]				č	w cocXLS6/2/2009	1

000002

SAMPLE RECEIPT FORM						
Date Received: $1-25-09$	Work Order ID#: <u>402005</u>					
Site/Proj. Name: DIU TOM.M	Cooler Temp (°C):					
Received By: V. Verguna	Sign: pullipud					
Check the approp	riate 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 a	nd legibly? 🖉 yes 🗆 no					
4. Was the chain of custody signed in the approp	priate place? 🔤 yes 🗌 no					
5. Did the labels agree with the chain of custody	? . ∠ yes 🗆 no					
6. Were the correct containers/preservatives use	ed? yes □ no					
7. Was a sufficient amount of sample supplied?	ves □ 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 with	hin 15 minutes 🗆 yes 🗌 no 🖵 n/a					

Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
			· ·	`	
· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·
<u></u>					
		•	•		

Comments:_____

## **GPS COORDINATED**



#### U.S. ARMY - FT. MONMOUTH, NJ

### BUILDING 750 - UST 'E'

## 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)**

750E NORTH WALL 750E SOUTH WALL 750E EAST WALL 750E WEST WALL 537999.109 537982.744 537992.64 537988.742 617635.673 617644.25 617643.534 617634.674

#### U.S. ARMY - FT. MONMOUTH, NJ

### BUILDING 750 - UST 'D'

## 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)

750D PX1 SOUTH WALL 750D PX2 EAST WALL 750D PX3 BOTTOM 750D PX4 NORTH WALL 750D PX5 WEST WALL

538007.026	
538029.338	
538020.697	
538039.11	
538015.389	

617721.234 617728.036 617713.203 617705.835 617703.925

# FIELD DUPLICATE IDENTIFICATION



## **Field Duplicate Identification**

Lab ID: 90265

Site: Bldg. 750 Motor Pool

The Field Duplicate was performed on 750-E-4, West Wall (Lab ID 9026504).

## 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 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	<u></u>
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	<u>yes</u>
7.	Analysis holding time met (If not met, list number of days exceeded for each sample)	yes
Additi 	atory Manager: Municipal On Halling Dia Halling Dia Halling Dia Halling Date: 91	alblusez
	Contraction of	

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDC	G. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	25-Jun-09
Matrix:	Soil	Date Extracted:	26-Jun-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type: 👘	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	1-Jul-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB06260901	MB06260901	1.00	15.00	100.00	23	333	0.00	
LCS06260901	LCS06260901	1.00	15.00	100.00	23	333	843.67	
9026501	750-E-1 NORTH WALL	1.00	15.53	83.50	27	386	128.33	J
9026502	750-E-2 SOUTH WALL	1.00	15.76	83.20	27	381	0.00	
9026503	750-E-3 EAST WALL	1.00	15.60	83.70	27	383	13089.23	E -
9026503	750-E-3 EAST WALL	5.00	15.60	83.70	134	1915	14133.35	D
9026504	750-E-4 WEST WALL	1.00	15.83	82.70	27	382	3218.94	
9026505	750-D-PX4 NORTH WALL	1.00	15.73	81.10	27	392	0.00	
9026506	750-D-PX5 WEST WALL	1.00	15.67	83.20	27	384	227.02	J
9026507	750-D DUPLICATE	1.00	15.38	82.50	28	394	2824.77	

## 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.	_V_
2.	Table of Contents submitted.	$\underline{\mathcal{V}}$
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	<u> </u>
4.	Document paginated and legible.	<u></u>
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.	V
9.	Results submitted on a dry weight basis.	$\underline{\vee}$
10.	Method Detection Limits submitted.	
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	V

Laboratory Manager or Environmental Consultant's Signature		aurizi Que Hame
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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.

91603 acquèline Hamer A/QC Supervisor



DIRECTORATE OF PUBLIC WORKS PHONE (732) 532-4359 FAX (732) 532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING NJDEP CERTIFICATION #13461



## ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT 09-123690

Diug. 750/051 #1									
Field Sample Location	Laboratory	Matrix	Date and Time	Date					
	Sample ID#		of Collection	Received					
750 E PX 1 West Wall	9027401	Soil	09 July-09 14 20	07/09/09					
750-E PX 2 East Wall	9027402	Soil	09-July-09 15 00	07/09/09					
750-E PX 3, Bottom	9027403	Soil	09 July-09 14 40	07/09/09					
750-E, Piping	9027404	Soil	09-July-09 15 20	07/09/09					
750-E, Duplicate	9027405	Soil	09-July-09 15 00	07/09/09					

## Bldg. 750/UST # I

## ANALYSIS FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

Jacqueline Hamer/Date QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced except in full without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.



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Laboratory Deliverable Check List	36
Laboratory Authentication Statement	37



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# CHAIN OF CUSTODY



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Bldg 173, SELFM Tel (732)532 4359 NJDEP Certificat	PW EV, Fort Monmouth, Fax (732)532 6263 EMail Ion #13461	<b>nviro</b> NJ 07703 Jacqueline ha	<b>NM</b> mer@us	enta	al To	esting	; La Cha	abo	Oratory of Custody Record
Customer CHUCK APPLEBY	Project No 09-123	3690		A	nalysıs l	Parameters			Comments
Phone # X22692	Location BL DG. 750	2	*	5			F	LE.	
)DERA ( )OMA (汝)Other	UST # 750-E	<u> </u>		5			A.	E	
Samplers Name / Company FRINK A	CCORSI /TVS	Sample #		2			3	E.	
LIMS/Work Order # Sample Location	Date <u>Time</u>	Type bottles		-			d	Q	Remarks / Preservation Method
40274 01750-E.PX-1 WALL	7-9-09 1420	501L 1	X	X			20	75-8	<u> 10E</u>
12 750 E. PX-2 WALL	1500			<u>×</u>			350	75-8	
62,750-E, 1X 3, BOTTOM	1440	1		<u>×</u>			0	ا کرلا	
11 TOE PIPING	1520		×	<u>X</u>		<u> </u>		35-4	
J ISD-E, NUPLICATE	1500	<b>Ý</b> 1	X	<u>×</u>			2	7.58	
		<u> </u>							· · · · · · · · · · · · · · · · · · ·
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			+			<u>├</u>			
	<u> </u>		$\left\{ \begin{array}{c} \\ \end{array} \right\}$			<u>├ -                                   </u>			
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			<u>+</u> +						
Relinquished by (signature) Date/Time		Relin	quished l	by (signat	ure)	Date/Time	Recei	ved by	(signature)
Relinquished by (signature) Date/Time	Received by (signature)	Relin	quished	by (signat	ure)	Date/Time	Recei	ved by	(signature)
Report Type ()Full (y)Reduced ()Standard ()Scre	een / non certified ()EDD	<b>•</b> • • •	# C	HESI	GENT	BNA IF	ТРН	<u>ک</u> /,	000 Ppm, on

<u>د</u> ر .

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SAMPLE RECEI	PT FORM
Date Received 1-9-09	Work Order ID#
Site/Proj Name	Cooler Temp (°C)
Received By (Print name)	Sign f. Mille
Check the approp	priate/box
1 Did the samples come in a cooler?	no 🗆 n/a
2 Were samples rec'd in good condition?	, ∠Tyes 🗋 no
3 Was the chain of custody filled out correctly a	and legibly? Jaryes 🗆 no
4 Was the chain of custody signed in the approx	priate place? 🖉 yes 🗋 no
5 Did the labels agree with the chain of custod	y [⊋] y <del>os</del> no
6 Were the correct containers/preservatives us	sed?
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 wi	thin 15 minutes 🛛 yes 🗆 no 🖉 n/a

## Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pН	Preservative
			<u>.</u>		

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## Comments _____

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## GPS COORDINATED



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## US ARMY - FT MONMOUTH, NJ

## BUILDING 750 - UST E

## 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)

750E PX1 WEST WALL UST	537982 429	617626 411
750E PX2 EAST WALL UST	537994 15	617647 161
750E PX3 BOTTOM	537988 101	617634 129
750E PX4 EAST WALL	537997 611	617650 231
750E PX5 EAST WALL N END	538002 189	617650 03
750E PX6 EAST WALL SOUTH END	537996 415	617654 837
750E PIPING	537982 76	617642 794



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# FIELD DUPLICATE IDENTIFICATION





## **Field Duplicate Identification**

Lab ID 90274

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Site Bldg 750 UST # 750-E 1

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The Field Duplicate was performed on 750-E, PX-2, East Wall (Lab ID 9027402)



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## METHOD SUMMARY



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## 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 nnsed 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 Chlonde 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 Chlonde 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



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## CONFORMANCE/ NON-CONFORMANCE SUMMARY





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## **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	<u>_NO</u>
3	Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	425
4	Duplicate Results Summary Meet Criteria	<u>(ps</u>
5	IR Spectra submitted for standards blanks and samples	<u>14</u>
6	Chromatograms submitted for standards blanks and samples if GC fingerprinting was conducted	400
7	Analysis holding time met (If not met list number of days exceeded for each sample)	yes_
Additu G A Dan Labora	onal comments Stimple 9027402 7 1000 pom No alyous redormed, It's duplicate result who labled homogenerity atory Manager Augus On themen Date 9/0/04	<u>additional</u> <u>S 172ppm</u>

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# TOTAL PETROLEUM HYDROCARBONS



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

Client	US Army	Project #	09-123690
	DPW SELFM-PW-EV	Location BLDC	750 MOTOR POOL
	Bldg 173	ECP	
	Ft Monmouth NJ 07703	Work Order	
Analysis	OQA-QAM-025	Date Received	9 Jul-09
Matrix	Soil	Date Extracted	13 Jul-09
Inst ID	GC TPHC INST #1	Extraction Method	Shake
Column Type	RTX 5 0 32mm ID 30 m	Analysis Complete	14-Jul 09
Injection Volume	1 uL	Analyst	Robert Szot
Blank Conc	0 00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB07130901	MB07130901	1 00	15 00	100 00	23	333	0 00	
LCS07130901	LCS07130901	1 00	15 00	100 00	23	333	886 83	
9027401	750-E PX-1 WEST WALL	1 00	15 55	77 60	29	414	0 00	
9027402	750-E PX 2 EAST WALL	1 00	15 53	80 80	28	398	1232 09	
9027403	750-E PX-3 BOTTOM	1 00	15 42	76 40	30	424	0 00	
9027404	750-E PIPING	1 00	15 36	85 60	27	380	0 00	
9027405	750-E DUPLICATE	1 00	15 41	81 30	28	399	172 37	

## 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

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#### 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	$\underline{}$
5	Chain of Custody submitted	
6	Samples submitted to lab within 48 hours of sample collection	
7	Methodology Summary submitted	$\underline{L}$
8	Laboratory Chronicle and Holding Time Check submitted	$\underline{}$
9	Results submitted on a dry weight basis	
10	Method Detection Limits submitted	$\checkmark$
11	Lab certified by NJDEP for parameters of appropnate category of parameters or a member of the USEPA CLP	V

Laboratory Manager or Environmental Consultant s Signature		usera Quetterno
Date 4 122 109	ſ	1

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

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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

acqueline Hamer QA/QC Supervisor
## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

### Bldg. 750/UST # E

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
750-E-PX4, West Wall	9028301	Soil	14-July-09 15:00	07/14/09

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

m 9/17/08 ueline Hamer/Date

QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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# CHAIN OF CUSTODY

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	Tommouth F		onmental	lesting La	boratory
Tel (732)532-435	M-F W-EV, Fort Monmouth 59 Fax (732)532-6263 EMa <b>:ation #13461</b>	, NJ 07703 ll:jacqueline.l	aamer@us.army.mil	Chair	of Custody Record
Customer: CHUCK APLESY	Project No: 0 9- 12	3690	Analysi	is Parameters	Comments:
Phone #: <i>X えもユイ</i> ヨ 226 9 2 ( )DERA ( )OMA ( XOther:	Location: BLOG. 7	250 02	<i></i>	(61)	
Samplers Name / Company: FRMUK A	100 KS1 17 VS	Samnle #	nos Ha	10 10 10 10 10	111
LIMS/Work Order # Sample Location	Date Time	Tvpe bottl	<u>%</u>	<u>i)</u> 	Kemarks / Preservation Method
AUX3 UN 75DE, PX9. WEST WAL	11 7-14-09 1500	2015 1	XX	0 6	
Palinmichal I (zi)	. (				
Trank and Justice 7-140 1545	Received by (signature);	192 Reli	inquished by (signature):	Date/Time: Received	by (signature):
Relinquished by (signature): Date/Time:	Received by (signature):	Reli	inquished by (signature):	Date/Time: Received	by (signature):
Report Type: UFull, UReduced, (Standard, USco	reen / non-certified, ()EDD		Comments:		
$\int \frac{1}{1000} \frac{1}{1000} \frac{1}{1000} \frac{1}{10000} \frac{1}{10000} \frac{1}{100000} \frac{1}{1000000} \frac{1}{10000000000000000000000000000000000$	OASAP Verbal Hrs.				
ر ، ته ۳ print legibly	_	Page / c	of _/		new coc. 1.XLS7/14/2009

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new coc._1.XLS7/14/2009

### SAMPLE RECEIPT FORM

Date Received: <u>7-14-09</u> Work Orde	er ID#: <u>40 a.83</u>
Site/Proj. Name: BIUY 150/M. 100 Cooler Ten	np (°C): <u>4,0</u>
Received By: J. UNUM Sign: p	Mullin
(Print name) /	Λ
Спеск тле арргоргате вох	
1. Did the samples come in a cooler?	yes y 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?	Ves 🗆 no
5. Did the labels agree with the chain of custody?	∠yes 🗆 no
6. Were the correct containers/preservatives used?	Źyes□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  $\Box$  yes  $\Box$  no  $\Box$  n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pН	Preservative
			····		
			· u		
			···		

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### Comments:_____

# **GPS COORDINATED**

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### U.S. ARMY - FT. MONMOUTH, NJ

### BUILDING 750 - UST 'E'

### 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)** 617635.673 617644.25 617643.534

750E NORTH WALL 750E SOUTH WALL 750E EAST WALL 750E WEST WALL

537999.109 537982.744 537992.64 537988.742

617634.674

# METHOD SUMMARY

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## 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.

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# CONFORMANCE/ NON-CONFORMANCE SUMMARY

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### **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

Indicate

Yes, No, N/A <u>Yes</u> 1. Method Detection Limits Provided NO 2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank Matrix Spike Results Summary Meet Criteria 3. 25 (If not met, list the sample and corresponding recovery which falls outside the acceptable range) _____ 4. Duplicate Results Summary Meet Criteria pes 5. IR Spectra submitted for standards, blanks and samples 6. Chromatograms submitted for standards, blanks and samples yes yes if GC fingerprinting was conducted 7. Analysis holding time met (If not met, list number of days exceeded for each sample)

Additional comments:

Laboratory Manager: Journey, Que Helmon Date: 9/17/09

000009

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDC	G. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	14-Jul-09
Matrix:	Soil	Date Extracted:	17-Jul-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	20-Jul-09
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)	Qualifiers
MB07170901	MB07170901	1.00	15.00	100.00	23	333	0.00	
LCS07170901	LCS07170901	1.00	15.00	100.00	23	333	822.85	
9028301	750-E PX4 WEST WALL	1.00	15.43	85.5	27	379	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

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2.	Table of Contents submitted.	<u> </u>
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	V.
4.	Document paginated and legible.	$\underline{\mathcal{V}}$
5.	Chain of Custody submitted.	<u> </u>
6.	Samples submitted to lab within 48 hours of sample collection.	
7.	Methodology Summary submitted.	<u> </u>
8.	Laboratory Chronicle and Holding Time Check submitted.	<u> </u>
9.	Results submitted on a dry weight basis.	
10.	Method Detection Limits submitted.	$\underline{v}$
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	$\checkmark$

Laboratory Manager or Environmental Consultant's Signature Date:/ 」/	Janesendunterner
Laboratory Cortification # 12461	$\vee$

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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.

Ine Homon 9/17/01 acqueline Hamer QA/QC Supervisor

## **PRT MONMOUTH ENVIRONMENTAL**

**LABORATORY** 

DIRECTORATE OF PUBLIC WORKS PHONE (732) 532-4359 FAX (732) 532-6263 WET CHEM - METALS - ORGANICS - FIELD SAMPLING NJDEP CERTIFICATION #13461



### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT 09-123690

### **Bldg. 750/UST # E**

ſ	Field Sample Location	Laboratory	Matrix	Date and Time	Date
ģ	-	Sample ID#		of Collection	Received
I	750 E PX5 East Wall North End	9030001	Soil 🛹	16 July-09 15 05	07/16/09
ł	750-E, PX6, East Wall South End	9030002	Soil	16-July-09 15 15	07/16/09
[	750-E Duplicate	9030003	Soil	16-July-09 15 15	07/16/09

ANALYSIS FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

17/09 acqueline Hamer/Date A/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.



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Laboratory Deliverable Check List	35
Laboratory Authentication Statement	36

* *



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# CHAIN OF CUSTODY

Customer CHUC	K APP	NEBY		Project No	09-12	369	0			Anal	ysis P	arame	ters			Comments
Phone # $\chi 26$	<i>292</i> (x)Other	····		Location <b>B</b>	606 750	o, us	TE		501					(~~)	(LL)	
Samplers Name / Co	mpany y	RANK	ACCO,	RSI /	TVS	Sample	#	T PH	205 201					11 (1	LPTH	
LIMS/Work Order #	Sar 750-F	nple Locatio	n WALL	Date 7-/6-09	Time	Type So //-	bottles		~~ X					0	9	Remarks / Preservation Method
12	750-E	PX6. SOUTH	WALL		1515		1	×	×					0	6.5-7	<u>/ U</u>
<u> </u>	750-E,	pupile	fie_	7	15\$5	V	1	x	*					0	6.5-7	
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Relinguished by (signati	ure)	Date/Tu	ne	Received by	(signature)		Relin	guished	by (sig	nature)		Date/1	lime	Recei	ved by	(signature)

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### SAMPLE RECEIPT FORM

Date Received 7-14-06/	Work Order ID# <u> </u>
Site/Proj Name Black 750-E	Cooler Temp (°C) $3.0^{\circ}$
Received By J. Climburt	Sign Jelling
(Print name) /	
<u>Check the approp</u>	<u>riate box</u>
1 Did the samples come in a cooler?	_ □ yeş [] no □ n/a
2 Were samples rec'd in good condition?	yes 🗆 no
3 Was the chain of custody filled out correctly ar	nd legibly? 🖊 year 🗆 no
4 Was the chain of custody signed in the approp	riate place? 🖉 yes 🗍 no
5 Did the labels agree with the chain of custody	
6 Were the correct containers/preservatives use	d? 🖉 yes 🛛 no
7 Was a sufficient amount of sample supplied?	Q 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 with	nın 15 minutes 🛛 yes 🗍 no 🗗 n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
			<u> </u>		
					·
			·····		
			· · · · · · · · · · · · · · · ·	<u>  </u>	<u> </u>
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### Comments _____

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# GPS COORDINATED

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### US ARMY - FT MONMOUTH, NJ

### BUILDING 750 - UST 'E'

### 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)
750E PX1 WEST WALL UST	537982 429	617626 411
750E PX2 EAST WALL UST	537994 15	617647 161
750E PX3 BOTTOM	537988 101	617634 129
750E PX4 EAST WALL	537997 611	617650 231
750E PX5 EAST WALL N END	538002 189	617650 03
750E PX6 EAST WALL SOUTH END	537996 415	617654 837
750E PIPING	537982 76	617642 794



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# FIELD DUPLICATE IDENTIFICATION



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## **Field Duplicate Identification**

Lab ID 90300

Site Bldg 750 UST # 750-E ۱

The Field Duplicate was performed on 750-E-PX6, East Wall South End (Lab ID 9030002)



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# METHOD SUMMARY



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## 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-mi 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



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# CONFORMANCE/ NON-CONFORMANCE SUMMARY

### **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

	Indicate Yes No N/A
Method Detection Limits Provided	yes
Method Blank Contamination – If yes list the sample and the corresponding concentrations in each blank	<u>_NO</u>
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	yes
Duplicate Results Summary Meet Criteria	yes
IR Spectra submitted for standards blanks and samples	
Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	yez_
Analysis holding time met (If not met list number of days exceeded for each sample)	-yes

Additional comments

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Laboratory Manager Joury Luc Herming Date 9/17/09



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# TOTAL PETROLEUM HYDROCARBONS

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

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Client	US Army		Project #	09-123690
	DPW SELFM-PW-EV	•	Location BLDG	750 MOTOR POOL
	Bldg 173		ECP	
	Ft Monmouth NJ 07703		Work Order	
Analysis	OQA QAM-025		Date Received	16 Jul-09
Matrix	Soil		Date Extracted	17-Jul-09
Inst ID	GC TPHC INST #1		Extraction Method	Shake
Column Type	RTX-5 0 32mm ID 30 m		Analysis Complete	20 Jul-09
Injection Volume	1 uL		Analyst	Robert Szot
Blank Conc	0 00		-	

....

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	<b>TPHC Result</b>	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB07170901	MB07170901	1 00	15 00	100 00	23	333	0 00	
LCS07170901	LCS07170901	1 00	15 00	100 00	23	333	822 85	
9030001	750-E PX5 EAST WALL NORTH END	1 00	16 12	88 0	25	352	0 00	
9030002	750-E PX6 EAST WALL SOUTH END	1 00	16 04	87 8	25	355	0 00	
9030003	750-E DUPLICATE	1 00	15 84	88 0	25	359	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

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### **,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  $\sqrt{2}$  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	<u> </u>
4	Document paginated and legible	_/
5	Chain of Custody submitted	$\sim$
6	Samples submitted to lab within 48 hours of sample collection	
7	Methodology Summary submitted	<u> </u>
8	Laboratory Chronicle and Holding Time Check submitted	
9	Results submitted on a dry weight basis	<u> </u>
10	Method Detection Limits submitted	<u>_k</u>
11	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	<u>_</u>

Laboratory Manager or Environmental Consultant's Signature	Janua Que Karnen
Date <u>911109</u>	1 6
	U °

Laboratory Certification # 13461

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



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### 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

ouna 91,17 03 acqueline Hamer QA/QC Supervisor

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## FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

DIRECTORATE OF PUBLIC WORKS PHONE: (732)532-6224 FAX: (732)532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING



ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

PROJECT: UST/ Monitoring Program

### SAMPLE LOCATION AND IDENTIFICATION

<u>SITE</u>: 750

LABORATORY ID #	MONITOR WELL#	NJDEP WELL ID#	SAMPLE DATE
9043404	750MW01**	29-28992	11/03/09
9043405	750MW02	29-28993	11/03/09
9043406	750MW03	29-28994	11/03/09
9043407	750MW04	29-28995	11/03/09
9043408	750MW01A***	·	11/03/09
9043409	750MW02A*		11/03/09
9043410	750MW03A*		11/03/09
9043411	750MW04A*		11/03/09

*New Wells Round I

**Duplicate Sample for VOA and TAL Metals is 9043404.

*** Duplicate Sample for BN is 9043408.

NJDEP Laboratory Certification #13461

20/10 Dean Tardiff/Date:

Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

Seantural 3/15/10

Dean Tardiff

SAMPLING
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	ort Monmou 32-6263 EN <b>31</b>		<b>4</b> 日 の	DR WELL.	/TVS	, Time	20,'6 6	9 12:20	6	9 15:30	3 1500	9 15:70	9 15:2	7 12:30	3 12:50	3 17.00	9 13:20	12:30	 	by (signature)	by (signature)	tified, ()EDI balHrs.	
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	Bidg. 173, SELFN Tel (732)532-435 NJDEP Certific:	ron-	6223	1	WACTER	imple Location	TRIPBLANK	TECD B/ANK	DUP	10#mm	MW #02	MW #03	MW #04	NW#4014	WW#02A	MW #03 A	MW#041	MWHOHD		Date/Time:	Date/Time:	, WStandard, ()Sc ks, ()Rush Wk.,_(	
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new coc._1.XLS8/18/2009

## SAMPLE RECEIPT FORM

Date Received: 11-4-09	Work Order ID#: <u>404-34</u>
Site/Proj. Name:	Cooler Temp (°C): <u>3.0</u>
Received By: J. URiguit	Sign: plugeline
(Print name)	
<u>Check the appropriate the appropriate the appropriate the second /u>	<u>riate box</u>
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 ar	nd legibly? 🔄 yes 🗆 no
4. Was the chain of custody signed in the approp	riate place? 🖉 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes □ no
6. Were the correct containers/preservatives used	d? 🖉 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 with	iin 15 minutes □ yes□ no ☑ n/a

## Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
1049411-11	NHA	HCL			
· · · · · · · · · · · · · · · · · · ·	7				
			•		
					·
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Comments:_____

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	Fort M		uth E	'nvi	ronm	ental T	esting	Laboratory	7
	Bldg. 173, SELFM	-PW-EV, Fort Fax (732)532- tion #13461	Monmouth, -6263 EMail	NJ 0770 Ljacqueli	3 ae.hamer@u	s.army.mil		, Chain of Custod	y Record
Customer: Jacquel	ine Hamer	Project No:				Analvsis	Parameters	Comments:	Γ
Phone #: (732)532-435	6	Location: 75	0						
()DERA ()OMA (	)Other:								
Samplers Name / Con	ıpany:			Sample	<b>;</b> ]+				
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles <b>BX</b>			Remarks / Prese	rrvation Method
9043402	Field Blank	11/3/2009	12:20	AQ	۲ ۲				
9043408	750MW01A	11/3/2009	12:30	AQ	1 X				
9043408DUP.	750MW01A	11/3/2009	12:30	AQ	۲ ۲				
9043409	750MW02A	11/3/2009	12:50	AQ	1 X				
9043410	750MW03A	11/3/2009	13:00	AQ	1 X				e
9043411	750MW04A	11/3/2009	13:20	AQ	1 X				
					-				
			/	0					
Relinquished by (signatur	:e): Date/Time: 11-4/00/1410	Received by	sjensture): ZM/w	J)	Relinquished	by (signature):	Date/Time:	Received by (signature):	-
Relinquished by (signatu	:e): Date/Time:	Received by (	signature):		Relinquished	by (signature):	Date/Time:	Received by (signature):	
Report Type: UFull, Ul	Reduced, (X)Standard, ()Scr	een / non-certifi	led, ()EDD		Comn	tents: DK9/2009	-389 (PO C	99-20650)	
Turnaround time: (X)Stan	dard 3 wks, ()Rush Wk,_(	)ASAP Verbal	Hrs.						
print legibly	T			age	of /		No se	.A / new coc. 1.	(LS11/4/2009

## US ARMY FORT MONMOUTH MONITOR WELL SAMPLING

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LOCATION: 750A MW #:02A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09 WEATHER: Sunny and cool. TIDE: N/A	OM-VINNELL S	Sampling C Accordance N SAM ERVICES	Conducted in with TVS SOP -0205
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2 Purge Method: Peristaltic Pump/O Purge Rate: Not to Exceed Well D	" well or 0.65 for ther (Specify) traw Down of 0.5	7 4" well) x 3 = 5' 25/109	TDOW-21.50 8.81 ft 21.50 ft 12.69 ft 0.00 ppm 25 Gal. 24.74 Gal/Min.
Purge Data: Start Time of Purging: 10:52 End Time of Purging: 12:41 pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	Initial Value 5.05 su 16.79 (°C) 6156 us/cm 156 mv 1.98 mg/L 12.20 ft 12.29 ft 12:50 12:56	<b>Pre-Sample</b> 5.12 su 17.32 ( °C) 7216 us/cm 139 mv 2.33 mg/L	<b>Post-Sample</b> 5.16 su 17.31 ( °C) 7079 us/cm 142 mv 2.31 mg/L
			· · · · · · · · · · · · · · · · · · ·

# CONFORMANCE/ NON-CONFORMANCE SUMMARY



## GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
·1.	Chromatograms labe (Field samples a	led/Compounds identified nd method blanks)	<u>Yes</u>
2.	Retention times for c	hromatograms provided	Yes
3.	GC/MS Tune Specif	ications	
	a. b.	BFB Meet Criteria DFTPP Meet Criteria	<u>Yes</u> <u>NA</u>
4.	GC/MS Tuning Freq series and 12 hours f	uency – Performed every 24 hours for 600 or 8000 series	Yes
5.	GC/MS Calibration - analysis and continui sample analysis for 6	- Initial Calibration performed before sample ing calibration performed within 24 hours of 00 series and 12 hours for 8000 series	Yes
6.	GC/MS Calibration	equirements	
	a. b.	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	<u>Yes</u> Yes
7.	Blank Contamination	- If yes, List compounds and concentrations in each blank:	No
	a.	VOA Fraction	
	b.	B/N Fraction NA	
	с.	Acid Fraction <u>NA</u>	
8.	Surrogate Recoveries	Meet Criteria	Yes
	If not met, list th outside the accep	ose compounds and their recoveries, which fall otable range:	
	а	VOA Fraction	
	ц. b.	B/N Fraction NA	
	c.	Acid Fraction <u>NA</u>	
	If not met, were as "estimated"?	the calculations checked and the results qualified	
0	Matrix Snike/Matrix	Snike Dunlicate Recoveries Meet Criteria	No
	(If not met. list those	compounds and their recoveries, which fall	
	outside the acceptable	e range).	
	a.	VOA Fraction: <u>Several compounds have high recoveries</u> , see summary form	
	b.	B/N Fraction <u>NA</u>	

c. Acid Fraction <u>NA</u>

			Indicate Yes, No, N/A
10.	Internal Standard (If not met, list th	Area/Retention Time Shift Meet Criteria ose compounds, which fall outside the acceptable range)	Yes
	a.	VOA Fraction	
	b.	B/N Fraction <u>NA</u>	
	с.	Acid Fraction <u>NA</u>	
11.	Extraction Holdir	ng Time Met	<u>NA</u>
	If not met, list the	number of days exceeded for each sample:	
12.	Analysis Holding	Time Met	<u>Yes</u>
	If not met, list the	number of days exceeded for each sample:	
Ađđ	itional Comments:		
•			
Lab	pratory Manager: _	Scantenary Date: 1/20/10	

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



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## CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Fort Monmouth Environmental Testing Lab.

Job No JA33317

**Report Date** 

12/6/2009 6:26:47 PM

Site: 750

On 11/18/2009, 5 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.5 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA33317 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:	OP41049		

* All samples were extracted within the recommended method holding time.

* All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JA33267-2MS, JA33267-2MSD were used as the QC samples indicated.

- Blank Spike Recovery(s) for Atrazine are outside control limits.
- Matrix Spike Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Sample(s) OP41049-MSD have surrogates outside control limits. Probable cause due to matrix interference.

#### Extractables by GCMS By Method SW846 8270C BY SIM

Γ	Matrix AQ	Batch ID: OP41049	A
101	All samples were extracted within	the recommended method holding ti	me.

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA33267-2MS were used as the QC samples indicated.

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

Sunday, December 06, 2009



## METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Lab ID:	90434	Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2	ICP Interference Check Sample Results Meet Criteria	Yes
3	Serial Dilutions Meet Criteria	Yes
4	Laboratory Control Samples Meet Criteria	Yes
5	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank	No
6	Spike Sample Recoveries Meet Criteria 9043103: Al = 55.9%	Yes
7	Duplicates Meet Criteria	Yes
8	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes
	Additional Comments:	
	Laboratory Manager: Dean Tandy Date: /	120/10

METHOD SUMMARY



## Method Summary

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

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

## EPA Method 3510/8270 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.

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

#### Milestone MLS 1200 MEGA

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

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

#### Perkin Elmer OPTIMA 3000 DV

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

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

#### Varian SpectrAA-640, VGA-77

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

# LABORATORY CHRONICLE



## **Laboratory Chronicle**

Lab ID: 90447

Site: 750 LTM

	Date	Hold Time
Date Sampled	11/03/09	NA
Receipt/Refrigeration	11/03/09	NA

## Analyses

Volatiles	11/14,15/09	14 Days
Base Neutral	11/11,17/09	7 Days
TAL Metals	11/10/09	6 Months
Arsenic	11/17/09	6 Months
Mercury	11/13/09	28 Days
Thallium	11/16/09	6 Months
	Volatiles Base Neutral TAL Metals Arsenic Mercury Thallium	Volatiles 11/14,15/09   Base Neutral 11/11,17/09   TAL Metals 11/10/09   Arsenic 11/17/09   Mercury 11/13/09   Thallium 11/16/09

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# 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	VA4841.D		Sample Name	MB11040902
Operator	ROBERTS		Field ID	METHOD 624 11/04/09
Date Acquired	4 Nov 2009	7:26 pm	Sample Multiplier	1

CAS#	Compound Name	RТ	Resnanse	Result		Regulatory Level (ug/l)*	MDL	$\mathbf{RL}$	Oualifiers
107028	Acrolein			pot	detected	5	2.09 ug	/L 5.00 ug/L	
107131	Acrylonitrile	1		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	1		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 1.00 ug/L	
74-87-3	Chloromethane	1		not	detected	nle	0.10 ug	/L 1.00 ug/L	
75-01-4	Vinyl Chloride	1		not	detected	1	0.22 ug	/L 1.00 ug/L	
74-83-9	Bromomethane	1		not	detected	10	0.25 ug	/L 1.00 ug/L	
75-00-3	Chloroethane			not	detected	пle	0,22 ug	/L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug	/L 1.00 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	Vinvl Acetate			not	detected	7000 ·	0.20 ug	/L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug	/L 1.00 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	1		not	detected	1	0.16 ug	/L 0.50 ug/L	
107-06-2	1 2-Dichioroethane			not	detected	2	0.19 ug	/L 0.50 ug/L	
79-01-6	Trichloroethene			not	detected	I	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	I	0.14 ug	/L 0.50 ug/L	
110-75-8	2-Chloroethyl vinvl ether .			not	detected	nle	0,25 ug	/L 1.00 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 1,00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug	/L 0.50 ug/L	
10061-02-6	trans-1 3-Dichloronropene			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	Ethylhenzene			not	detected	700	0.16 ug	/L 0.50 ug/L	
630-20-6	1 1 1 2-tetrachloroethane			not	detected	j	0.15 ug	/L 0.50 ug/L	
1330-20-7	m+p-Xvlenes			not	detected	nle	0.27 ug	/L 1.00 ug/L	
1330-20-7	o-Xvlene			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 1.00 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-Dichlorohenzene			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



VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

		TENTATI	VELY IDEN	TIFIED COMP	POUND	S <u>.</u>	ND44040	
Lab Name:	FMETL			Contra	ct:		WB11040	902
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS	No.:	S	DG No.: 90434	1 .
Matrix: (soil/v	vater)	WATER	-	¢	Lab Sa	mple ID:	MB11040902	
Sample wt/vo	ol:	5.0	(g/ml) ML		Lab File	e ID:	VA4841.D	_
Level: (low/n	ned)	LOW	-		Date R	eceived:	11/3/2009	
% Moisture: r	not dec.				Date A	nalyzed:	11/4/2009	
GC Column:	RTX-V	<u>M</u> ID: <u>0.2</u>	2 <u>5</u> (mm)		Dilution	Factor:	1.0 ·	
Soil Extract V	olume:		(uL)		Soil Ali	quot Volu	Ime:	_ (uL)
Number TICs	found:	0	_	CONCENTF (ug/L or ug/l	RATION Kg)	UNITS: UG/L		
CAS NO.		COMPOU	ND NAME		R	r es	ST. CONC.	Q

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

Regulatory Level (ug/l)*

Data File Operator Date Acquired	VA4843.D ROBERTS 4 Nov 2009	8:28 pm	Sample Name Field ID Sample Multiplier	9043401 750 TRIP BLANK 1	

CAS#	Compound Name	вт	Resnonse	Result	ł	Regulatory Level (ug/l)*	MDL	RL	Oualifiers
107028	Acrolein			not	detected	5	2.09 ug/	L 5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.64 ug/	( 5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	001	1.89 ug/	L 5.00 ug/L	
1634044	Methyl-tert-Butyl ether		<u></u>	not	detected	70	0.18 ug/	L 0.50 ug/L	
108203	Di-isopronyl ether			not	detected	20000	0.12 ug/	L 0,50 ug/L	,
75718	Dichlorodifluoromethane	1		not	detected	1000	0,22 ug/	L 1.00 ug/L	
74-87-3	Chloromethane		· · · · · · · · · · · · · · · · · · ·	not	detected	nle	0,10 ug/	L 1.00 ug/L	
75-01-4	Vinvi Chloride			not	detected	1	0.22 ug/	L 1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25 ug/	L 1.00 ug/L	
75-00-3	Chloroethane	1		not	detected	ole	0.22 ug/	L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/	L 1,00 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	1		not	detected	. 700	0.18 ug/	L 0.50 ug/L	
75-09-2	Methylene Chloride	1		not	detected	3	0.16 ug/	L 0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene	1	-	not	detected	100	0.20 ug/	L 0.50 ug/L	
75-35-3	1.1-Dichloroethane	1		not	detected	50	0,19 ug/	L 0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.20 ug/	L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/	L 1.00 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	1		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 1.00 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 1.00 ug/L	<b></b>
108-88-3	Toluene			not	detected	1000	0.15 ug/	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 ug/	0.50 ug/L	
79-00-5	1.1.2-Trichloroethane			not	detected	3	0.14 ug/	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	1	0.18 ug/	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14 ug/	0.50_ug/L	
108-90-7	Chlorobenzene			not	detected	50	0.15 ug/	. 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		0.15 ug/	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27 ug/l	_ <u>1.00 ug/L</u>	
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/J	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.12 ug/	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/	<u>0.50 ug/L</u>	
95-50-1	1,2-Dichlorobenzene			not	detected	600	0.12 ug/l	<u>  0.50 ug/L</u>	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

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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		TENTATI	VELY IDEN	TIFIED COMPOU	NDS		
Lab Name:	FMETL			Contract:		750 TRIP BL	ANK
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS No.		SDG No.: 90434	
Matrix: (soil/v	vater)	WATER	_	Lab	Sample II	D: 9043401	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab	File ID:	VA4843.D	_
Level: (low/n	ned)	LOW	_	Date	e Receive	d: <u>11/3/2009</u>	-
% Moisture: r	not dec.		<u></u>	Date	e Analyzeo	d: <u>11/4/2009</u>	_
GC Column:	RTX-V	<u>/M_</u> ID; <u>0.2</u>	25 (mm)	Dilu	tion Facto	r: <u>1.0</u>	_
Soil Extract Volume:			(uL)	Soil	Aliquot Vo	olume:	. (uL)
				CONCENTRATI		S:	
Number TICs	s found:	0	<u> </u>	(ug/L or ug/Kg)	UG/L		
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q

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3/90 000027

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

Data File	VA4844.D	Sample Name	9043402
Operator	ROBERTS	Field ID	750 FIELD BLANK
Date Acquired	4 Nov 2009 8:59 pm	Sample Multiplier	1

<u> </u>		5.00	<b>D</b>	Decult		Regulatory Level (ug/l)*	MDI		рĭ	Qualifiers
CAS#	Compound Name	<u>R.1.</u>	Response	Result	datastad		2 00	11 <i>m</i> /T	5.00 110/1	Quanners
107028	Acrolein			not	detected		1.64	<u>цель</u> ма/Г	5.00 ug/L	
107131	Acrylonitrile			not	detected	- 2	1.04	ug/L ug/T	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100	0.19		0.50 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.10	ид/С	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12	ug/L v.~/T	0.00 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22	<u>ug/L</u>	1.00 ug/L	····
74-87-3	Chloromethane			not	detected	nle	0.10	ug/L /r	1.00 ug/L	· · · · - · - · - · - · -
75-01-4	Vinyl Chloride			not	detected		0.22	ug/L	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25	ид/ш	1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22	ug/L	1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.10	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	0,10	ug/L væ/T	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	700	0,16	ug/L ua/T	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	3	0.10	ugyr.	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20	ugyr.	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	0.50 ug/L	1
78-93-3	2-Butanone			not	detected	300	0.10	ug/L	1.00 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	defected		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 Tetrachioride			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	I	0,18	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane	-		not	detected		0.16	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle.	0.25	ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0,16	ug/L	0.50 ug/L	···
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0,26	ug/L	<u>1.00 ug/L</u>	
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		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	nie	0.27	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	nie	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	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.1 <u>2</u>	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	ļ
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

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					NDO		
Lab Name:	FMETL			Contract:			DEANN
Lab Code:	13461	Ca	se No.: MW	SAS No.	:	SDG No.: 90	)434
Matrix: (soil/v	vater)	WATER	-	Lab	Sample II	D: 9043402	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4844.D	
Level: (low/n	ned)	LOW	_	Dat	e Receive	d: <u>11/3/2009</u>	
% Moisture: r	not dec.			Dat	e Analyzeo	d: <u>11/4/2009</u>	
GC Column:	RTX-V	/ <u>M_</u> ID: <u>0.2</u>	25(mm)	Dilu	ition Facto	r: <u>1.0</u>	
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	(uL)
Number TICs	s found:	0	_	CONCENTRAT (ug/L or ug/Kg)	ION UNIT	S:	
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q



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

Data File	VA4851.D	Sample Name	9043409
Operator	ROBERTS	Field ID	750 MW#02A
Date Acquired	5 Nov 2009 12:37 am	Sample Multiplier	1

C 1 84	Compound Name	ъœ	<b>D</b>	D14		Regulatory Level (ug/i)*		זמ	Onelificur
L 107039		<u> </u>	Response	Result				F 00	Quanners
107020	Acrolein	· ·		not	delected	3	2.09 ug/L	5.00 112/1	· ·
75650	Acrylonitrile	,	· · ·	not	detected	2	1.04 ug/L	5.00 ug/L	
1624044	tert-Butyl alconol		· · · · · · · · · · · · · · · · · · ·	not	detected	100	1.89 Ug/L		
1034044	Methyl-tert-Butyl ether		··	not	detected	• 70	0,18 ug/L	0.50 ug/L	
108203	Di-isopropyl ether	ļ	<u> </u>	not	detected	20000	0.12[ug/L	0.50 ug/L	
75/18	Dichlorodifluoromethane			not	detected	1000	0.22 ug/L	1.00 ug/L	
74-87-3	Chloromethane		<u> </u>	not	detected	nle	0.10 ug/L	1.00 ug/L	
. /3-01-4	Vinyl Chloride			not	detected	1 1	0.22 ug/L	1.00 ug/L	
74-83-9	Bromomethane		ļ	not	detected	10	0.25 ug/L	1.00 ug/L	· · · · · · · · · · · · · · · · · · ·
75-00-3	Chloroethane			not	detected	nle	0.22 ug/L	1,00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/L	1.00 ug/L	. <u> </u>
75-35-4	1,1-Dichloroethene			not	detected	l I	0.20 ug/L	0.50 ug/L	
67-64-1	Acetone	<u> </u>		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	0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/L	1.00 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	I	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	I	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	<u> </u>	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	1.00 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	nie	0.26 ug/L	1.00 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	nie	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	1.00 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



E	۶A	SA	MPI	LE	NO.
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	١	/OLATILE (	ORGANICS A	NALYSIS DATA	SHEET		EPA SAMPL	.E NO.
Lah Name:	EMETI	TENTAT	IVELY IDENT	IFIED COMPOU	JNDS		750 MW#	02A
Lab Code:	13461	Ca	se No.: MW	SAS No	).:	SE	DG No.: 9043	4
Matrix: (soil/\	water)	WATER	_	La	b Sample	e ID:	9043409	
Sample wt/vo	ol:	5.0	(g/ml) ML	La	b File ID:	-	VA4851.D	
Level: (low/r	ned)	LOW		Da	te Recei	ved:	11/3/2009	
% Moisture:	not dec.			Da	te Analy:	zed:	11/5/2009	
GC Column:	RTX-\	/M_ID: 0.	25 (mm)	Dil	ution Fac	ctor:	1.0	
Soil Extract \	/olume:		(uL)	So	il Aliquot	Volun	ne:	(uL)
				CONCENTRA		ITS:		
Number TIC:	s found:	0		(ug/L or ug/Kg)	UG	/L		
CAS NO.		COMPOL	JND NAME		RT	ES	T. CONC.	Q
L <u>ee</u>				· •				

# SEMI-VOLATILE ORGANICS

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			Repo	rt of Aı	nalysis			Page 1 of 2	(ب) مع 1000000
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043402 le ID: JA32053 AQ - Fi SW846 750	2 FIELD BL/ 3-1 eld Blank Wa 8270C SW8	ANK nter 346 3510C		Date S Date F Percer	ampled: teceived: t Solids:	11/03/09 11/04/09 n/a		
Run #1 Run #2	File ID 3E23002.D	DF 1	Analyzed 11/17/09	By OYA	Prep D 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045	
Run #1 Run #2	Initial Volume 1000 ml	Final Volu 1.0 ml	me						
BN TCL42	! List								
CAS No.	Compound		Result	RL	MDL	Units	Q		
98-86-2 1912-24-9	Acetophenone Atrazine		ND ND	5.0 5.0	0.40 0.39	ug/l ug/l			• •
100-52-7 101-55-3	Benzaldehyde 4-Bromophenyl Butch harmed al	phenyl ethe	ND r ND ND	5.0 2.0 2.0	0.40	ug/1 ug/1 ug/1			
85-68-7 92-52-4	1,1'-Biphenyl		ND ND	2.0	0.42	ug/l ug/l			
91-38-7 106-47-8	4-Chloroaniline	)	ND	5.0 2.0	0.25	ug/l			
105-60-2	Carbazole Caprolactam	oral mothan	ND	2.0	0.20	ug/l		·	
111-91-1	bis(2-Chloroeth	iyl)ether	ND	2.0	0.31	ug/l			
108-60-1 7005-72-3	4-Chloropheny	propyitemer I phenyl ethe	r ND	2.0	0.35	ug/l			
121-14-2 606-20-2	2,4-Dinitrotolu 2,6-Dinitrotolu	ene	ND	2.0	0.22	ug/l		<u>~</u>	
91-94-1 132-64-9	3,3'-Dichlorob Dibenzofuran	enzidine	ND	5.0 5.0	0.30	ug/1			
84-74-2 117-84-0	Di-n-butyl phth Di-n-octyl phth	alate alate	ND ND	2.0 2.0	0.19	ug/l ug/l			
84-66-2 131-11-3	Diethyl phthala Dimethyl phtha	ite ilate	ND ND	2.0 2.0	$\begin{array}{c} 0.17 \\ 0.23 \end{array}$	ug/l ug/l			
117-81-7 87-68-3	bis(2-Ethylhex Hexachlorobut	yl)phthalate adiene	ND ND	2.0 1.0	0.33 0.37	ug/l ug/l			
77-47-4 67-72-1	Hexachlorocyc Hexachloroeth:	lopentadiene ane	ND ND	20 5.0	$0.67 \\ 0.26$	ug/l ug/l			
78-59-1 91-57-6	Isophorone 2-Methylnapht	halene	ND ND	2.0 2.0	0.25 0.66	ug/l ug/l			
88-74-4 99-09-2	2-Nitroaniline 3-Nitroaniline		ND ND	$\begin{array}{c} 5.0\\ 5.0\end{array}$	0.24 0.29	ug/l ug/l			
100-01-6 98-95-3	4-Nitroaniline Nitrobenzene	`	ND ND	5.0 2.0	0.18 0.25	ug/l ug/l			

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blankN = Indicates presumptive evidence of a compound



	Report of Analysis									
Client Sample ID:9043402 FIELD BLLab Sample ID:JA32053-1Matrix:AQ - Field Blank WMethod:SW846 8270C SWProject:750		9043402 FIELD BLAI JA32053-1 AQ - Field Blank Wate SW846 8270C SW84 750	NK er 6 3510C		Date Sampled: Date Received: Percent Solids:			03/09 04/09		
BN TCL42	List					-				
CAS No.	Compo	ound	Result	RL	MDL	Units	Q			
621-64-7 86-30-6	N-Nitr N-Nitr	oso-di-n-propylamine osodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l				
CAS No.	Surrog	gate Recoveries	Run# 1	Run# 2	Lim	its				
4165-60-0 321-60-8 1718-51-0	Nitrob 2-Fluo Terphe	enzene-d5 robiphenyl enyl-d14	79% 78% 79%		25-1 31-1 14-1	12% 106% 122%				
CAS No.	Tentat	tively Identified Comp	ounds	R.T.	Est.	Conc.	Units	Q		
	Interna Total 7	al standard added for Sl FIC, Semi-Volatile	IM test	11.50	4.3 0		ug/l ug/l	J		

MDL - Method Detection Limit ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $\tilde{B}$  = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 2 of 2

	Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043402 FIELD B e ID: JA32053-1 AQ - Field Blank SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date Sa Date R Percent	ampled: eceived: t Solids:	11/03/09 11/04/09 n/a	
Run #1 Run #2	File ID   DF     4M13243.D   1	Analyzed 11/11/09	By NAP	Prep Da 11/09/09	te )	Prep Batch OP40821A	Analytical Batch E4M610
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluorene	ND ND ND ND ND ND ND ND ND ND	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.20\\ 0.20\\ 0.20\\ 0.020\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.023 0.024 0.027 0.0090	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND	0.020 0.10 0.10 0.10 0.10	0.0099 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its		<b>_</b>
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	90% 77% 73%		18-1 18-1 13-1	19% 04% 09%		

MDL - Method Detection Limit ND = Not detected

RL = Reporting LimitE = 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





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Client Samp Lab Sample Matrix: Method: Project:	ple ID: 9043409 750MW02A D: JA32053-4 AQ - Ground Water SW846 8270C SW8 750	46 3510C		Date S Date F Percer	11/03/09 11/04/09 n/a				
Run #1 Run #2	File ID   DF   A     3E23005.D   1   1	DF Analyzed By 5.D 1 11/17/09 OYA			Prep Date Prep Batch 11/09/09 OP40821		By Prep Date Prep Bat DYA 11/09/09 OP40821		Analytical Batch E3E1045
	Initial Volume Final Volum	ne	. <u></u>						
Run #1 Run #2	1000 ml 1.0 ml					· <b></b>			
BN TCL42	List								
CAS No.	Compound	Result	RL	MDL	Units	Q			
98-86-2	Acetophenone	ND	5.0	0.40	ug/l				
1912-24-9	Atrazine	ND	5.0	0.39	ug/l				
100-52-7	Benzaldehvde	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	2.0	0.42	ug/l				
91-58-7	2-Chloronaphthalene	ND	5.0	0.42	ug/l				
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/l				
86-74-8	Carbazole	ND	2.0	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/I				
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/l				
108-60-1	his(2-Chloroisopropyl)ether	ND	2.0	0.39	ug/l				
7005-72-3	4-Chloronhenvl phenvl 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				
24_74_2	Di-n-butyl ohthalate	ND	2.0	0.19	ug/l				
117_8/_0	Di-n-octyl phthalate	ND	2.0	0.40	ug/l				
217-04-0 24 66_2	Diethyl nhthalate	ND	2.0	0.17	ug/l				
121 11 2	Dimothyl philade	ND	2.0	0.23	ug/l				
117_81_7	his (2-Ethylberyl) nhthalate	ND	2.0	0.33	ug/l				
87_68_2	Hexachlorobutadiene	ND	1.0	0.37	ug/l				
77.47-4	Hexachlorocyclonentadiene	ND	20	0.67	ug/l				
67-72-1	Hexachloroethane	ND	5.0	0.26	ug/l				
78-59-1	Isophorone	ND	2.0	0.25	ug/l				
91-57-6	2-Methylnaphthalene	ND	2.0	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				
00 05 2	Nitrobenzene	ND	2.0	0.25	ug/l				

MDL - Method Detection Limit ND = Not detected

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

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## Report of Analysis

Client Samp Lab Sample Matrix: Method: Project:	le ID: ID:	9043409 750MW02A JA32053-4 AQ - Ground Water SW846 8270C SW846 3510C 750			Date Sampled: Date Received: Percent Solids:			: 11/ 1: 11/ s: n/a	11/03/09 11/04/09 n/a			•
BN TCL42 I	List											
CAS No.	Comp	ound .	Result	RL	M	DL	Units	Q				
621-64-7 86-30-6	N-Niti N-Niti	roso-di-n-propylamine rosodiphenylamine	ND ND	2.0 5.0	0.4 0.2	14 22	ug/l ug/l					
CAS No.	Surro	gate Recoveries	Run# 1	Run# 2		Limi	ts	•				
4165-60-0 321-60-8 1718-51-0	Nitrob 2-Fluo Terpho	enzene-d5 robiphenyl enyl-d14	64% 66% 71%			25-11 31-1( 14-12	12% 16% 22%					
CAS No.	Tenta	tively Identified Comp	ounds	R.T.		Est.	Conc.	Units	Q			
	Interna Total 7	al standard added for SI TIC, Semi-Volatile	M test	11.50		4.6 0		ug/l ug/l	J			

ND = Not detected MDL - Method Detection Limit RL = Reporting LimitE = 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







Client Sample ID: 9043409 750MW02A Date Sampled: 11/03/09 JA32053-4 Lab Sample ID: 11/04/09 Date Received: AQ - Ground Water Matrix: SW846 8270C BY SIM SW846 3510C Percent Solids: n/a Method: 750 Project: Prep Batch Prep Date Analyzed By File ID DF OP40821A 11/09/09 11/11/09 NAP 4M13246.D 1 Run #1 Run #2 Initial Volume Final Volume 1.0 ml 1000 ml Run #1 Run #2 Units Q RL MDL Result CAS No. Compound ND 0.10 0.029 ug/l 83-32-9 Acenanhthene

Report of Analysis

03-32-3	Accuapitutene	112	÷·		U
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/I
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	Limi	ts
4165-60-0	Nitrobenzene-d5	73%		18-1	19%
321-60-8	2-Fluorobiphenyl	65%		18-1	04%
1718-51-0	Terphenyl-d14	63%		13-1	09%

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

Page 1 of 1

Analytical Batch

E4M610





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### 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: 1 / 10/ 10

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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.

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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



## ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

## PROJECT: UST/ Monitoring Program New Wells Round II

## SAMPLE LOCATION AND IDENTIFICATION

SITE: 750

LABORATORY ID #	MONITOR WELL#	NJDEP WELL ID#	SAMPLE DÅTE
9044704	750MW01A**		11/17/09
9044705	750MW02A		11/17/09
9044706	750MW03A		11/17/09
9044707	750MW04A		11/17/09

*New Wells Round II **DUP. Sample is 9044704.

NJDEP Laboratory Certification # 13461

12011

Dean Tardiff/Date: Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

3/15/10 Secularly

Dean Tardiff

# SAMPLING
Fort Monmouth Environmental Testing Laboratory

 Elds. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.ml

 Chain of Custody

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**Chain of Custody Record** 

NJDEP Certifica	tion #13461						
Customer: JOE FALLON	Project No:			Analysis F	arameters		Comments:
Phone #: 732-532-6223	Location: 2 ND	Courd Courd	0				
( )DERA ( )OMA ( )Other:		, ] 	11	51			
Samplers Name / Company: しとんしてじん F	UNIC/ TVS	Sample	ΨO #	+0			
LIMS/Work Order # Sample Location	Date Ti	me - Type b	ttles	B			Remarks / Preservation Method
GUNNT . OI 750 TRIP BLANK	50-LI-11	00 AQ	Z Z				
102 750 FELD TLANK	111 60.21.11	00 AQ	3 X	X			
,03 750 DUP.		0 H T	ЗЗ				
A)0HUM *051 40,	111 50-61-11	0 AQ	2	X			
105 750 MW#02A	111 60-21-11	20 AQ	3 X	X			
A 106 750 mu #03A	111 60-61-11	30 A Q	З X	X			
07 750 mm #04p	11-17-09 11	50 99	З Х	X			-
,			<u> </u>				
							-
						<u>.</u>	
Relinguished the (standature) Date/Time:	Roceived by (signa	durre): d. M. A.	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Relinquished by (signature): Date/Time:	Received by (sign	truje):	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Report Type: ()Full, ()Reduced, ()Standard, ()S Turnaround time: ()Standard 3 wks, ()Rush Wk.,_	creen / non-certified, ( ()ASAP Verbal	JEDD Hrs.	Com	lents:			
		Βοπο					1 VI 2410/000

### SAMPLE RECEIPT FORM

Date Received: _//-17-064	Work Order ID#:
Site/Proj. Name: 150/17/ 012-04	Cooler Temp (°C): 350C
Received By: J. U. MUM	Sign: Achulun
(Print name)	
<u>Check the approp</u>	priate box
<ol> <li>Did the samples come in a cooler?</li> </ol>	yes ∐ vo/ ∐ n/a
2. Were samples rec'd in good condition?	yes 🗌 no
3. Was the chain of custody filled out correctly a	Ind legibly?
4. Was the chain of custody signed in the approp	priate place? yes no
5. Did the labels agree with the chain of custody	/? Lyes I no
6. Were the correct containers/preservatives use	ed? ∠d 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 wit	hin 15 minutes □ yes□ no □ n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
POULA-1-1	NA	ACL.			
1	-7.				
					,
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				<u> </u>	
					· · · · · · · · · · · · · · · · · · ·
·					
		·			

Comments:_____

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Fort Monmouth Environmental Testing Laboratory

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Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

Chain of Custody Record

	Tel (732)532-4359 ]	Fax (732)532-( ion #13461	5263 EMail;	jacquelir	e.hame	r@us.army.mil	C	hain of Custody Record	
Customer: Jacqueli	ine Hamer	Project No:				Analy	sis Parameters	Comments:	
2hone #: (732)532-435	ó	Location: 750	New Wells	Rd. II					
)DERA ()OMA (	)Other:								
Samplers Name / Com	ıpany:			Sample	#	SI+			
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles	BN		Remarks / Preservation Method	
9044702	Field Blank	11/17/2009	11:00	AQ	~	×			
9044703	DUP.	11/17/2009	11:10	AQ		×		•	
9044704	750MW01A	11/17/2009	11:10	AQ		×			
9044705	750MW02A	11/17/2009	11:20	AQ	~	×			
9044706	750MW03A	11/17/2009	11:30	AQ	~	×			
9044707	750MW04A	11/17/2009	0.80625	AQ	۲	×			
									_
					   .				
									Í
									1
Refinquished by (signatu	rre): Date/Time:	Received by	Ksignaturef:	J.J	Reling	uished by (signature)	: Date/Time:	Received by (signature):	
Relinquished by (signati	rre): Date/Time:	Received by	(sígnature):		Relinc	uished by (signature)	: Date/Time:	Received by (signature):	
Report Type: ()Full, ( Turnaround time: (X)Sta	)Reduced, (X)Standard, ()Sc ndard 3 wks, ()Rush Wk.,_	rreen / non-certi ()ASAP Verba	fied, (JEDD 1Hrs.			Comments: C09-2	20650		
print legibly				Page_	<u>/</u> of	V I	bSeg/ ~	750 COC. 1.XLS11/18/2009	

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print legibly

### US ARMY FORT MONMOUTH MONITOR WELL SAMPLING

LOCATION: 750A MW #:02A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/17/09 WEATHER: Sunny and cool. TIDE: High	:OM-VINNELL S	Sampling C Accordance SAM ERVICES	Conducted in with TVS SOP I-0205	
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2 Purge Method: Peristaltic Pump/C Purge Rate: Not to Exceed Well D	2" well or 0.65 for Other (Specify) Oraw Down of 0.5	- 4" well) x 3 = 5' 25/109	TDOW-21.48 8.96 ft 21.48 ft 12.52 ft 0.00 ppm 25 Gal. 24.41 Gal/Min.	
Purge Data: Start Time of Purging: 09:53 End Time of Purging: 11:12 pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time; Sampling End Time:	Initial Value 5.12 su 16.07 (°C) 5908 us/cm 98 mv 3.12 mg/L 14.88 ft 14.97 ft 11:20 11:24	<b>Pre-Sample</b> 5.02 su 16.39 ( °C) 7064 us/cm 103 mv 3:18 mg/L	Post-Sample 5.10 su 16.52 (°C) 6410 us/cm 62 mv 3.48 mg/L	

## CONFORMANCE/ NON-CONFORMANCE SUMMARY

## 90447 VOA

## GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	Indicate Yes No. N/A
Chromatograms labeled/Compounds identified (Field samples and method blanks)	Yes
Retention times for chromatograms provided	Yes
GC/MS Tune Specifications	
	405
<ul><li>a. BFB Meet Criteria</li><li>b. DFTPP Meet Criteria</li></ul>	NIA
GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series	Yes
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 .
GC/MS Calibration requirements	
e de la Challe Change de Mont Critoria	Yes
a. Calibration Check Compounds Meet Criteria b. System Performance Check Compounds Meet Criteria	Yes
Blank Contamination – If yes, List compounds and concentrations in each blank:	Na
a VOA Fraction	
b. B/N Fraction	
c. Acid Fraction	
Surrogate Recoveries Meet Criteria	Yes
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
VOA Fraction	
b B/N Fraction	·
c. Acid Fraction	
If not met, were the calculations checked and the results qualified as "estimated"?	· · · · · ·
A star for the Materix Spile Duplicate Recoveries Meet Criteria	No
Genet met liet these compounds and their recoveries, which fall	<del></del>
outside the acceptable range)	
NOA Fraction Several Confounds have high recoveries duet	o matrix in terference
a. PORtraction	
U. DANTIGORON	
	Chromatograms labeled/Compounds identified (Field samples and method blanks) Retention times for chromatograms provided GC/MS Tune Specifications a. BFB Meet Criteria b. DFTPP Meet Criteria GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series 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 GC/MS Calibration requirements a. Calibration Check Compounds Meet Criteria b. System Performance Check Compounds Meet Criteria Blank Contamination – If yes, List compounds and concentrations in each blank: a. VOA Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction c. Acid Fraction c. Acid Fraction b. B/N Fraction c. Acid

000010

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

Indicate Yes, No, N/A

Yej

Yes

000011

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

a.		VOA Fraction	 	
ь.	•	B/N Fraction	 	
c.		Acid Fraction	 	

11: Extraction Holding Time Met

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

12. Analysis Holding Time Met

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

Additional Comments:

Scanlard 1/20/10 Date: Laboratory Manager:____

11/30/09

# METHOD SUMMARY

### **Method Summary**

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

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

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

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

# LABORATORY CHRONICLE

## Laboratory Chronicle

Lab ID: 90447

Site: 750

	Date	Hold Time
Date Sampled	11/17/09	NA
Receipt/Refrigeration	11/17/09	NA

#### Analyses

1.	Volatilės	11/25/09	14 Days
2.	Semi-Volatiles	11/24-12/02/09	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.

000017

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

VA4992.D Data File Operator Date Acquired

ROBERTS 25 Nov 2009 1:36 pm Sample Name Field ID Sample Multiplier 1

MB11250901 METHOD 624 11/25/09

C1 8#	Compound Name	рт	Resnanse	Result		Regulatory Level (agr)*	MDL		RL	Qualifiers
107029	Aoroloin		Response	not	detected	5	2.09	ug/L	5.00 ug/L	
107028	Acsolenitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	tert Butul sloopol			not	detected	100	1.89	ug/L	5.00 ug/L	
1634044	Method tert-Bubyl ether	<del>_</del>		not	detected	70	0.18	ug/L	0.50 ug/L	
109203	Di-isonronyl ether			not	detected	20000	0.12	ug/L	0.50 ug/L	
75719	Disblorodifluoromethane			not	detected	1000	0.22	ug/L	0.50 ug/L	
74 97 2	Chloromethene			not	detected	nle	0.10	ug/L	0.50 ug/L	
75-01-4	Winyl 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	m		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-Dichlomethane			not	detected	50	0.19	ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20	ug/L	0.50 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	<u> </u>
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	<u>.</u>
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	<u> </u>	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		L

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

J= Estimated concentration, value fails between R.L. and M.D.L.

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

11/30/2009 3:10 PM 000018

	· · · · · · · · · · · · · · · · · · ·	/OLATILI	1E E ORGANICS A	NALYSIS DATA SHE	ET	EPA SAMPLE	NO.
•		TENTA	TIVELY IDENT	IFIED COMPOUNDS		MB112509	01
Lab Name:	FMETL			Contract:			
Lab Code:	<b>1</b> 3461	(	Case No.: <u>MW</u>	SAS No.:	S	DG No.: 90447	
Matrix: (soil/v	water)	WATER	<u> </u>	Lab San	nple ID:	MB11250901	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab File	ID:	VA4992.D	-
Level: (low/r	ned)	LOW		Date Re	ceived:	11/17/2009	-
% Moisture:	not dec.	. <u></u>		Date An	alyzed:	11/25/2009	-
GC Column:	RTX-V	<u>M</u> ID:	<u>0.25</u> (mm)	Dilution	Factor:	1.0	
Soil Extract V	/olume:		(uL)	Soil Aliq	uot Volu	ime:	. (uL)
					UNITS:		
Number TICs	s found:	0		(ug/L or ug/Kg)			<u> </u>
CAS NO.		COMP	OUND NAME	RT	ES	ST. CONC.	Q

#### FORM I VOA-TIC



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

VA4998.D Data File ROBERTS Operator Date Acquired

25 Nov 2009 5:45 pm

Sample Name Field ID Sample Multiplier 1

9044701 750 TRIP BLANK

Regulatory Launt (unlikt

C'A 8#	Compound Name	R.T.	Response	Result		Regulatory Detai (up)	MDL		Qualifiers
107028	Aorolein			not	detected	5	2.09 ug/L	5.00 ug/L	<u> </u>
107028	Acrolonitrile			not	detected	2	1.64 ug/L	5.00 ug/L	
75650	tert-Butul alcohol		· · · ·	. not	detected	100	1.89 ug/L	5.00 ug/L	
1634.044	Methyd_tert_Butyl ether			not	detected	70	0.18 ug/L	0.50 ug/L	
108203	Di iconronul ether			not	detected	20000	0.12 ug/L	0.50 ug/L	
75718	Dichlorodifuoromethane			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	nie	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	<u>0.20 ug/L</u>	0.50 ug/L	
75-35-3	1.1-Dichloroethane			not	detected	50	0.19 ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20 ug/L	0.50 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		0.17 ug/L	0.50 ug/L	<u></u>
56-23-5	Carbon Tetrachloride			not	detected	1	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	I	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		0.18 ug/L	0.50 ug/L	. <u>.</u>
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/1	<u> </u>
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	<u> </u>	0.18 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/L		
126-48-1	Dibromochloromethane			not	detected		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			<u> </u>	detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.2/lug/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	U.12 ug/L		
75-25-2	Bromoform			not	detected	4 .	U.14 ug/L		
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	<b>1</b>	0.12[ug/L		
541-73-1	1,3-Dichlorobenzene			not	detected	600	0.12 ug/L		
106-46-7	1,4-Dichlorobenzene			not	detected			0.50 ug/L	
95-50-1	1.2-Dichlorohenzene			not	detected	600	0.12 ug/L		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

000020

	1E VOLATILE ORGANICS	ANALYSIS DATA SHEET	EPA SAMPLE	E NO.
	TENTATIVELY IDEN	TIFIED COMPOUNDS	750 TRIP BL	ANK
Lab Name: FMET	L	Contract:		
Lab Code: 13461	Case No.: MW	SAS No.: S	SDG No.: <u>90447</u>	
Matrix: (soil/water)	WATER	Lab Sample ID:	9044701	<u> </u>
Sample wt/vol:	5.0 (g/ml) <u>ML</u>	Lab File ID:	VA4998.D	-
Level: (low/med)	LOW	Date Received:	11/17/2009	-
% Moisture: not dec.		Date Analyzed:	11/25/2009	<b>→</b>
GC Column: RTX	-VM_ID: <u>0.25</u> (mm)	Dilution Factor:	1.0	_
Soil Extract Volume:	(uL)	Soil Aliquot Vol	ume:	_ (uL)
		CONCENTRATION UNITS	· ·	
Number TICs found:	0	(ug/L or ug/Kg) UG/L		
CAS NO.	COMPOUND NAME	RT E	ST. CONC.	Q

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

VA4999.D Data File ROBERTS Operator 25 Nov 2009 6:16 pm Date Acquired

Sample Name Field ID Sample Multiplier 1

9044702 750 FIELD BLANK

CASH	Compaund 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	
107028	Acrulonitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	fort Butul alashai	•••		not	detected	100	1,89	ug/L	5.00 ug/L	
1624044	Nethod fort But d other			not	detected	70	0,18	ug/L	0.50 ug/L	
1024044	Di inappanul other			not	detected	20000	0.12	ug/L	0.50 ug/L	
108205	Di-Isopropyl euler			not	detected	1000	0.22	ug/L	0.50 ug/L	
73718	Clinerashan			not	detected	nle	0,10	ug/L	0.50 ug/L	
74-87-3	Chioroinemane			not	detected	1	0,22	ug/L	0.50 ug/L	
/5-01-4	Vinyi Chionde			not	detected	10	0,25	ug/L	0.50 ug/L	
74-83-9	Bromomethane	<u>-</u>		not	detected	nle	0.22	ug/L	0.50 ug/L	
75-00-3				not	detected	2000	0.18	ug/L	0.50 ug/L	
75-69-4	Inchlorofluoromethane			not	detected '	1	0,20	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene		·	not not	detected	6000	0.18	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	700	0.18	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	100	0.16	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride	•		not	detected	100	0.20	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	50	0.19	ug/L	0.50 ug/L	·
75-35-3	1,1-Dichloroethane			not	detected	7000	0.20	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	/ 200	0.16	ng/I.	0.50 ug/L	
78-93-3	2-Butanone			not	detected	70	0.14	110/1.	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene		<u>.</u>	not	detected	70	0.21	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected		0.17	ng/L	0.50 ug/1.	
75-55-6	1,1,1-Trichioroethane	·			delected		0.27	ug/1	0.50 ug/L	
56-23-5	Carbon Tetrachloride	<u> </u>		not	delected		0.16	ug/f	050 ug/L	
71-43-2	Benzene	<del>.</del>		not	detected		0.10	ug/L	050 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	²	0.12	ug/L	0.50 ug/1	
79-01-6	Trichloroethene			not	detected		0.16	ug/I	0.50 ug/l	
78-87-5	1,2-Dichloropropane			not	detected		0.10	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane		<i></i>	not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether	<u></u> .		not	detected	nie	0.16	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0.10		0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone	<u></u>		not	detected	nle	0.20		0.50 ug/L	
108-88-3	Toluene			not	detected	1000	0.13	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	_ <u>_</u>	0.12	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	Tetrachioroethene			not	detected		. 0,18	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20		0.50 ug/L	
126-48-1	Dibromochloromethane		'	not	detected	<u>I</u>	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		0.15	ug/L	<u>0.50 ug/1.</u>	
1330-20-7	m+p-Xylenes		ļl	not	detected	nle	0.27	ug/L	1.00 ug/L	ļ
1330-20-7	o-Xylene			not	detected	nle	0,14	ug/L	0.50 ug/L	<u> </u>
100-42-5	Styrene			not	detected	100	0.12	ug/L	0.50 ug/L	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		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-Dichlombenzene			not	detected	600	0.12	lug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

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

11/30/2009 3:06 PM 000022

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#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

						750 FIFLD BL	ANK
Lab Name:	FMETL			Contract:			
Lab Code:	13461	C:	ase No.: <u>MW</u>	SAS No.	: 8	DG No.: <u>90447</u>	
Matrix: (soil/v	vater)	WATER		Lab	Sample ID:	9044702	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4999.D	_
Level: (low/n	ned)	LOW		Dat	e Received:	11/17/2009	
% Moisture: 1	not dec.			Date	e Analyzed:	11/25/2009	_
GC Column:	RTX-V	/ <u>M</u> ID: <u>0</u>	.25 (mm)	Dilu	tion Factor:	1.0	-
Soil Extract V	/olume:		(uL)	Soil	Aliquot Volu	.me:	_ (uL)
					ON UNITS:		
Number TICs	s found:	0	- <u></u>	(ug/L of ug/itg)			
CAS NO.		COMPO	UND NAME		RT E	ST. CONC.	Q

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#### 000000

EPA SAMPLE NO.

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

Sample Name VA4995.D Data File Field ID ROBERTS Operator Sample Multiplier 1 25 Nov 2009 4:13 pm Date Acquired

9044705

750 MW#02A

			_	~ *		Regulatory Level (ug/l)*	MDŤ	זינו	Onalifiers
CAS#	Compound Name	<u>R.T.</u>	Response	Result		·	2 00 100/	5.00 µg/[	Quanners
107028	Acrolein		·	not	detected		1.64 ug/L	5.00 ug/L	
107131	Acrylonitrile	<u></u>		not	detected	2	1.04 ug/L	5.00 ug/L	
75650	tert-Butyl aicohol			not	detected	100	1.89 ug/L	0.50 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	0.30 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,I-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 цр/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	0.50 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		0.17 ug/L	0.50 ug/L	
56-23-5	Carbon Tetrachloride			not	detected	<u> </u>	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		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	<u></u>		not	detected	nte	0.26 ug/L	0.50 ug/L	
108-88-3	Toluene			not	detected	0001	0.15 ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene		·	not	detected	<u> </u>	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	<u> </u>	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		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-tetrachioroethane			not	detected		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		<b></b>
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-Dichlombenzene	_		not	detectéd	600	0.12 ug/L	0.50 ug/L	l

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL/s and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

B = Compound found in related blank E = Value above línear range

D = Value from dilution

PQL = Practical Quantitation Limit

J= Estimated concentration, value fails between R.L. and M.D.L.



#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

1E

750 MW#02A Lab Name: FMETL Contract: SDG No.: 90447 SAS No.: Lab Code: 13461 Case No.: MW Lab Sample ID: 9044705 WATER Matrix: (soil/water) VA4995.D Sample wt/vol: 5.0 Lab File ID: (g/ml) ML Level: (low/med) LOW Date Received: 11/17/2009 % Moisture: not dec. Date Analyzed: 11/25/2009 GC Column: RTX-VM ID: 0.25 (mm) Dilution Factor: 1.0 (uL) Soil Aliquot Volume: (uL) Soil Extract Volume: . CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Number TICs found: 0 CAS NO. COMPOUND NAME RT EST. CONC. Q



EPA SAMPLE NO.

## SEMI-VOLATILE ORGANICS

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	<i>.</i>	Repo	rt of A	nalysis			Page 1 of
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044702 FIELD BLA e ID: JA33317-1 AQ - Field Blank Wa SW846 8270C SW8 750	ANK .ter 46 3510C		Date S Date F Percer	Sampled: Received: nt Solids:	11/17/09 11/18/09 n/a	
Run #1 Run #2	File ID DF R75635.D 1	Analyzed 12/02/09	By VN	Prep D 11/20/0	ate 19	Prep Batch OP41049	Analytical Batch ER2857
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	ne	•				
BN TCL42	List						
CAS No.	Compound	Result	RĹ	MDL	Units	Q	
98-86-2	Acetophenone	ND	5.0	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'-Biphenvl	ND	2.0	0.42	ug/l		
91-58-7	2-Chloronanhthalene	ND	5.0	0.42	ug/l		
106-47-8	· 4-Chloroaniline	ND	5.0	0.25	ug/l		
86-74-8	Carbazole	ND	2.0	0.17	ˈug/l		
105-60-2	Caprolactam	ND	2.0	0.20	ug/l		
111-91-1	his(2-Chloroethoxy)methane	ND	2.0	0.25	ug/l		
111-44-4	his(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/I		
87-68-3	Hexachlorobutadiene	ND	1.0	0.37	ug/I		
77-47-4	Hexachlorocyclopentadiene	ND	20	0.67	ug/l		
67-72-1	Hexachloroethane	ND	5.0	0.26	ug/l		
78-59-1	Isophorone	ND	2.0	0.25	ug/I		
91-57-6	2-Methylnaphthalene	ND	2.0	0.66	ug/I		
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		
08-05-3	Nitrobenzene	ND	2.0	0.25	ug/l		

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

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ACCUTEST. JA33317 Laboritorios



### Report of Analysis

Client Samp Lab Sample Matrix: Method: Project:	ole ID: 9044702 FIELD BLA D: JA33317-1 AQ - Field Blank Wa SW846 8270C SW8 750	9044702 FIELD BLANK JA33317-1 AQ - Field Blank Water SW846 8270C SW846 3510C 750		Date Sampled: Date Received: Percent Solids:			11/17/09 11/18/09 n/a		
BN TCL42	List							•	
CAS No.	Compound	Result	RL	MDL	Units	Q			
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l				
CAS No.	Surrogate Recoveries	Run# 1	Run#2	Lim	its				
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	79% 71% 66%	·	25-1 31-1 14-1	12% 06% 22%				
CAS No.	Tentatively Identified Com	pounds	R.T.	Est.	Conc.	Units	Q		
	system artifact/aldol-conden Internal standard added for Total TIC, Semi-Volatile	4.53 8.48	4.1 4.1 0		ug/l ug/l 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



Page 2 of 2

•	Report of Analysis							
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9044702 FIELD B le ID: JA33317-1 AQ - Field Blank V SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date S Date R Percen	ampled: eceived t Solids	11/17/09 : 11/18/09 : n/a		
Run #1 Run #2	File ID         DF           4M13629.D         1	Analyzed 11/24/09	By NAP	Prep Da 11/20/09	ate 9	Prep Batch OP41049A	Analytical Batch E4M623	
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume						
CAS No.	Compound	Result	RL	MDL	Units	Q		
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo (a)anthracene Benzo (a)pyrene Benzo (b)fluoranthene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno (1,2,3-cd) pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	·		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its			
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	88% 79% 74%		18-1 18-1 13-1	19% 04% 09%	• •		

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

 $\begin{array}{l} J = \mbox{ Indicates an estimated value} \\ B = \mbox{ Indicates analyte found in associated method blank} \\ N = \mbox{ Indicates presumptive evidence of a compound} \end{array}$ 

(4) ***



	Report of Analysis							
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044705 750MW02A e ID: JA33317-4 AQ - Ground Water SW846 8270C SW8 750	46 3510C		Date S Date I Percei	Sampled: Received: nt Solids:	11/17/09 11/18/09 n/a		
Run #1 Run #2	File ID DF R75644.D 1	Analyzed 12/02/09	By VN	Prep D 11/20/0	)9	Prep Batch OP41049	Analytical Batch ER2858	
Run #1 Run #2	Initial Volume Final Volur 1000 ml 1.0 ml	ne						
BN TCL42	List							
CAS No.	Compound	Result	RL	MDL	Units	Q		
98-86-2 1912-24-9 100-52-7 101-55-3 85-68-7	Acetophenone Atrazine Benzaldehyde 4-Bromophenyl phenyl ether Butyl benzyl phthalate	ND ND ND ND ND	5.0 5.0 5.0 2.0 2.0	0.40 0.39 0.40 0.35 0.25	ug/l ug/l ug/l ug/l ug/l			
92-52-4 91-58-7 106-47-8 86-74-8	1,1'-Biphenyl 2-Chloronaphthalene 4-Chloroaniline Carbazole	ND ND ND ND	2.0 5.0 5.0 2.0	0.42 0.42 0.25 0.17	ug/l ug/l ug/l ug/l			
105-60-2 111-91-1 111-44-4 108-60-1 7005-72.3	Caprolactam bis(2-Chloroethoxy)methane bis(2-Chloroethyl)ether bis(2-Chloroisopropyl)ether 4-Chlorophenyl phenyl ether	ND ND ND ND ND	2.0 2.0 2.0 2.0 2.0 2.0	0.20 0.25 0.31 0.39 0.35	ug/l ug/l ug/l ug/l ug/l			

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

121-14-2

606-20-2

91-94-1

84-74-2

84-66-2

131-11-3

117-81-7

87-68-3

77-47-4

67-72-1

78-59-1

91-57-6

88-74-4

99-09-2

100-01-6

98-95-3

117-84-0

132-64-9

E = Indicates value exceeds calibration range

2,4-Dinitrotoluene

2,6-Dinitrotoluene

Di-n-butyl phthalate

Di-n-octyl phthalate

Diethyl phthalate

Dimethyl phthalate

Hexachloroethane

Isophorone

2-Nitroaniline

3-Nitroaniline

4-Nitroaniline

Nitrobenzene

Hexachlorobutadiene

2-Methylnaphthalene

bis(2-Ethylhexyl)phthalate

Hexachlorocyclopentadiene

Dibenzofuran

3.3'-Dichlorobenzidine

J = Indicates an estimated value

ug/l

0.22

0.33

0.30

0.30

0.19

0.40

0.17

0.23

0.33

0.37

0.67

0.26

0.25

0.66

0.24

0.29

0.18

0.25

2.0

2.0

5.0

5.0

2.0

2.0

2.0

2.0

2.0

1.0

20

5.0

2.0

2.0

5.0

5.0

5.0

2.0

ND.

ND

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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JA33317 Laboritorios



Report of Analysis

Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044705 750MW02A e ID: JA33317-4 AQ - Ground Water SW846 8270C SW8 750	A 846 3510C		Date Sampled Date Receive Percent Solid	d: 11 d: 11 s: n/a	/17/09 /18/09 a	
BN TCL42	List						
CAS No.	Compound	Result	RL	MDL Units	Q		
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 ug/l 0.22 ug/l			
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits			
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	75% 72% 42%		25-112% 31-106% 14-122%			
CAS No.	Tentatively Identified Com	pounds	R.T.	Est. Conc.	Units	Q	
•	Internal standard added for S Internal standard added for S Total TIC, Semi-Volatile	SIM test SIM test	8.48 18.37	4.1 4.2 0	ug/l ug/l 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



Page 2 of 2

	Report of Analysis						
Client San Lab Samp Matrix: Method: Project:	nple ID: 9044705 750MW0 le ID: JA33317-4 AQ - Ground Wate SW846 8270C BY 750	2A er SIM SW846	3 3510C	Date S Date R Percen	ampled: leceived it Solids	11/17/09 11/18/09 n/a	
Run #1 Run #2	File ID DF 4M13632.D 1	Analyzed 11/24/09	By NAP	Prep D: 11/20/0	ate 9	Prep Batch OP41049A	Analytical Batch E4M623
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2	Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene	ND ND ND ND ND	0.10 0.10 0.10 0.10 0.10 0.10	0.029 0.039 0.026 0.024 0.031 0.036	ug/l ug/l ug/l ug/l ug/l ug/l		
191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene	ND ND ND ND ND ND	0.10 0.10 0.10 0.10 0.10 0.10	0.023 0.028 0.022 0.023 0.024 0.027	ug/l ug/l ug/l ug/l ug/l		
118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND	0.020 0.10 0.10 0.10 0.10	0.0099 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l		
ÇAS No.	Surrogate Recoveries	- Run#1	Âun#2	Lim	its		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	87% 77% 47%		18-1 18-1 13-1	19% 04% 09%		

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

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N = Indicates presumptive evidence of a compound



JA33317 Labor Maria

#### 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 heid 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: _/ / 20/_/D

<u>el</u>u M

(111)2

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.

and 1/2 1/21/10

Dean Tardiff Laboratory Manager

#### ATTACHMENT I

UST 750F File Review and Analyses



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

Date: August 30, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: <b>750F</b>	Registration ID: None
Recommended Status of Site: Change	to Case Closed
Based on the file review, were there indi	ications of a contaminant release? [ ] Yes [X] No
NJDEP Release No. or DICAR (If applicabl	e): <u>None</u>
Did NJDEP approve No Further Action (N	IFA) for this site? [ ] Yes [ X ] No [ ] Not Applicable
Tank Description: [X] Steel [] Fiberg	lass Size: <u>1000 gals.</u> Contents: <u>No. 2 Fuel Oil</u>
[X] Residential [] Commercial/In	ndustrial
Tank Removed? [ X ] Yes [ ] No If "y	yes," removal date:7/13/2009
Were closure soil samples taken? [X] Ye	es [ ] No Analyses: <u>TPH</u>
Comparison criteria: <u>5,100 mg/kg TF</u>	<u>PH</u>
Were closure soil sample results less that	n comparison criteria? [X]Yes []No

#### **Brief Narrative**

UST 750F was initially identified as anomaly P51_20 in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_20 location, a steel tank was located and removed on 7/13/09. No evidence of fuel oil contamination was observed. Initial soil samples (750-F-1 through 750-F-3) were collected from the east end, west end, and center of the excavation on 7/13/09, and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). TPH in all of these initial soil samples was not detected (ND). On 7/16/09 additional side wall samples were collected because groundwater was observed in the open excavation at 7 feet below ground surface. These additional side wall samples (750-F North Wall, 750-F South Wall, 750-F East Wall, and 750-F West Wall) were also all ND for TPH. The final results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Therefore, there is no indication of a release to soil or groundwater at UST 750F, and no additional soil sampling or remedial action was warranted.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): <u>Change to "Case Closed", request NFA from NJDEP</u>

Signed:

Kent A. Friesen, Parsons

## Fort Monmouth UST Status Summary Report

#### UST REGISTRATION INFORMATION SUMMARY

750 F

LOCATION:

NJDEP REG ID:

**RESIDENTIAL?** YES

#### UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS): 1000

1000 **** #2:FUEL OIL

YEAR INSTALLED:

STEEL

CONSTRUCTION:

#### UST REMOVAL/INVESTIGATION SUMMARY

**REMOVAL DATE: 7/13/2009 REMOVAL CONTRACTOR:** TVS Inc. SRF SEND DATE: TMS: NR UHOT DICAR NO. LEAK DETECT: **REMEDIATION** Three pit bottom soil samples were collected on the day of UST removal. The results were less then the action level. C. Appleby had side wall samples **COMMENTS:** collected above the water prior to backfilling. CA Not registered as per the BRAC legal ofice determination that this is a UHOT. REGISTRATION COMMENTS: SAS DONE: NO **CONSULTANT:** MWs NEEDED: . 0 **MONITORING WELLS:** 0 SUB-SURFACE CharlesAppleby **EVALUATOR:** 

#### **CURRENT UST STATUS**

UST STATUS: REMOVED CLEAN SITE SAS CONT. CASE STATUS: Case Open

SUBMITTAL DATE:

APPROVAL DATE:

e ser e

#### US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG.#: 750 REG.#: UST F	
DATE: 7-13-09 TOA: TOD: CLOSURE TECH FRANK ACCORSI NJDEP CERT. #: 00/0042	
PERSONNEL: ANTHONY FORGIONE, MARC TAYLOR	
Δ(ΨΤΥΤΨΥ	YES/
	N 0
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	Ĭ.
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	Ý.
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ. (E.G. 29CFR)	٢
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM. YES NO)	Ý
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	4
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	Y
4 DRUMS OF WASTE WERE GENERATED AT THIS SITE TODAY (ID CARDS COMPLETED)	
DRUMS OF WASTE WERE TRANSPORTED TO THE (MP, CW, EV) HWSA	7
GALLONS OF WASTE WERE REMOVED (MANIFEST#:)	N
CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)	P
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO)	NA
ALL PETROL. CONT. SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	MA
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION. SSE INITIAL REQUIRED:	Y
THE UST WAS TRANSPORTED TO 108 TARD 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,	

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 ACCORST Juni 7-13-04 DATE : SIGNATURE:

ca\ms\ust\removal\sitec499.doc

DAILY UST SUBSURFACE REMOVAL LOG	
BLDG. #: 750 DATE: 7-13-09 SSE: FRANK ACCORSI REMOVAL CONTRACTOR: TVS Inc. PWS-007 CLOSURE SUPERVISOR: FRANK ACCORSI WEATHER: $fTLT$ . $cloupt$ , $gors$	
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)	Ĭ
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#	NA
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	7
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	NA
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	~
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	

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 <u>et seq</u>. 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 ACCORS/	Date:7-13-09
SIGNATURE: _	Frank aguri	<i>'</i>

ca\ms\ust\removal\sitessls499.doc

	DARMY, SELFM-PW-E	4
•	DAILY UST SUBSURFACE REMOVAL LOG	
	BLDG. #: $750 - F$ REG. #: $NA$ DATE: $7 - 16 - 29$ SSE: <u>Chinel</u> , <u>foold</u> , <u>fronk</u> <u>prent</u> NJDEP CERT. #: <u>9974</u> REMOVAL CONTRACTOR: TVS Inc. PWS-007 CLOSURE SUPERVISOR: <u>Fronk</u> <u>prent</u> NJDEP CERT. #: <u>WEATHER</u>	
	hoamper	
	ACTIVITY	YES/ NO
	THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	4
د	THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	LI GO
	ALL ON-SITE PERSONNEL HAD TRAINING IAW ALL SAFETY REOUIREMENTS (E.G. 29CFR)	
2	A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	<u>475</u>
	THE UST WAS PLACED ONTO PLASTIC SCRAPED OFF INSPECTED FOR HOLES AND PHOTOCRAPHED	NP.
	A DISCHARGE WAS REPORTED BT THE DOW TO THE NIDED (877) 927-6337)	9/574
	CASE#	NA
t . ma	PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	NA
35	GROUNDWATER WAS ENCOUNTERED AT, $7.0$ FEET BG, A SHEEN (WAS WAS NOT) OBSERVED ON GW	415
	IF OVA WAS USED: WAS IT CAL. AND FOUND TO BE OPERATIONAL (cal. data on COC)	NA
. <i>н</i>	IF SAMPLES WERE TAKEN: COC, SCALED SITE MAP (VERT. SOIL HORIZONS AND PLOT PLAN)	NP
•	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 - I Rest to Additional Subcall	סעק
• {	ALL ENVIRONMENTAL SAMPLE POINTS WERE GPS AND LOGGED	NP
	ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	415
<b>پ</b> ر ۱۰۰	THE FOLLOWING DOCUMENTS WERE ADDED TO THE PROJECT FOLDER TODAY: (CIRCLE EACH)	
•	<ul> <li>SCRAP TICKET, CSE PERMIT, ACCIDENT REPORT, HAZ. WASTE MANIFEST, DAILY UST CLOSURE LOG,</li> <li>SCALED SITE MAP (SAMPLING), SRF-CLOSURE, CHAIN OF CUSTODY, SOIL ANALYTICAL RESULTS, CLEAN</li> <li>FILL TICKETS(IN YDS³), PHOTOGRAPHS (UST, EXCAVATION, SAMPLING POINTS)</li> </ul>	1
	Ust Datalas was uppated to include the	1. 05
	CHECK ALL BOXES, LEAV	E NO BLAN formed
	in compliance with N.J.A.C. 7:14B-9.2(b)3 and 7:26 <u>et seg</u> I am aware that are significant penalties for submitting false, inaccurate, or inco information, including fines and/or imprisonment.	there mplete
4	Subsurface Evaluator (print Name): Charles Apple Date: )-15-0	9. -
Ct. Notes, bod been Pulled. last week, -037 - Three Simple + I dape when toka for TPHC - Centuline No woter was observed at time of Renovals - No Stand of discharge abserver-I wis stal the Site on 7-15-09 As well, " And There were no Signo of A altschimen UST Detologio will be updated by Aduly this site ... Site is Uttor And Not to be Reg. u/ NJDEP 13 per Brove legal office. -1000 gal 05T - STEL - Residentia/ - I appoind Allitime toste Saph be Collected for pll Side anils son blove GU. Note: GW Was not observed when UST Was. Ranound.

## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



## ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

## Bldg. 750/UST # 750-F

Field Sample Location	Laboratory	Matrix	Date and Time	Date
	Sample ID#		of Collection	Received
750-F-1, East End	9028101	Soil	13-July-09 15:00	07/13/09
750-F-2, Center	9028102	Soil	13-July-09 15:20	07/13/09
750-F-3, West End	9028103	Soil	13-July-09 15:40	07/13/09
750-D, Duplicate	9028104	Soil	13-July-09 15:00	07/13/09

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

769 icqueline Hamer/Date A/OC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.



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# CHAIN OF CUSTODY

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Lustomer: CHUC	<u>6797</u>	LEBI	Proje	CUNO:	07 - 1 AJ	ישי דיסי די (ד	15	T:#		Analysi		ysis i	arameters	s <u>1925</u> :		Comments:
$\frac{10000 \#}{1000}$	)Other:		2 57	1011: 15 )-F	204.73	, c	,	/ ++-						S.	5	
Samplers Name / Col	mpany: F	RAWK ACC	OR	511	TVS	Sam	nle	#	X	Q				19		
LIMS/Work Order #	Samn	le Location		ate	Time	Tv	pe	bottles		8				٦ ا	25	Remarks / Preservation Method
MAARI DI	150-F-1	, EASTEND	7.1	3-09	1500	50	12	1	X	X		<u>مُنْتَ مُسْنَ</u>		0	6.65	icF
12	750-F-J	CENTER	1		1520	1		1	Υ X	X				10	6-65	
13	750-F-3	WESTEND			1540			1	X	X		····		0	6-65	
C-M	750-F	DUPLICATE	Ý		1500		,	1	X	$\dot{\chi}$				0	6.65	
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elinquished by (signatu	ire):	Date/Time:	Receiv	yed by	(signature)	A 11	/	Relin	quished	by (sig	mature)	:	Date/Time	Recei	ved by	(signature):
dorand Ulus	in /	15-04 1600	<u> </u>	R	MN	M	4						<u>_</u>			
Relinquished by (signatu	re):	Date/Time:	Receiv	ved by	(signature):			Relin	quished	by (sig	(nature)	:	Date/Time	Recei	ved by	(signature):

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SAMPLE RECEIPT FORM	<u>1</u>
Date Received: <u>7-13-09</u> Work Ord	er ID#: <u>1028</u>
Site/Proj. Name: BIULTOD Cooler Ter	mp (°C): <u>7:0</u>
Received By:	ellipina
(Print name)	X
<u>Check the appropriate box</u>	
1. Did the samples come in a cooler?	🗆 yes 🖾 no 🗆 n/a
2. Were samples rec'd in good condition?	√ yes I 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?	ves 🗆 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

## Fill out the following table for each sample bottle

Lims ID	рН	Preservative	Sample ID	pH	Preservative
			····		
<u> </u>		· · · · · · · · · · · · · · · · · · ·			
				-	
			<u> </u>		

Comments:_____



# GPS COORDINATED



#### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 - UST 'F'

#### 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)

<u>FORTION/DESONFTION</u>		A COORDINATE (LASTING
750F.1 EAST END UST	538040.212	617324.612
750F.2 CENTER UST	538036.871	617319.874
750F.3 WEST END UST	538033.776	617313.698
750F NORTH WALL	538037.983	617319.129
750F SOUTH WALL	538031.78	617324.644
750F EAST WALL	538039.546	617326.74
750F WEST WALL	538030.405	617314.756

## 0 0

# FIELD DUPLICATE IDENTIFICATION



## **Field Duplicate Identification**

Lab ID: 90281

Site: Bldg. 750 UST # 750-F

The Field Duplicate was performed on 750-F-1, East End (Lab ID 9028101).



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## 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

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### **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

	Indicate Yes, No, N/A
Method Detection Limits Provided	yes
Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	_NO
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	yes
Duplicate Results Summary Meet Criteria	yes
IR Spectra submitted for standards, blanks and samples	_NA
Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	yes
Analysis holding time met (If not met, list number of days exceeded for each sample)	yes

Additional comments:

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Laboratory Manager: Janger Herner Date: 9/17/09

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLD	G. 750 MOTOR POOL
	Bldg, 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	13-Jul-09
Matrix:	Soil	Date Extracted:	14-Jul-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	15-Jul-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB07140901	MB07140901	1.00	15.00	100.00	23	333	0.00	
LCS07140901	LCS07140901	1.00	15.00	100.00	23	333	927.87	
9028101	750-F-1 EAST END	1.00	15.67	83.90	27	380	0.00	
9028102	750-F-2 CENTER	1.00	15.99	84.80	26	369	0.00	
9028103	750-F-3 WEST END	1.00	15.69	84.40	26	378	0.00	
9028104	750-F DUPLICATE	1.00	15.43	82.10	28	395	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



### ABORATORY 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.	$\checkmark$
5.	Chain of Custody submitted.	<u> </u>
6.	Samples submitted to lab within 48 hours of sample collection.	$\checkmark$
7.	Methodology Summary submitted.	$\angle$
8.	Laboratory Chronicle and Holding Time Check submitted.	V
9.	Results submitted on a dry weight basis.	$\nu$
10.	Method Detection Limits submitted.	<u> </u>
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	V

Laboratory Manager or Environmental Consultant's Signature Date: <u>4 / 17 / 06</u>	Janung Que Herrey
Laboratory Continuent # 12/61	( )

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Laboratory Certification # 13461

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



## Laboratory Authentication Statement

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

Jacqueline Hamer QA/QC Supervisor



## **RT MONMOUTH ENVIRONMENTAL FING LABORATORY DIRECTORATE OF PUBLIC WORKS** PHONE: (732) 532-4359 FAX: (732) 532-6263

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING NJDEP CERTIFICATION #13461



## ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

Diug. /50/US1 # /50 F									
Field Sample Location	Laboratory	Matrix	Date and Time	Date					
	Sample ID#		of Collection	Received					
750-F-1, North Wall	9029901	Soil	16-July-09 14:30	07/16/09					
750-F-2, South Wall	9029902	Soil	16-July-09 14:40	07/16/09					
750-F-3, East Wall	9029903	Soil	16-July-09 14:55	07/16/09					
750-F-4, West Wall	9029904	Soil	16-July-09 15:10	07/16/09					
750-F, Duplicate	9029905	Soil	16-July-09 14:30	07/16/09					

### **ANALYSIS:** FORT MONMOUTH ENVIRONMENTAL LAB **TPHC**, % SOLIDS

acqueline Hamer/Date JQC Supervisor

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# CHAIN OF CUSTODY



	Tel (7	732)532-4359 : EP Certificat	Fax (7 ion # [.]	32)532 1 <b>3461</b>	-6263 EMai	il:jacq	luel	ine.ha	mer@ı	is.army	.mil			C	hai	in o	f Custody Record
Customer:CHUCKAPPLEBYProjPhone #:X26292Loca( )DERA( )OMA(X)Other:##			Project No: 09-123690				Analysis Parame			eters			Comments:				
			Location: BLOG. 750, UST #F			57	suns				(4)	(ل)					
amplers Name / Compa	iny: FRA	NK Acco	285	, /	TUS	Sam	ole	#	1	8					0 •	J.J	
IMS/Work Order #	Sample I	Location	D	ate	Time	Тут	be .	bottles	1	2					2	De	Remarks / Preservation Method
10244 0175	O-F, NO	KTH WALL	7-1	6-09	1930	501	2	1	X	X					0	4-4.5	( CE
1 47 75	0-F. 500	TH WALL			1440			1	X	×					9	44.5	
13 75	OF, EAS	T WALL			1455			1	X	X				(	2	4:4.5	
75	D-F. WE	ST WALL			1510			1	X	X				· ·	0	<u>4-4.5</u>	
- 65 75	DF DU.	PLICATE		!	1930	1		1.	X	X					0	<u>4-4.5</u>	<b>V</b>
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Front accorei	7-16	-01 1600	L	Ű	M	Ň	/										
Relinquished by (signature): Date/Time: Received by (signature):				Relin	quished	l by (sig	(nature):	:	Date/T	<u>ime:</u> R	eceiv	ed by (	(signature):				

## **SAMPLE RECEIPT FORM**

Date Received: <u>1-110-04</u>	Work Order ID#: Maga
Site/Proj. Name: <u>B1001750-F</u>	Cooler Temp (°C): 3.
Received By: J. C. M.M.	Sign: pluglic
(Print name)	
<u>Check the appropr</u>	riate 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 an	nd legibly? yes 🗌 no
4. Was the chain of custody signed in the appropriate	riate place? 🖉 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes 🗆 no
6. Were the correct containers/preservatives used	d? 🖉 yes 🗆 no
7. Was a sufficient amount of sample supplied?	yes 🗆 no
8. Were air bubbles present in VOA vials?	yes 🗆 no 🖵 n/a

## Fill out the following table for each sample bottle

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### Comments:_____



# GPS COORDINATED



#### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 - UST 'F'

### SOIL SAMPLING GPS POSITIONS & COORDINATES

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

### (IN US SURVEY FEET)

### SAMPLE POINTS

#### **POSITION/DESCRIPTION**

#### V COORDINATE (NORTHING)

POSITION/DESCRIPTION	<u>Y COORDINATE (NORTHING)</u>	X COORDINATE (EASTING)
750F.1 EAST END UST	538040.212	617324.612
750F.2 CENTER UST	538036.871	617319.874
750F.3 WEST END UST	538033.776	617313.698
750F NORTH WALL	538037.983	617319.129
750F SOUTH WALL	538031.78	617324.644
750F EAST WALL	538039.546	617326.74
750F WEST WALL	538030.405	617314.756



# FIELD DUPLICATE IDENTIFICATION

## **Field Duplicate Identification**

Lab ID: 90299

Site: Bldg. 750 UST # 750-F

The Field Duplicate was performed on 750-F, North Wall (Lab ID 9029901).



## 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

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## TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

	Indicate Yes, No, N/A
Method Detection Limits Provided	Yes
Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	<u> </u>
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	<u> 425</u>
Duplicate Results Summary Meet Criteria	<u>ycs</u>
IR Spectra submitted for standards, blanks and samples	_ <u>N</u> A
Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	<u>yes</u>
Analysis holding time met (If not met, list number of days exceeded for each sample)	yes

Additional comments: _

Laboratory Manager: Joursepuline Harmy Date: 917/09

# TOTAL PETROLEUM HYDROCARBONS

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

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Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDO	G. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	16-Jul-09
Matrix:	Soil	Date Extracted:	17-Jul-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	20-Jul-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB07170901	MB07170901	1.00	15.00	100.00	23	333	0.00	
LCS07170901	LCS07170901	1.00	15.00	100.00	23	333	822.85	
9029901	750-F NORTH WALL	1.00	15.75	88.8	25	358	0.00	
9029902	750-F SOUTH WALL	1.00	15.84	91.1	24	346	0.00	
9029903	750-F EAST WALL	1.00	15.84	86.1	26	367	0.00	
9029904	750-F WEST WALL	1.00	15.53	87.2	26	369	0.00	
9029905	750-F DUPLICATE	1.00	15,54	88.4	25	364	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

#### TRIS 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.	<u></u>
4.	Document paginated and legible.	<u> </u>
5.	Chain of Custody submitted.	<u> </u>
6.	Samples submitted to lab within 48 hours of sample collection.	<u> </u>
7.	Methodology Summary submitted.	$\overline{}$
8.	Laboratory Chronicle and Holding Time Check submitted.	V
9.	Results submitted on a dry weight basis.	<u>.</u>
10.	Method Detection Limits submitted.	
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	<u>v</u>

N			$\bigcap \downarrow$	
Laboratory Manager or Environmental Consultant's Signature	$\Delta c$	Juna	Sur	Former
Date: 0/17/00	$\overline{\Lambda}$	$\Box$	) -	- <del></del> (
·	1	)		
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.

Homes alizba Autoria Hamer Acqueine Hamer A/QC Supervisor



## ATTACHMENT J

UST 750G File Review and Analyses


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

Date: August 31, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: <b>750G</b>	Registration ID: None
Recommended Status of Site: Change to	Case Closed
Based on the file review, were there indicat	ions of a contaminant release? [X] Yes [] No
NJDEP Release No. or DICAR (If applicable):	09-07-16-1341-23
Did NJDEP approve No Further Action (NFA)	for this site? [ ] Yes [ X ] No [ ] Not Applicable
Tank Description: [X] Steel [] Fiberglass	Size: <u>1000 gals.</u> Contents: <u>No. 2 Fuel Oil</u>
[X] Residential [] Commercial/Indu	strial
Tank Removed? [X]Yes [] No If "yes,	" removal date:7/16/2009
Were closure soil samples taken? [X] Yes	] No Analyses: <u>TPH</u>
Comparison criteria:5,100 mg/kg TPH	
Were closure soil sample results less than co	omparison criteria? [X]Yes []No

# **Brief Narrative**

UST 750G was initially identified as anomaly P51_38 in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_38 location, a steel tank was located and removed on 7/16/09. Stained soil was observed below the tank, and a sheen was noted on groundwater at 7.5 feet below ground surface. Contaminated soil was removed from the excavation, and then initial soil samples (750-G-1 through 750-G-4) were collected from the side walls of the excavation and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). TPH in three of the samples was not detected (ND), and 1166 milligrams per kilogram (mg/kg) of TPH was detected in the north side wall sample. After additional soil excavation, the north side wall was sampled again on 7/27/09, and this additional sample (750-G-5 North Wall) was also ND for TPH. The final results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Therefore, no additional soil sampling or remedial action was warranted.

Groundwater well 750MW08 was installed on 10/16/09 approximately downgradient of the removed UST 750G, and sampled on 11/3/09 and 11/17/09 for analysis of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), plus VOC and SVOC tentatively identified compounds (TICs). As noted in the analytical data reports (see the sheet preceding the Chain of Custody Form), well 750MW08 was initially designated as "750MW04A". Carbon disulfide was the only VOC detected in only one sample round but at a concentration well below the respective Class IIA Ground Water Quality Criteria (GWQC). No SVOCs were detected in the groundwater samples. Therefore, there is no indication of a release to groundwater at UST 750G.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): <u>Change to "Case Closed", request NFA from NJDEP</u>

Signed:

Kent A. Friesen, Parsons

UST REGISTRATION I	ΝϯΟΡΜΑΤΙϘ	N SUMMARY	
TLOCATION 750	G	<i>NJDEP REG ID</i>	
RESIDENTIAL?			
UST CONSTRUCTION			
SIZE (GALLONS) 1000	$\langle \rangle$	CONSTRUCTIO	N STEEL
PRODUCT		YEAR INSTALL	ED
UST REMOVAL/INVES	TIGATION SU	JMMARY	
<i>REMOVAL DATE</i> 7/16/2009	\$ :	REMOVAL CON	TRACTOR TVS Inc
SRF SEND DATE	$\sim$ )	TMS	
DICAR NO 09-07-16-1	341-23	I EAK DETECT	
REMEDIATIONOil stainedCOMMENTSfollowing b	soil observed belov JST removal CA	v tank line Excavat	on began immediately
REGISTRATION Not registe	red as per BRAC L	egal determination	UST 15 a UHOT
SAS DONE NO		CONSULTANT	
MWs NEEDED		MONITORING	WELLS
<i>SUB-SURFACE</i> CharlesAp <i>EVALUATOR</i>	pleby		
		<u>.</u>	
CURRENT UST STATU	IS		
UST STATUS REMEDIATION	N ON-GOING	CASE STATU	S Case Open
SUBMITTAL DATE		APPROVAL	DATE
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BLDG # 750 - G REG # MA DAILY UST SUBSURFACE REMOVAL LOG BLDG # 750 - G REG # MA DATE 7-16-09 TOA 1530 FM TOD 1330 SSE Charles Produces I france NJDEP CERT # 4974 REMOVAL CONTRACTOR TVS Inc PWS-007 CLOSURE SUPERVISOR Flow Accoss NJDEP CERT #	
ACTIVITY	YES/
THE TECHNICIAN (CLOSURE CERT ) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	
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)	97, PA
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	7/3
THE UST WAS PLACED ONTO PLASTIC, SCRAPED OFF, INSPECTED FOR HOLES AND PHOTOGRAPHED	PV I+
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (877)927-6337) 04-145Pm 733	5322682
CASE# 09-07-16-1341-23 1000ge - Rend Acres 100m #261.	
PHOTOS HAVE UST# BLDG # DATE TIME NAME OF SSE AND DESCR WRITTEN ON BACK	NO
GROUNDWATER WAS ENCOUNTERED AT ~ 75 FEET BG A SHEEN (WAS) WAS NOT) OBSERVED ON GW	4-5
IF OVA WAS USED WAS IT CAL AND FOUND TO BE OPERATIONAL (cal data on COC)	NO
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	NB
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7 26E-3 6 et seg	- NO
ALL PETROL CONT SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	415
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	415
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)	
- Datobour updates with the S'th information CA	VE NO BLANKS
I certify under penalty of law that tank decommissioning activities were pein compliance with N J A C 7 14B-9 2(b)3 and 7 26 et seq I am aware that are significant penalties for submitting false, inaccurate, or including fines and/or imprisonment Subsurface Evaluator (print Name) $\int Chhr. h. H. H. H. Date 7-16 34$	rformed t there omplete
SIGNATURE (	
ca\ms\ust\removal\sitessls499 doc	

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6 **.** CA- Norts, - UST had been Rilled in morning - UST Detalore (111 be updated with this information 2 ٢, - site is a UHOT And not to be reg 4/NJDEP As per Bare legal office .... 1000 gal Sterk UST Ma Resultator # 2 Ful oil ~ 300 gol of hot /or Removed Dreme / The Lot disport. L 1

# FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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

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# ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

Field Sample Location	Laboratory	Matrix	Date and Time	Date						
	Sample ID#		of Collection	Received						
750-G-1, North Wall	9029601	Soil	16-July-09 13:10	07/16/09						
750-G-2, South Wall	9029602	Soil	16-July-09 13:20	07/16/09						
750-G-3, East Wall	9029603	Soil	16-July-09 13:30	07/16/09						
· 750-G-4, West Wall	9029604	Soil	16-July-09 13:45	07/16/09						
750-G, Duplicate	9029605	Soil	16-July-09 13:30	07/16/09						

# Bldg. 750/UST # 750 G

## ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

acquelline Hamer/Date **/OC** Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

# Table of Contents

Section	Page No.
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GPS Coordinated	4-5
Field Duplicate Identification	6-7
Method Summary	8-9
Conformance/Non-Conformance Summary	10-11
Total Petroleum Hydrocarbons Result Summary Calibration Summary Surrogate Results Summary MS/MSD Results Summary LCS Results Summary Raw Sample Data	12 13 14-23 24 25 26 27-38
Laboratory Deliverable Check List	39
Laboratory Authentication Statement	40

# CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory

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Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

1. Company: FX # N/E ACORSI /TVS Sample	4 The second sec	ysis Parameters	Comments:
11 750 6-1, NORTH WALL 7-16-09 1310 5010 40 750 6-2, SOUTH WALL 1320 1320 13 750 6-3, EAST WALL 1330 1330	×, × × × × × × × ×	4 7-7 2 7-7 3 7-7 1 7-7	25 75 75 75
XB 7506, Doller CATE 1330 4			
ignature): Date/Time: Received by (signature): Leg VL 7-16-09 1400 AUNN ignature): Date/Time: Received by (signature):	Relinquished by (signature) Relinquished by (signature)	: Date/Time: Received t Date/Time: Received t	by (signature): by (signature):
ili, (次Reduced, しStandard, しScreen / non-certified, しEDD DStandard 3 wks, (次Rush才Wk.,_し)ASAP VerbalHrs. ルインジ	Comments:		

# **SAMPLE RECEIPT FORM**

Date Received: 7-16-09	Work Order ID#: 90390
Site/Proj Name: Blau BOC	Cooler Term ( $^{\circ}$ C):
The stand	
Received By: A. / //////	Sign: h(MMM
(Print name)	
Check the ap	propriate box
1. Did the samples come in a cooler?	yeş □ no □ n/a
2. Were samples rec'd in good condition?	🖵 yếs 🗆 no
3. Was the chain of custody filled out corre	ctly and legibly? $\Box$ yes $\Box$ no
4. Was the chain of custody signed in the a	appropriate place? 🖉 yes 🛛 no
5. Did the labels agree with the chain of cu	istody?
6. Were the correct containers/preservative	es used? 🛛 yes 🗆 no
7. Was a sufficient amount of sample suppl	lied? 🛛 🗸 🖓 Ves 🗆 no
8. Were air bubbles present in VOA vials?	✓ □ yes □ no ☑ n/a

9. Were samples received on ice? 10. Were analyze-immediately tests perform within 15 minutes yes no n/a

# Fill out the following table for each sample bottle

Lims ID	pН	Preservative	Sample ID	рН	Preservative
					10.011
			·		
-					

# Comments:_____

# GPS COORDINATED



### U.S. ARMY - FT. MONMOUTH, NJ

### BUILDING 750 - UST 'G'

### **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)

750G.1 NORTH WALL 750G.2 SOUTH WALL 750G.3 EAST WALL 750G.4 WEST WALL 537961.969 537946.404 537958.065 537950.703 617566.535 617576.269 617577.422 617567.023

# FIELD DUPLICATE IDENTIFICATION

# **Field Duplicate Identification**

Lab ID: 90296

Site: Bldg. 750⁷ UST # 750²G

The Field Duplicate was performed on 750-G-3, East Wall (Lab ID 9029603).

# 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

#### Indicate Yes, No, N/A yes 1. Method Detection Limits Provided 2. Method Blank Contamination - If yes, list the sample and the NÒ corresponding concentrations in each blank ____ 3. Matrix Spike Results Summary Meet Criteria yes (If not met, list the sample and corresponding recovery which falls outside the acceptable range) _____ 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 yez Yes if GC fingerprinting was conducted 7. Analysis holding time met (If not met, list number of days exceeded for each sample) ____ _____

#### **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

Additional comments:

Laboratory Manager:	Januar	lonQ.	Louna	Date:	9/17/09
	0 - 0				•

# TOTAL PETROLEUM HYDROCARBONS

### 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: BLDG ECP: Work Order:	09-123690 . 750 MOTOR POOL
Analysis:	OQA-QAM-025	Date Received:	16-Jul-09
Matrix:	Soil	Date Extracted:	17-Jul-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	20-Jul-09
Injection Volume:	1 uL	Analyst:	Robert Szot

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB07170901	MB07170901	1.00	15.00	100.00	23	333	0.00	
LCS07170901	LCS07170901	1.00	15.00	100.00	23	333	822.85	
9029601	750-G-1 NORTH WALL	1.00	15.58	77.0	29	417	1166.16	
9029602	750-G-2 SOUTH WALL	1.00	16.17	76.6	28	404	0.00	
9029603	750-G-3 EAST WALL	1.00	15.60	76.9	29	417	0.00	
9029604	750-G-4 WEST WALL	1.00	15.84	77.3	29	408	0.00	
9029605	750-G DUPLICATE	1.00	15.32	76.2	30	428	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 <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.	L
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.	$\underline{\nu}$
9.	Results submitted on a dry weight basis.	4
10.	Method Detection Limits submitted.	<u> </u>
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	$\cup$

Laboratory Manager or Environmental Consultant's Signature	$\langle \rangle$	aner	Home
Date: <u>9/17/09</u>	Å	0	

000039

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.

lacqueline Hamer A/QC Supervisor

# FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

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



# ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

# Bldg. 750/UST # G

Field Sample Location	Laboratory	Matrix	Date and Time	Date
	Sample ID#		of Collection	Received
750-G-5, North Wall	9031101	Soil	27-July-09 09:20	07/27/09
750-G, Duplicate	9031102	Soil	27-July-09 09:20	07/27/09

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

zelog acqueline Hamer/Date QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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Conformance/Non-Conformance Summary	10-11
Total Petroleum Hydrocarbons Result Summary Calibration Summary Surrogate Results Summary MS/MSD Results Summary LCS Results Summary Raw Sample Data	12 13 14-18 19 20 21 22-27
Laboratory Deliverable Check List	28
Laboratory Authentication Statement	29

# CHAIN OF CUSTODY

	Fort N	omno	uth E	nvi	uoj	me	ntal T	esting	La	boratory	
	Bldg. 173, SELF Tel (732)532-435 NJDEP Certific	M-PW-EV, For 9 Fax (732)532 ation #13461	t Monmouth, 6263 EMail	NJ 07703 jacquelin	e.hame	r@us.a.	imy.mil	) –	Chai	a of Custody Reco	rd
Customer: CHUCK	APPLEBY	Project No:	09-123	690			Analysis	Parameters		Comments:	
Phone #: X2629:	2	Location: B	20. 75	Ó		14			(,,		n a su a s
( )DERA ( )OMA (x)Ot	her:	USTE				11. r e - f	91-15		18	Ð	9 in 19 in 19
Samplers Name / Compan	y: FRANK AC	60 KSI 17	51-	Sample	#	) 11	> 6 6		) q	HLa	
LIMS/Work Order #	Sample Location	Date	Time	Type b	ottles	L. []	7		18	Remarks / Preservation Met	hod
90311,01 750	2. G - 5. NORTH WA	10-12-2701	0420	5012		×	×		9 E	S-7	Ly C
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Relinquished by (signature):	Date/Time:	Received by	(signature):		Relinqui	shed by	(signature):	Date/Time:	Receive	d by (signature):	-
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print legibly				age	_ of _	_				new coc1.XLS7/14/200	6

# SAMPLE RECEIPT FORM

Date Received:	7/27/	0	9	
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750 Site/Proj. Name: ____

ed By: George Boyce	Sign: Aural Ball

VVOrK	Order	ID#:	

Cooler Temp (°C):  $\mathcal{H}^{\circ}$ 

Receive (Print name)

# Check the appropriate box

- 1. Did the samples come in a cooler?
- 2. Were samples rec'd in good condition?
- 3. Was the chain of custody filled out correctly and legibly?
- 4. Was the chain of custody signed in the appropriate place?
- 5. Did the labels agree with the chain of custody?
- 6. Were the correct containers/preservatives used?
- 7. Was a sufficient amount of sample supplied?
- 8. Were air bubbles present in VOA vials?
- 9. Were samples received on ice?

10. Were analyze-immediately tests perform within 15 minutes  $\Box$  yes  $\Box$  no  $\boxtimes$  n/a

# Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
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	1				
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### Comments:

☑ yes □ no □ n/a 🗹 yes 🛛 no 🗹 yes 🗆 no ☑ yes □ no ⊠ yes □ no ⊠ yes □ no ⊠ yes □ no □ yes □ no ☑ n/a ⊠ yes □ no

# GPS COORDINATED

#### U.S. ARMY - FT. MONMOUTH, NJ

### BUILDING 750 - UST 'G'

### 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 <u>COORDINATE (EASTING)</u>

750G.1 NORTH WALL 750G.2 SOUTH WALL 750G.3 EAST WALL 750G.4 WEST WALL 750G.5 WEST WALL

ORDINATE (NORTHING)	X COORDINATE (EA
537961.969	617566.535
537946.404	617576.269
537958.065	617577.422
537950.703	617567.023
537967.487	617562.349

# FIELD DUPLICATE IDENTIFICATION



# **Field Duplicate Identification**

Lab ID: 90311

Site: Bldg. 750 UST # 750-G

The Field Duplicate was performed on 750-G-5, North Wall (Lab ID 9031101).

# 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 CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

Indicate

Yes, No, N/A 1. Method Detection Limits Provided 2. Method Blank Contamination - If yes, list the sample and the NO 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 yes _____ _____ 5. IR Spectra submitted for standards, blanks and samples 6. Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted 7. Analysis holding time met res (If not met, list number of days exceeded for each sample)

Laboratory Manager: 0110200 Home Date: 917/09

Additional comments:

000011

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDG	. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	27-Jul-09
Matrix:	Soil	Date Extracted:	30-Jul-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	6-Aug-09
Injection Volume:	-1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00	-	

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB07300902	MB07300902	1.00	15.00	100.00	23	333	0.00	
LCS0730902	LCS0730902	1.00	15.00	100.00	23	333	1161.47	
9031101	750-G-5 NORTH WALL	1.00	15.87	83.1	27	379	0.00	
9031102	750-G DUPLICATE	1.00	15.64	85.0	26	376	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

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1.	Cover Page, Title Page listing Lab Certification #, facility name and address, & date of report submitted.	<u> </u>
2.	Table of Contents submitted.	$\sim$
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	<u></u>
4.	Document paginated and legible.	<u> </u>
5.	Chain of Custody submitted.	$\underline{\smile}$
6.	Samples submitted to lab within 48 hours of sample collection.	<u> </u>
7.	Methodology Summary submitted.	<u></u>
8.	Laboratory Chronicle and Holding Time Check submitted.	<u> </u>
9.	Results submitted on a dry weight basis.	L
10.	Method Detection Limits submitted.	<u> </u>
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

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.

Hamon 9/17/09 acqueline Hamer /QC Supervisor



# FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

DIRECTORATE OF PUBLIC WORKS PHONE: (732)532-6224 FAX: (732)532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING



ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

PROJECT: UST/ Monitoring Program

### SAMPLE LOCATION AND IDENTIFICATION

<u>SITE</u>: 750

LABORATORY	MONITOR	NJDEP WELL ID#	SAMPLE
ID #	WELL#		DATE
9043404	750MW01**	29-28992	11/03/09
9043405	750MW02	29-28993	11/03/09
9043406	750MW03	29-28994	11/03/09
9043407	750MW04	29-28995	11/03/09
9043408	750MW01A***	·	11/03/09
9043409	750MW02A*		11/03/09
9043410	750MW03A*		11/03/09
9043411	750MW04A*		11/03/09

*New Wells Round I

**Duplicate Sample for VOA and TAL Metals is 9043404.

*** Duplicate Sample for BN is 9043408.

NJDEP Laboratory Certification # 13461

20/10 Dean Tardiff/Date:

Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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M-Tech	311

The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

Seantural 3/15/10

Dean Tardiff

SAMPLING

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	Bidg. 173, SELFN Tel (732)532-435 NJDEP Certific:	ron-	6223	1	WACTER	imple Location	TRIPBLANK	TECD B/ANK	DUP	10#mm	MW #02	MW #03	MW #04	NW#4014	WW#02A	MW #03 A	MW#041	MWHOHD		Date/Time:	Date/Time:	, WStandard, ()Sc ks, ()Rush Wk.,_(	
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new coc._1.XLS8/18/2009

## SAMPLE RECEIPT FORM

Date Received: 11-4-09	Work Order ID#: <u>404-34</u>
Site/Proj. Name:	Cooler Temp (°C): <u>3.0</u>
Received By: J. URiguit	Sign: plugeline
(Print name)	
<u>Check the appropr</u>	<u>riate box</u>
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 ar	nd legibly? 🔄 yes 🗆 no
4. Was the chain of custody signed in the approp	riate place? 🖉 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes □ no
6. Were the correct containers/preservatives used	d? 🖉 yes 🗆 no
7. Was a sufficient amount of sample supplied?	yes 🗆 no
8. Were air bubbles present in VOA vials?	🗌 yeş 🖉 no 🗌 n/a
9. Were samples received on ice?	yes 🗌 no
10. Were analyze-immediately tests perform with	iin 15 minutes □ yes□ no ☑ n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
1049411-11	NHA	HCL			
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Comments:_____

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	Fort M		uth E	'nvi	ronm	ental T	esting	Laboratory	7
	Bldg. 173, SELFM	-PW-EV, Fort Fax (732)532- tion #13461	Monmouth, -6263 EMail	NJ 0770 Ljacqueli	3 ae.hamer@u	s.army.mil		, Chain of Custod	y Record
Customer: Jacquel	ine Hamer	Project No:				Analvsis	Parameters	Comments:	
Phone #: (732)532-435	6	Location: 75	0						
()DERA ()OMA (	)Other:								
Samplers Name / Con	ıpany:			Sample	<b>;</b> ]+				
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles <b>BX</b>			Remarks / Prese	rrvation Method
9043402	Field Blank	11/3/2009	12:20	AQ	۲ ۲				
9043408	750MW01A	11/3/2009	12:30	AQ	1 X				
9043408DUP.	750MW01A	11/3/2009	12:30	AQ	۲ ۲				
9043409	750MW02A	11/3/2009	12:50	AQ	1 X				
9043410	750MW03A	11/3/2009	13:00	AQ	1 X				e
9043411	750MW04A	11/3/2009	13:20	AQ	1 X				
					-				
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Relinquished by (signatu	:e): Date/Time:	Received by (	signature):		Relinquished	by (signature):	Date/Time:	Received by (signature):	
Report Type: UFull, Ul	Reduced, (X)Standard, ()Scr	een / non-certifi	led, ()EDD		Comn	tents: DK9/2009	-389 (PO C	99-20650)	
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print legibly	T			age	of /		No se	.A / new coc. 1.	(LS11/4/2009

### **US ARMY FORT MONMOUTH MONITOR WELL SAMPLING**

LOCATION: 750A MW #:04A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09 WEATHER: Sunny and cool. TIDE: N/A	OM-VINNELL SI	Sampling C Accordance v SAM ERVICES	onducted in with TVS SOP -0205
			TDOW 10.22
Initial Readings			10000-19.25
Elevation of Casing Survey Mark:			5 67 ft
Depth of Well:			19.23 ft
Height of Water in Well:			13.56 ft
PID/FID Reading:			0.00 ppm
Gallons of Water to be Purged:			27 Gal.
Formula: ht.of water x (0.163 for 2	' well or 0.65 for	4" well) x 3 =	26.44
Purge Method: Peristaltic Pump/O	ther (Specify)	·	
Purge Rate: Not to Exceed Well D	raw Down of 0.5	27/117	Gal/Min.
· · ·			
Purge Data:			
Start Time of Purging: 11:21			
End Time of Purging: 13:18			
	Initial Value	Pre-Sample	Post-Sample
pH:	3.91 su	3.90 su	3.88 su
Temperature:	19.28 ( °C)	19.62 ( °C)	19.75 ( °C)
Specific Conductivity:	12313 us/cm	12929 us/cm	13606 us/cm
ORP:	181 mv	146 mv	148 mv
DO:	1.26 mg/L	1.27 mg/L	1.05 mg/L
Depth to Water Post Purge:	8.08 ft		
Depth to Water Post Sampling:	8.17 ft		
Sampling Start Time:	13:20		
Sampling End Time:	13:28		
		· · · · · · · · · · · · · · · · · · ·	
Comments:			
·			

# CONFORMANCE/ NON-CONFORMANCE SUMMARY



### GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
·1.	Chromatograms labe (Field samples a	led/Compounds identified nd method blanks)	<u>Yes</u>
2.	Retention times for c	hromatograms provided	Yes
3.	GC/MS Tune Specif	ications	
	a. b.	BFB Meet Criteria DFTPP Meet Criteria	<u>Yes</u> <u>NA</u>
4.	GC/MS Tuning Freq series and 12 hours f	uency – Performed every 24 hours for 600 or 8000 series	Yes
5.	GC/MS Calibration - analysis and continui sample analysis for 6	- Initial Calibration performed before sample ing calibration performed within 24 hours of 00 series and 12 hours for 8000 series	Yes
6.	GC/MS Calibration	equirements	
	a. b.	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	<u>Yes</u> Yes
7.	Blank Contamination	- If yes, List compounds and concentrations in each blank:	No
	a.	VOA Fraction	
	b.	B/N Fraction NA	
	с.	Acid Fraction <u>NA</u>	
8.	Surrogate Recoveries	Meet Criteria	Yes
	If not met, list th outside the accep	ose compounds and their recoveries, which fall otable range:	
	а	VOA Fraction	
	ц. b.	B/N Fraction NA	
	c.	Acid Fraction <u>NA</u>	
	If not met, were as "estimated"?	the calculations checked and the results qualified	
0	Matrix Snike/Matrix	Snike Dunlicate Recoveries Meet Criteria	No
	(If not met. list those	compounds and their recoveries, which fall	
	outside the acceptable	e range).	
	a.	VOA Fraction: <u>Several compounds have high recoveries</u> , see summary form	
	b.	B/N Fraction <u>NA</u>	

c. Acid Fraction <u>NA</u>

			Indicate Yes, No, N/A
10.	Internal Standard (If not met, list th	Area/Retention Time Shift Meet Criteria ose compounds, which fall outside the acceptable range)	Yes
	a.	VOA Fraction	
	b.	B/N Fraction <u>NA</u>	
	с.	Acid Fraction <u>NA</u>	
11.	Extraction Holdir	ng Time Met	<u>NA</u>
	If not met, list the	number of days exceeded for each sample:	
12.	Analysis Holding	Time Met	<u>Yes</u>
	If not met, list the	number of days exceeded for each sample:	
Ađđ	itional Comments:		
•			
Lab	pratory Manager: _	Scantenary Date: 1/20/10	

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



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### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Fort Monmouth Environmental Testing Lab.

Job No JA33317

**Report Date** 

12/6/2009 6:26:47 PM

Site: 750

On 11/18/2009, 5 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.5 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA33317 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:	OP41049		

* All samples were extracted within the recommended method holding time.

* All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JA33267-2MS, JA33267-2MSD were used as the QC samples indicated.

- Blank Spike Recovery(s) for Atrazine are outside control limits.
- Matrix Spike Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Sample(s) OP41049-MSD have surrogates outside control limits. Probable cause due to matrix interference.

#### Extractables by GCMS By Method SW846 8270C BY SIM

Γ	Matrix AQ	Batch ID: OP41049	A
101	All samples were extracted within	the recommended method holding ti	me.

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA33267-2MS were used as the QC samples indicated.

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

Sunday, December 06, 2009



### METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Lab ID:	90434	Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2	ICP Interference Check Sample Results Meet Criteria	Yes
3	Serial Dilutions Meet Criteria	Yes
4	Laboratory Control Samples Meet Criteria	Yes
5	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank	No
6	Spike Sample Recoveries Meet Criteria 9043103: Al = 55.9%	Yes
7	Duplicates Meet Criteria	Yes
8	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes
	Additional Comments:	
	Laboratory Manager: Dean Tandy Date: /	120/10

METHOD SUMMARY



### Method Summary

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

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

### EPA Method 3510/8270 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.

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

### Milestone MLS 1200 MEGA

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

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

#### Perkin Elmer OPTIMA 3000 DV

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

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

#### Varian SpectrAA-640, VGA-77

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

# LABORATORY CHRONICLE



# **Laboratory Chronicle**

Lab ID: 90447

Site: 750 LTM

	Date	Hold Time
Date Sampled	11/03/09	NA
Receipt/Refrigeration	11/03/09	NA

### Analyses

Volatiles	11/14,15/09	14 Days
Base Neutral	11/11,17/09	7 Days
TAL Metals	11/10/09	6 Months
Arsenic	11/17/09	6 Months
Mercury	11/13/09	28 Days
Thallium	11/16/09	6 Months
	Volatiles Base Neutral TAL Metals Arsenic Mercury Thallium	Volatiles   11/14,15/09     Base Neutral   11/11,17/09     TAL Metals   11/10/09     Arsenic   11/17/09     Mercury   11/13/09     Thallium   11/16/09

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# **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	VA4841.D		Sample Name	MB11040902
Operator	ROBERTS		Field ID	METHOD 624 11/04/09
Date Acquired	4 Nov 2009	7:26 pm	Sample Multiplier	1

CAS#	Compound Name	RТ	Resnanse	Result		Regulatory Level (ug/l)*	MDL	$\mathbf{RL}$	Oualifiers
107028	Acrolein			pot	detected	5	2.09 ug	/L 5.00 ug/L	
107131	Acrylonitrile	1		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	1		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 1.00 ug/L	
74-87-3	Chloromethane	1		not	detected	nle	0.10 ug	/L 1.00 ug/L	
75-01-4	Vinyl Chloride	1		not	detected	1	0.22 ug	/L 1.00 ug/L	
74-83-9	Bromomethane	1		not	detected	10	0.25 ug	/L 1.00 ug/L	
75-00-3	Chloroethane			not	detected	пle	0,22 ug	/L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug	/L 1.00 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	Vinvl Acetate			not	detected	7000 ·	0.20 ug	/L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug	/L 1.00 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	1		not	detected	1	0.16 ug	/L 0.50 ug/L	
107-06-2	1 2-Dichioroethane			not	detected	2	0.19 ug	/L 0.50 ug/L	
79-01-6	Trichloroethene			not	detected	I	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	I	0.14 ug	/L 0.50 ug/L	
110-75-8	2-Chloroethyl vinvl ether .			not	detected	nle	0,25 ug	/L 1.00 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 1,00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug	/L 0.50 ug/L	
10061-02-6	trans-1 3-Dichloronropene			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	Ethylhenzene			not	detected	700	0.16 ug	/L 0.50 ug/L	
630-20-6	1 1 1 2-tetrachloroethane			not	detected	j	0.15 ug	/L 0.50 ug/L	
1330-20-7	m+p-Xvlenes			not	detected	nle	0.27 ug	/L 1.00 ug/L	
1330-20-7	o-Xvlene			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 1.00 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-Dichlorohenzene			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



VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

		TENTATI	VELY IDEN	TIFIED COMP	POUND	S <u>.</u>	ND44040	
Lab Name:	FMETL			Contra	ct:		WB11040	902
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS	No.:	S	DG No.: 90434	1 .
Matrix: (soil/v	vater)	WATER	-	¢	Lab Sa	mple ID:	MB11040902	
Sample wt/vo	ol:	5.0	(g/ml) ML		Lab File	e ID:	VA4841.D	_
Level: (low/n	ned)	LOW	-		Date R	eceived:	11/3/2009	
% Moisture: r	not dec.				Date A	nalyzed:	11/4/2009	
GC Column:	RTX-V	<u>M</u> ID: <u>0.2</u>	2 <u>5</u> (mm)		Dilution	Factor:	1.0 ·	
Soil Extract V	olume:		(uL)		Soil Ali	quot Volu	Ime:	_ (uL)
Number TICs	found:	0	_	CONCENTF (ug/L or ug/l	RATION Kg)	UNITS: UG/L		
CAS NO.		COMPOU	ND NAME		R	r es	ST. CONC.	Q

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

Regulatory Level (ug/l)*

Data File Operator Date Acquired	VA4843.D ROBERTS 4 Nov 2009	8:28 pm	Sample Name Field ID Sample Multiplier	9043401 750 TRIP BLANK 1	

CAS#	Compound Name	вт	Resnonse	Result	ł	Regulatory Level (ug/l)*	MDL	RL	Oualifiers
107028	Acrolein			not	detected	5	2.09 ug/	L 5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.64 ug/	( 5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	001	1.89 ug/	L 5.00 ug/L	
1634044	Methyl-tert-Butyl ether		<u></u>	not	detected	70	0.18 ug/	L 0.50 ug/L	
108203	Di-isopronyl ether			not	detected	20000	0.12 ug/	L 0,50 ug/L	,
75718	Dichlorodifluoromethane	1		not	detected	1000	0,22 ug/	L 1.00 ug/L	
74-87-3	Chloromethane		· · · · · · · · · · · · · · · · · · ·	not	detected	nle	0,10 ug/	L 1.00 ug/L	
75-01-4	Vinvi Chloride			not	detected	1	0.22 ug/	L 1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25 ug/	L 1.00 ug/L	
75-00-3	Chloroethane	1		not	detected	ole	0.22 ug/	L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/	L 1.00 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	1		not	detected	. 700	0.18 ug/	L 0.50 ug/L	
75-09-2	Methylene Chloride	1		not	detected	3	0.16 ug/	L 0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene	1	-	not	detected	100	0.20 ug/	L 0.50 ug/L	
75-35-3	1.1-Dichloroethane	1		not	detected	50	0,19 ug/	L 0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.20 ug/	L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/	L 1.00 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	1		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 1.00 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 1.00 ug/L	<b></b>
108-88-3	Toluene			not	detected	1000	0.15 ug/	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 ug/	0.50 ug/L	
79-00-5	1.1.2-Trichloroethane			not	detected	3	0.14 ug/	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	1	0.18 ug/	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14 ug/	0.50_ug/L	
108-90-7	Chlorobenzene			not	detected	50	0.15 ug/	. 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		0.15 ug/	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27 ug/l	_ <u>1.00 ug/L</u>	
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/J	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.12 ug/	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/	<u>0.50 ug/L</u>	
95-50-1	1,2-Dichlorobenzene			not	detected	600	0.12 ug/l	<u>  0.50 ug/L</u>	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

### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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		TENTATI	VELY IDEN	TIFIED COMPOU	NDS		
Lab Name:	FMETL			Contract:		750 TRIP BL	ANK
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS No.		SDG No.: 90434	
Matrix: (soil/v	vater)	WATER	_	Lab	Sample II	D: 9043401	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab	File ID:	VA4843.D	_
Level: (low/n	ned)	LOW	_	Date	e Receive	d: <u>11/3/2009</u>	-
% Moisture: r	not dec.		<u></u>	Date	e Analyzeo	d: <u>11/4/2009</u>	_
GC Column:	RTX-V	<u>/M_</u> ID; <u>0.2</u>	25 (mm)	Dilu	tion Facto	r: <u>1.0</u>	_
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	. (uL)
				CONCENTRATI		S:	
Number TICs	s found:	0	<u> </u>	(ug/L or ug/Kg)	UG/L		
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q

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3/90 000027

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

Data File	VA4844.D	Sample Name	9043402
Operator	ROBERTS	Field ID	750 FIELD BLANK
Date Acquired	4 Nov 2009 8:59 pm	Sample Multiplier	1

<u> </u>		5.00	<b>D</b>	Decult		Regulatory Level (ug/l)*	MDI		рĭ	Qualifiers
CAS#	Compound Name	<u>R.1.</u>	Response	Result	datastad		2 00	11 <i>m</i> /T	5.00 ug/f	Quanners
107028	Acrolein			not	detected		1.64	<u>цель</u> ма/Г	5.00 ug/L	
107131	Acrylonitrile			not	detected	- 2	1.04	ug/L ug/T	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100	0.19		0.50 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.10	ид/С	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12	ug/L v.~/T	0.00 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22	<u>ug/L</u>	1.00 ug/L	····
74-87-3	Chloromethane			not	detected	nle	0.10	ug/L /r	1.00 ug/L	· · · · - ·
75-01-4	Vinyl Chloride			not	detected		0.22	ug/L	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25	ид/ш	1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22	ug/L	1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.10	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	0,10	ug/L væ/T	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	700	0,16	ug/L ua/T	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	3	0.10	ugyr.	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20	ugyr.	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	0.50 ug/L	1
78-93-3	2-Butanone			not	detected	300	0.10	ug/L	1.00 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	defected		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 Tetrachioride			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	I	0,18	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane	-		not	detected		0.16	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle.	0.25	ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0,16	ug/L	0.50 ug/L	···
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0,26	ug/L	<u>1.00 ug/L</u>	
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		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	nie	0.27	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	nie	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	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.1 <u>2</u>	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	ļ
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

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					NDO		
Lab Name:	FMETL			Contract:			DEANN
Lab Code:	13461	Ca	se No.: MW	SAS No.	:	SDG No.: 90	)434
Matrix: (soil/v	vater)	WATER	-	Lab	Sample II	D: 9043402	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4844.D	
Level: (low/n	ned)	LOW	_	Dat	e Receive	d: <u>11/3/2009</u>	
% Moisture: r	not dec.			Dat	e Analyzeo	d: <u>11/4/2009</u>	
GC Column:	RTX-V	/M_ID: 0.2	25(mm)	Dilu	ition Facto	r: <u>1.0</u>	
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	(uL)
Number TICs	s found:	0	_	CONCENTRAT (ug/L or ug/Kg)	ION UNIT	S:	
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q



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

Requisiony Level (1008)*

Data File Operator	VA4853.D ROBERTS		Sample Name Field ID	9043411 750 MW#04A
Date Acquired	5 Nov 2009	1:40 am	Sample Multiplier	1

107028     Accylainity     notidetected     5     2.09 lug/L     5.00 ug/L       107131     Acayonity     notidetected     2     1.64 gug/L     5.00 ug/L       1634044     MathylaterBard     notidetected     100     1.89 ug/L     5.00 ug/L       1634044     MathylaterBard     notidetected     700     0.18 ug/L     0.50 ug/L       175718     Dickionorilloorcouchane     notidetected     4etected     1000     0.22 ug/L     1.00 ug/L       73718     Dickionorilloorcouchane     notidetected     4etected     1000     0.22 ug/L     1.00 ug/L       74-87-3     Biromonethane     notidetected     10     0.23 ug/L     1.00 ug/L       75-50-4     Vinyi Chloride     notidetected     10     0.23 ug/L     1.00 ug/L       75-55-4     1.1-Dickinocethane     notidetected     10     0.23 ug/L     1.00 ug/L       75-55-4     1.1-Dickinocethane     notidetected     200     0.18 ug/L     0.50 ug/L       75-55-4     1.1-Dickinocethane     notidetected     3     0.16 ug/L     0.50 ug/L	CAS#	Compound Name	R.T.	Response	Result			MDL	RL	Qualifiers
107131     AcryAmirlie     .     and detected     2     1.64 lug7.     5.60 ug7.       75550     tersButi Jackobal     mod detected     100     1.83 lug7.     0.50 ug7.       108203     Diskorroyl ether     mod detected     2000     0.12 lug7.     0.50 ug7.       75718     Dicharosoftenen     mod detected     2000     0.21 ug7.     1.00 ug7.       75718     Dicharosoftenen     mod detected     1.00 ug7.     1.00 ug7.       73-01-4     Viral Choirode     mod detected     1.00 ug7.     1.00 ug7.       73-01-4     Viral Choirode     mod detected     1.00 ug7.     1.00 ug7.       73-02-3     Romanostane     mod detected     1.00 ug7.     1.00 ug7.       73-50-4     Trichlorofluoronethane     mod detected     1.00 ug7.     1.00 ug7.       73-55-4     Trichlorofluoronethane     mod detected     1.00 ug7.     1.00 ug7.       73-56-4     Acetone     mod detected     1.00 ug7.     0.00 ug7.     1.00 ug7.       73-56-4     Acetone     mod detected     1.00 ug7.     0.00 ug7.	107028	Acrolein			not	detected	5	2.09 ug/L	5.00 ug/L	
72550     ture-Buyl alcohol     nod detected     70     1.88 [ug/L     5.00 ug/L       103203     Disborroyd thar     nod detected     70     0.18 [ug/L     0.50 ug/L       175718     Dichlorodfiluconestame     nod detected     1000     0.22 ug/L     100 ug/L       174487.3     Chloromethame     nod detected     nk     0.01 (ug/L     1.00 ug/L       174487.3     Chloromethame     nod detected     1     0.22 [ug/L     1.00 ug/L       17448.3     Chloromethame     nod detected     1     0.22 [ug/L     1.00 ug/L       175.90-3     Chloromethame     nod detected     1     0.22 [ug/L     1.00 ug/L       175.92-4     1.1Dibloromethame     nod detected     1     0.20 [ug/L     0.50 ug/L       175.94     1.1Dibloromethame     nod detected     1     0.20 [ug/L     0.50 ug/L       175.95     1.1Dibloromethame     nod detected     1     0.20 [ug/L     0.50 ug/L       175.95     1.1Dibloromethame     nod detected     1     0.20 [ug/L     0.50 ug/L       175.95 <t< td=""><td>107131</td><td>Acrylonitrile</td><td>  </td><td></td><td>not</td><td>detected</td><td>2</td><td>1.64 ug/L</td><td>5.00 ug/L</td><td></td></t<>	107131	Acrylonitrile			not	detected	2	1.64 ug/L	5.00 ug/L	
1634044     Methyl-ter.Fauyl eller     uod detected     70     0.18 ug/L     0.50 ug/L       108203     Di-isorgory elles     not detected     2000     0.12 ug/L     0.50 ug/L       745718     Dichlororifizoromethane     not detected     1000     0.22 ug/L     1.00 ug/L       74-87-3     Chloromethane     not detected     1     0.22 ug/L     1.00 ug/L       74-81-3     Enomenchane     not detected     1     0.22 ug/L     1.00 ug/L       74-83-9     Bromonethane     not detected     1     0.22 ug/L     1.00 ug/L       75-69-4     Tichlorofhuromethane     not detected     1     0.22 ug/L     1.00 ug/L       75-53-4     Ti-Dichlorofhuro     not detected     2000     0.18 ug/L     0.50 ug/L       75-59-4     Ti-Dichlorofhuro     not detected     2     0.01 ug/L     0.50 ug/L       75-59-4     Ti-Dichlorofhuro     not detected     3     0.16 ug/L     0.50 ug/L       75-59-5     Um-L-Dichlorofhuro     not detected     3     0.16 ug/L     0.50 ug/L       75-59-6	75650	tert-Butyl alcohol			not	detected	100	1.89 ug/L	5.00 ug/L	
102:03     Disborognet elser     and detected     2000     0.12 ug/L     0.00 ug/L       74:718     Chicomentanae     not detected     100     0.22 ug/L     1.00 ug/L       74:718     Chicomentanae     not detected     1     0.22 ug/L     1.00 ug/L       74:83.9     Bromometane     not detected     1     0.22 ug/L     1.00 ug/L       74:83.9     Bromometane     not detected     1     0.22 ug/L     1.00 ug/L       74:83.9     Bromometane     not detected     1     0.22 ug/L     1.00 ug/L       75:59.4     1;Libidoroethene     not detected     2000     0.18 ug/L     0.50 ug/L       75:59.4     1;Libidoroethene     not detected     2     0.16 ug/L     0.50 ug/L       75:59.4     1;Libidoroethene     not detected     2     0.16 ug/L     0.50 ug/L       75:59.4     Herbylene Chioride     not detected     2     0.16 ug/L     0.50 ug/L       75:59.5     teststa     not detected     20     0.02 ug/L     0.50 ug/L       75:56.4     ti.1:philoroethane	1634044	Methyl-tert-Butyl ether			not	detected	70	0.18 ug/L	0.50 ug/L	
75718     Dicklorodificoromethame     nod detected     1000     0.22 lug/L     1.00 lug/L       74-87.3     Chloromethame     nod detected     16     0.01 lug/L     100 lug/L       74-87.3     Brommethame     nod detected     10     0.22 lug/L     1.00 lug/L       74-80.3     Brommethame     nod detected     10     0.22 lug/L     1.00 lug/L       75-90-4     Trichlorofluoromethame     nod detected     1     0.22 lug/L     1.00 lug/L       75-554-4     Trichlorofluoromethame     nod detected     1     0.20 lug/L     0.50 lug/L       67-54-1     Actiono     nod detected     1     0.20 lug/L     0.50 lug/L       75-50-2     Methylane Chloride     7.46     41952     1.52 lug/L     700     0.18 lug/L     0.50 lug/L       15-60-5     trans.12-Dichloroethane     nod detected     3     0.16 lug/L     0.50 lug/L       198-05-4     trans.12-Dichloroethane     nod detected     700     0.20 lug/L     0.50 lug/L       198-05-4     trans.12-Dichloroethane     nod detected     700     0.16 lug/L	108203	Di-isopropyl ether	<u> </u>		not	detected	20000	0.12 ug/L	0.50 ug/L	
174-87-3     Chloromethane     notl detected     1.0.0 ug/L     1.0.0 ug/L       775-014     Vinol Chlorofade     notl detected     1     0.221 ug/L     1.00 ug/L       775-014     Vinol Chlorofana     notl detected     10     0.221 ug/L     1.00 ug/L       775-09-3     Chlorofana     notl detected     10     0.221 ug/L     1.00 ug/L       75-69-4     Trichlorofluoronethane     notl detected     2000     0.18 ug/L     1.00 ug/L       75-59-4     11-Dichloroethene     notl detected     10     0.20 ug/L     0.50 ug/L       75-59-2     Methylene Chloride     notl detected     3     0.16 ug/L     0.50 ug/L       75-59-2     Methylene Chloride     notl detected     3     0.16 ug/L     0.50 ug/L       75-59-4     Vinol Acetate     notl detected     300     0.16 ug/L     0.50 ug/L       75-59-5     11-Dichloroethene     notl detected     300     0.16 ug/L     0.50 ug/L       78-93-3     2-Butanone     notl detected     300     0.16 ug/L     0.50 ug/L       78-93-5     11	75718	Dichlorodifluoromethane			not	detected	1000	0.22 ug/L	1.00 ug/L	
75-01-4     Vinyl Chloride     Inol detected     1     0.221 ug/L     1.00 ug/L       74-33-9     Bromonethane     nol detected     10     0.25 ug/L     1.00 ug/L       75-00-3     Chlorosthane     nol detected     2000     0.18 ug/L     1.00 ug/L       75-53-4     Trichlorofluoromethane     nol detected     2000     0.18 ug/L     0.50 ug/L       67-54-1     Actions     nol detected     600     0.18 ug/L     0.50 ug/L       75-15-0     Carbon Diadifie     7.46     41952     1.52 ug/L     700     0.18 ug/L     0.50 ug/L       75-04-1     Actions     nol detected     100     0.20 ug/L     0.50 ug/L       75-05-3     trans-1,2-Dichlorothene     nol detected     50     0.19 ug/L     0.50 ug/L       108-05-4     Vinyl Acetate     nol detected     50     0.19 ug/L     0.50 ug/L       108-05-4     Vinyl Acetate     nol detected     70     0.14 ug/L     0.50 ug/L       108-05-4     Vinyl Acetate     nol detected     70     0.21 ug/L     0.50 ug/L	74-87-3	Chloromethane			not	detected	nle	0.10 ug/L	1.00 ug/L	
174.83-9     Bromonethane     nol detected     10     0.22 (g/L     1.00 ug/L       75.00.3     Chloreschane     nol detected     n.1     0.22 (g/L     1.00 ug/L       75.54.4     Trichlorofluoromethane     nol detected     1     0.22 (g/L     0.50 ug/L       75.54.4     1.1-Dichloroeftene     nol detected     6000     0.18 (g/L     0.50 ug/L       75.07.2     Methylene Chloride     7.6     4.1     0.20 (g/L     0.50 ug/L       75.07.2     Methylene Chloride     7.6     9.1     0.50 ug/L     0.50 ug/L       156-60-5     trans 1,2-Dichloroethane     nol detected     500     0.16 (g/L     0.50 ug/L       156-60-5     trans 1,2-Dichloroethane     nol detected     500     0.16 (g/L     0.50 ug/L       168-02-4     Vin/A cocta/e     nol detected     7000     0.21 (g/L     0.50 ug/L       178-93-3     2-Butanone     nol detected     700     0.14 (g/L     0.50 ug/L       168-057-2     dis-1,2-Dichloroethane     nol detected     70     0.14 (g/L     0.50 ug/L       156-63	75-01-4	Vinyl Chloride	ł		not	detected		0.22 ug/L	1.00 ug/L	· · · · · · · · · · · · · · · · · · ·
75-69-3     Chloroethane     not detected     net     0.22 ug/L     1.00 ug/L       75-69-4     Tricklorophinovanchane     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       75-55-4     1,1-Dichlorophane     not detected     6000     0.18 ug/L     0.50 ug/L       67-64-1     Acetone     not detected     3     0.16 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-Dichloroethane     not detected     500     0.20 ug/L     0.50 ug/L       108-05-4     Vinyl Acetate     not detected     7000     0.20 ug/L     0.50 ug/L       186-59-2     dis1,2-Dichloroethane     not detected     70     0.21 ug/L     0.50 ug/L       67-65-3     Chloroform     not detected     70     0.21 ug/L     0.50 ug/L       74-53-5     L1,1-Tichloroethane     not detected     70     0.21 ug/L     0.50 ug/L       75-55-6	74-83-9	Bromomethane			not	detected	10	0.25 ug/L	1.00 ug/L	
75-55-6     Initialization     noti detected     2000     0.18 ug/L     1.00 ug/L       75-53-4     11-Dickloroethene     noti detected     1     0.20 ug/L     0.50 ug/L       75-53-4     11-Dickloroethene     noti detected     6000     0.18 ug/L     0.50 ug/L       75-09-4     Atetono Disalfide     7.46     41952     1.52 ug/L     700     0.18 ug/L     0.50 ug/L       75-09-4     Metuyene Choiride     noti detected     3     0.16 ug/L     0.50 ug/L     0.50 ug/L       156-60-5     trans-1,2-Dickloroethene     noti detected     30     0.19 ug/L     0.50 ug/L       168-62-4     Vinyl Acetate     noti detected     700     0.18 ug/L     0.50 ug/L       178-93-3     2-Butanone     noti detected     70     0.14 ug/L     0.50 ug/L       166-59-2     ci-1,2-Dickloroethene     noti detected     70     0.14 ug/L     0.50 ug/L       75-55-6     1,1-1'rickloroethane     noti detected     70     0.14 ug/L     0.50 ug/L       107-05-2     1,2-Dickloroethane     noti detected     1	75-00-3	Chloroethane			not	detected	nle	0.22 ug/L	1.00 ug/L	
75-35.4   1,1-Dichlorosftene   noti detected   1   0.20 lug/L   0.50 ug/L     67-64-1   Acetone   noti detected   600   0.18 lug/L   0.50 ug/L     75-15-0   Carbon Disalfide   7.46   41952   1.52 ug/L   700   0.18 lug/L   0.50 ug/L     75-09-2   Methylene Chloride   noti detected   3   0.16 lug/L   0.50 ug/L   0.50 ug/L     156-60-5   trans 1,2-Dichlorosthene   noti detected   50   0.19 lug/L   0.50 ug/L     108-05.4   Vini Acetate   noti detected   7000   0.20 lug/L   0.50 ug/L     105-59-2   cis1,2-Dichlorosthene   noti detected   7000   0.16 lug/L   0.50 ug/L     155-59-2   cis1,2-Dichlorosthene   noti detected   70   0.14 lug/L   0.50 ug/L     156-59-2   cis1,2-Dichlorosthene   noti detected   70   0.21 lug/L   0.50 ug/L     156-60-3   th,1,7-Trichlorosthane   noti detected   70   0.21 lug/L   0.50 ug/L     156-60-3   th,1,1,1-trichlorosthane   noti detected   1   0.16 lug/L   0.50 ug/L     166-12-1 <td< td=""><td>75-69-4</td><td>Trichlorofluoromethane</td><td></td><td></td><td>not</td><td>detected</td><td>2000</td><td>0.18 ug/L</td><td>1.00 ug/L</td><td></td></td<>	75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/L	1.00 ug/L	
67-64-1     Actions     not detected     6000     0.18     ug/L     0.50     ug/L       75-15-0     Carbon Disulfide     7.6     41952     1.52     ug/L     700     0.18     ug/L     0.50     ug/L       155-60-5     trans-1,2-Dichforcethene     not     detected     100     0.20     ug/L     0.50     ug/L       75:35-3     11-Dichforcethene     not     detected     50     0.19     ug/L     0.50     ug/L       108:05-4     Vim/ Acetate     not     detected     7000     0.18     ug/L     0.50     ug/L       108:05-2     11-Dichforcethene     not     detected     7000     0.14     ug/L     0.50     ug/L       165:05-2     cis-12-Dichforcethene     not     detected     700     0.14     ug/L     0.50     ug/L       156:32-2     Carbon Tetachforide     not     detected     700     0.21     ug/L     0.50     ug/L       75:35-6     Lip-Dichforcethane     not     detected     1	75-35-4	1,1-Dichloroethene			not	detected	I	0.20 ug/L	0.50 ug/L	`
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	67-64-1	Acetone	<u> </u>		not	detected	6000	0.18 ug/L	0.50 ug/L	
75-09-2.     Meduylene Chloride     not     detected     3     0.16     ug/L     0.50     ug/L       155-60-5     trans-1,2-Dichloroethane     not     detected     100     0.20     ug/L     0.50     ug/L       108-05-4     Vinyl Acetate     not     detected     50     0.19     ug/L     0.50     ug/L       108-05-4     Vinyl Acetate     not     detected     300     0.16     ug/L     0.50     ug/L       178-93-3     2-Butanone     not     detected     700     0.21     ug/L     0.50     ug/L       67-66-3     Chloroform     not     detected     70     0.21     ug/L     0.50     ug/L       56-23-5     Carbon Tetrachloride     not     detected     10     0.50     ug/L       71-43-2     Benzene     not     detected     1     0.17     ug/L     0.50     ug/L       107-06-2     1,2-Dichloroethane     not     detected     1     0.18     ug/L     0.50     ug/L </td <td>75-15-0</td> <td>Carbon Disulfide</td> <td>7.46</td> <td>41952</td> <td>1.52</td> <td>ug/L</td> <td>700</td> <td>0.18 ug/L</td> <td>0.50 ug/L</td> <td></td>	75-15-0	Carbon Disulfide	7.46	41952	1.52	ug/L	700	0.18 ug/L	0.50 ug/L	
156-60-5     trans-1,2-Dichloroethene     notl     detected     100     0.20 µg/L     0.50 µg/L       75-35-5     1,1-Dichloroethene     notl     detected     50     0.19 µg/L     0.50 µg/L       78-93-3     2-Butanone     notl     detected     300     0.16 µg/L     1.00 µg/L       156-59-2     cis-1,2-Dichloroethene     notl     detected     70     0.14 µg/L     0.50 µg/L       75-55-6     1,1,1-Trichloroethane     notl     detected     30     0.17 µg/L     0.50 µg/L       75-55-6     1,1,1-Trichloroethane     notl     detected     1     0.21 µg/L     0.50 µg/L       76-61-2     Carbon Tetrachoride     notl     detected     1     0.21 µg/L     0.50 µg/L       71-43-2     Benzene     notl     detected     1     0.21 µg/L     0.50 µg/L       107-06-2     1,2-Dichloroethane     notl     detected     1     0.16 µg/L     0.50 µg/L       78-87-5     1,2-Dichloroethane     notl     detected     1     0.16 µg/L     0.50 µg/L       100-1	75-09-2	Methylene Chloride			not	detected	3	0.16 ug/L	0.50 ug/L	
75-35-3     1.1-Dichloroethane     noti detected     50     0.19 lg/L     0.50 ug/L       108-05-4     Vinyl Acetate     noti detected     7000     0.20 ug/L     0.50 ug/L       178-93-3     2-Butanone     noti detected     7000     0.14 ug/L     0.50 ug/L       156-59-2     cis-1,2-Dichloroethane     noti detected     70     0.14 ug/L     0.50 ug/L       67-66-3     Chloroform     noti detected     70     0.21 ug/L     0.50 ug/L       75-55-6     1,1-Trichloroethane     noti detected     30     0.71 ug/L     0.50 ug/L       75-55-7     Carbon Tetrachloride     noti detected     1     0.27 ug/L     0.50 ug/L       71-43-2     Benzene     noti detected     1     0.16 ug/L     0.50 ug/L       107-06-2     1,2-Dichloroethane     noti detected     1     0.16 ug/L     0.50 ug/L       78-91-5     1,2-Dichloroethane     noti detected     1     0.16 ug/L     0.50 ug/L       78-87-5     1,2-Dichloroethane     noti detected     1     0.16 ug/L     0.50 ug/L       10051-01-5	156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20 ug/L	0.50 ug/L	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	75-35-3	1,1-Dichloroethane	<u> </u>		not	detected	50	0.19 ug/L	0.50 ug/L	
178-93-3     2-Buttanone     notl detected     300     0.16 (ug/L     1.00 ug/L       156-59-2     cis.1.2-Dickhoroethene     notl detected     70     0.14 ug/L     0.50 ug/L       67-66-3     Chloroform     notl detected     70     0.21 ug/L     0.50 ug/L       75-55-6     1,1.1-Trichloroethane     notl detected     300     0.17 ug/L     0.50 ug/L       366-23-5     Carbon Tetrachloride     notl detected     1     0.21 ug/L     0.50 ug/L       71-43-2     Benzene     notl detected     1     0.16 ug/L     0.50 ug/L       107-06-2     1.2-Dickhoroethane     notl detected     1     0.18 ug/L     0.50 ug/L       78-87-5     1.2-Dickhoroethane     notl detected     1     0.18 ug/L     0.50 ug/L       75-27-4     Bromodichoromethane     notl detected     1     0.16 ug/L     0.50 ug/L       10061-01-5     cis-1.3-Dichloropropane     notl detected     1     0.16 ug/L     0.50 ug/L       10061-01-6     cis-1.3-Dichloropropene     notl detected     1     0.16 ug/L     0.50 ug/L  1	108-05-4	Vinyl Acetate			not	detected	7000	0.20 ug/L	0.50 ug/L	
155-59-22     eis-1,2-Dichloroethene     not1 detected     70     0,14 ug/L     0.50 ug/L       67-66-3     Chloroform     not1 detected     70     0,21 ug/L     0.50 ug/L       75-55-6     1,1,1-Trichloroethane     not1 detected     30     0.77 ug/L     0.50 ug/L       56-23-5     Carbon Tetrachloride     not1 detected     1     0.27 ug/L     0.50 ug/L       71-43-2     Benzene     not1 detected     1     0.16 ug/L     0.50 ug/L       107-06-2.     1,2-Dichloroethane     not1 detected     1     0.16 ug/L     0.50 ug/L       79-01-6     Trichloroethane     not1 detected     1     0.16 ug/L     0.50 ug/L       75-27-4     Bromodichloromethane     not1 detected     1     0.16 ug/L     0.50 ug/L       110-75-8     2-Chloroethy vinyl ether     not1 detected     nle     0.25 ug/L     1.00 ug/L       10061-01-5     cis-1,3-Dichloropropene     not1 detected     nle     0.25 ug/L     1.00 ug/L       1008-10-1     4-Methyl-2-Pentanone     not1 detected     nle     0.26 ug/L     1.00 ug/L	78-93-3	2-Butanone			not	detected	300	0.16 ug/L	1.00 ug/L	
67-66-3     Chloroform     not[detected     70     0.21 [wg/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     Trichloroethane     not[detected     1     0.16 ug/L     0.50 ug/L       78-87-5     1,2-Dichloropropane     not[detected     1     0.16 ug/L     0.50 ug/L       100-75-8     2-Chloroethyl vinyl ether     not[detected     1     0.16 ug/L     0.50 ug/L       110-75-8     2-Chloroethyl vinyl ether     not[detected     nle     0.25 ug/L     1.00 ug/L       10061-01-5     cis.13-Dichloropropene     not[detected     nle     0.26 ug/L     0.50 ug/L       1008-88-3     Toluene     not[detected     1     0.16 ug/L     0.50 ug/L       1001	156-59-2	cis-1,2-Dichloroethene			not	detected	70	0.14 ug/L	0.50 ug/L	
75-55-6     1,1,1-Trichloroghane     notl detected     30     0,17     µg/L     0.50     µg/L       56-23-5     Carbon Tetrachloride     notl detected     1     0,27     µg/L     0.50     µg/L       71-43-2     Benzene     notl detected     1     0.16     µg/L     0.50     µg/L       107-06-2     1,2-Dichloroethane     notl detected     2     0.19     µg/L     0.50     µg/L       78-87-5     1,2-Dichloroethane     notl detected     1     0.16     µg/L     0.50     µg/L       78-87-5     1,2-Dichloropropane     notl detected     1     0.16     µg/L     0.50     µg/L       10-75-8     2-Chloroethyl vinyl ether     notl detected     1     0.14     µg/L     0.50     µg/L       10061-01-5     cis.1.3-Dichloropropene     notl detected     1     0.16     µg/L     1.00     µg/L       1008-10-1     4-Methyl-2-Pentanone     notl detected     1     0.16     µg/L     0.50     µg/L       10061-02-6     trans-1.3-Dichloro	67-66-3	Chloroform			not	detected	70	0.21 ug/L	0.50 ug/L	
56-23-5     Carbon Tetrachloride     notl detected     1     0.27 lug/L     0.50 ug/L       71-43-2     Benzene     notl detected     1     0.16 ug/L     0.50 ug/L       107-06-2     1,2-Dichloroethane     notl detected     2     0.19 ug/L     0.50 ug/L       78-01-6     Trichloroethane     notl detected     1     0.18 ug/L     0.50 ug/L       78-87-5     1,2-Dichloropropane     notl detected     1     0.16 ug/L     0.50 ug/L       78-87-5     1,2-Dichloropropane     notl detected     1     0.16 ug/L     0.50 ug/L       75-27-4     Bromodichloromethane     notl detected     1     0.16 ug/L     0.50 ug/L       110-75-8     2-Chloroethyl vinyl ether     notl detected     nle     0.25 ug/L     1.00 ug/L       10061-01-5     cis-1,3-Dichloropropene     notl detected     nle     0.26 ug/L     1.00 ug/L       108-8-10-1     4-Methyl-2-Pentanone     notl detected     nle     0.26 ug/L     0.50 ug/L       108-8-10-2     trans-1,3-Dichloropropene     notl detected     1     0.12 ug/L     0.50 ug/L	75-55-6	1,1,1-Trichloroethane			not	detected	30	0.17 ug/L	0.50 ug/L	
71-43-2   Benzene   not detected   1   0.16 µg/L   0.50 µg/L     107-06-2   1,2-Dichloroethane   not detected   2   0.19 µg/L   0.50 µg/L     79-01-6   Trichloroethane   not detected   1   0.16 µg/L   0.50 µg/L     78-87-5   1,2-Dichloropropane   not detected   1   0.14 µg/L   0.50 µg/L     75-27-4   Bromodichloromethane   not detected   1   0.14 µg/L   0.50 µg/L     110-75-8   2-Chloroethyl vinyl ether   not detected   nle   0.25 µg/L   1.00 µg/L     10061-01-5   cis-1,3-Dichloropropene   not detected   nle   0.26 µg/L   0.50 µg/L     108-88-3   Toluene   not detected   nle   0.26 µg/L   0.50 µg/L     10061-02-6   trans.1,3-Dichloropropene   not detected   1   0.16 µg/L   0.50 µg/L     10061-02-6   trans.1,3-Dichloropropene   not detected   1   0.12 µg/L   0.50 µg/L     10061-02-6   trans.1,3-Dichloropropene   not detected   1   0.12 µg/L   0.50 µg/L     10061-02-6   trans.1,3-Dichloropropene   not detected   1	56-23-5	Carbon Tetrachloride	·		not	detected	1	0.27 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   1.00 ug/L     10061-01-5   cis1,3-Dichloropropene   not detected   nle   0.26 ug/L   1.00 ug/L     108-10-1   4-Methyl-2-Pentanone   not detected   nle   0.26 ug/L   1.00 ug/L     108-10-26   trans-1,3-Dichloropropene   not detected   1   0.12 ug/L   0.50 ug/L     10061-02-6   trans-1,3-Dichloropropene   not detected   1   0.12 ug/L   0.50 ug/L     127-18-4   Tetrachloroethane   not detected   1   0.18 ug/L   0.50 ug/L     126-48-1   Dibromochloronthane   not detected   1   0.18 ug/L   0.50 ug/L     126-48-1   Dibromochloronthane   not detected	71-43-2	Benzene	<u> </u>		not	detected	.1	0.16 ug/L	0.50 ug/L	
79-01-6     Trichforoethene     not detected     1     0.18 ug/L     0.30 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       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     1.00 ug/L       10061-01-5     cis-1,3-Dichloropropene     nott detected     nle     0.26 ug/L     1.00 ug/L       108-88-3     Toluene     nott detected     nle     0.26 ug/L     0.50 ug/L       10061-02-6     trans-1,3-Dichloropropene     nott detected     1     0.12 ug/L     0.50 ug/L       10061-02-6     trans-1,3-Dichloropropene     nott detected     3     0.14 ug/L     0.50 ug/L       127-18-4     Tetrachloroethane     nott detected     1     0.18 ug/L     0.50 ug/L       126-48-1     Dibromochloromethane     not detected     1     0.14 ug/L     0.50 ug/L	107-06-2.	1,2-Dichloroethane	<u> </u>		not	detected	2	0.19 ug/L	0.50 ug/1.	
78-8/-5   1,2-Dichloropropane   noti detected   1   0.16 ug/L   0.50 ug/L     75-27-4   Bromodichloromethane   noti detected   1   0.14 ug/L   0.50 ug/L     110-75-8   2-Chloroethyl vinyl ether   noti detected   nle   0.25 ug/L   1.00 ug/L     10061-01-5   cis-1,3-Dichloropropene   noti detected   1   0.16 ug/L   0.50 ug/L     108-10-1   4-Methyl-2-Pentanone   noti detected   1   0.16 ug/L   0.50 ug/L     108-88-3   Toluene   noti detected   nle   0.26 ug/L   1.00 ug/L     108-88-3   Toluene   noti detected   1   0.12 ug/L   0.50 ug/L     10061-02-6   trans-1,3-Dichloropropene   noti detected   1   0.12 ug/L   0.50 ug/L     10061-02-6   trans-1,3-Dichloropropene   noti detected   1   0.12 ug/L   0.50 ug/L     127-18-4   Tetrachloroethane   noti detected   1   0.18 ug/L   0.50 ug/L     126-48-1   Dibromochloromethane   noti detected   1   0.14 ug/L   0.50 ug/L     126-48-1   Dibromochloromethane   noti detected   1 <td>79-01-6</td> <td>Trichloroethene</td> <td><del>  </del></td> <td></td> <td>not</td> <td>detected</td> <td>1</td> <td>0.18 ug/L</td> <td>0.50 ug/L</td> <td></td>	79-01-6	Trichloroethene	<del>  </del>		not	detected	1	0.18 ug/L	0.50 ug/L	
13-2/-4   Bromodichloromethane   not detected   1   0.14 lg/L   0.30 lg/L     110-75-8   2-Chloroethyl vinyl ether   not detected   nle   0.25 lg/L   1.00 ug/L     10061-01-5   cis-1,3-Dichloropropene   not detected   1   0.16 lg/L   0.50 ug/L     108-10-1   4-Methyl-2-Pentanone   not detected   nle   0.26 lg/L   1.00 ug/L     108-88-3   Toluene   not detected   nle   0.26 lg/L   0.50 ug/L     10061-02-6   trans-1,3-Dichloropropene   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     10061-02-6   trans-1,3-Dichloropropene   not detected   1   0.12 ug/L   0.50 ug/L     10061-02-6   trans-1,3-Dichloropropene   not detected   1   0.14 ug/L   0.50 ug/L     127-18-4   Tetrachloroethane   not detected   1   0.18 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	/8-8/-5	1,2-Dichloropropane	╂────┤		not	detected	1	0.16 ug/L	0.50 ug/L	
110-73-8     2-Chloroethyl vinyl ether     not detected     nle     0.25 lug/L     1.00 lg/L       10061-01-5     cis-1,3-Dichloropropene     not detected     1     0.16 lug/L     0.50 ug/L       108-10-1     4-Methyl-2-Pentanone     not detected     nle     0.26 lug/L     1.00 ug/L       108-88-3     Toluene     not detected     nle     0.26 lug/L     0.50 ug/L       10061-02-6     trans-1,3-Dichloropropene     not detected     1000     0.15 lug/L     0.50 ug/L       10061-02-6     trans-1,3-Dichloropropene     not detected     1     0.12 ug/L     0.50 ug/L       10061-02-6     trans-1,3-Dichloropropene     not detected     1     0.14 ug/L     0.50 ug/L       127-18-4     Tetrachloroethane     not detected     1     0.18 ug/L     0.50 ug/L       127-18-4     Tetrachloroethane     not detected     1     0.18 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     0.5	/5-27-4	Bromodichloromethane	<b>↓</b> ∤		not	detected	1	0.14 ug/L	0.50 ug/L	
10061-01-3     cist_1_3-Dichloropropene     not     detected     1     0.16     ug/L     0.30     ug/L     1       108-10-1     4-Methyl-2-Pentanone     not     detected     nle     0.26     ug/L     1.00     ug/L     1     0.16     ug/L     0.30     ug/L     1     0.12     ug/L     0.50     ug/L     1     0.12     ug/L     0.50     ug/L     1     0.12     ug/L     0.50     ug/L     1     1     0.14     ug/L     0.50     ug/L     1     1     1     0.14     ug/L     0.50     ug/L     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1	110-75-8	2-Chloroethyl vinyl ether			not	detected	nle	0.25 ug/L	1.00 ug/L	
IOS-10-1     4-Methyl-2-Pentanone     Incl detected     Incl d	10061-01-5	cis-1,3-Dichloropropene			not	detected		0.16jug/L	0.50 ug/L	
108-88-3     Toluene     not detected     1000     0.15 ltg/L     0.30 ltg/L       10061-02-6     trans-1,3-Dichloropropene     not detected     1     0.12 ltg/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     Tetrachloroethane     not detected     1     0.18 ug/L     0.50 ug/L       591-78-6     2-Hexanone     not detected     1     0.14 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     1     0.14 ug/L     0.50 ug/L       100-41-4     Ethylbenzene     not detected     50     0.15 ug/L     0.50 ug/L       100-42-4     Ethylbenzene     not detected     700     0.16 ug/L     0.50 ug/L       1330-20-7     m+p-Xylenes     not detected     ne     0.27 ug/L     1.00 ug/L	108-10-1	4-Methyl-2-Pentanone	───┦		not	detected	nle	0.26 ug/L	1.00 ug/L	
10061-02-6     trans-1,3-Dichloropropropene     not     detected     1     0.12 lug/L     0.30 lug/L       79-00-5     1,1,2-Trichloroethane     not     detected     3     0.14 lug/L     0.50 ug/L       127-18-4     Tetrachloroethane     not     detected     1     0.18 lug/L     0.50 ug/L       591-78-6     2-Hexanone     not     detected     1     0.14 lug/L     0.50 ug/L       126-48-1     Dibromochloromethane     not     detected     1     0.14 lug/L     0.50 ug/L       108-90-7     Chlorobenzene     not     detected     50     0.15 lug/L     0.50 ug/L       100-41-4     Ethylbenzene     not     detected     700     0.16 lug/L     0.50 ug/L       1330-20-7     m+p-Xylenes     not     detected     1     0.15 lug/L     0.50 ug/L	108-88-3	Toluene	<del>   </del>		not	detected	1000	0.15 ug/L	0.50 ug/L	
19-00-5     1,1,2-1nchloroethane     not detected     3     0.14 lug/L     0.30 lug/L       127-18-4     Tetrachloroethane     not detected     1     0.18 lug/L     0.50 lug/L       591-78-6     2-Hexanone     not detected     1     0.18 lug/L     0.50 lug/L       126-48-1     Dibromochloromethane     not detected     1     0.14 lug/L     0.50 lug/L       108-90-7     Chlorobenzene     not detected     50     0.15 lug/L     0.50 lug/L       100-41-4     Ethylbenzene     not detected     700     0.16 lug/L     0.50 lug/L       630-20-6     1,1,1,2-tetrachloroethane     not detected     1     0.15 lug/L     0.50 lug/L       1330-20-7     m+p-Xylenes     not detected     ne     0.27 lug/L     1.00 lug/L	10061-02-6	trans-1,3-Dichloropropene	╂∔		not	detected	1	0.12 ug/L	0.50 ug/L	
127-18-4     Tetrachiorosthene     not detected     1     0.18 lig/L     0.30 lig/L       591-78-6     2-Hexanone     not detected     nile     0.20 lig/L     0.50 lig/L       126-48-1     Dibromochloromethane     not detected     1     0.14 lig/L     0.50 lig/L       108-90-7     Chlorobenzene     not detected     50     0.15 lig/L     0.50 lig/L       100-41-4     Ethylbenzene     not detected     700     0.16 lig/L     0.50 lig/L       630-20-6     1,1,1,2-tetrachloroethane     not detected     1     0.15 lig/L     0.50 lig/L       1330-20-7     m+p-Xylenes     not detected     nile     0.27 lig/L     1.00 lig/L	19-00-5	1,1,2-Trichloroethane			not	detected	3	0.14 ug/L	0.50 ug/L	
S91-78-6     Z-Hexanone     not detected     nie     0.20 ug/L     0.30 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     nie     0.27 ug/L     1.00 ug/L	<u> </u>	1 etrachioroetnene	<b>├</b> ┟			detected	<u> </u>	0.18 ug/L	0.50 ug/L	
126-46-1     Dipromochioromethane     not detected     1     0.14 lbp/L     0.50 lbp/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	106 49 1	Z-Hexanone	<b>├</b> ────┼		not	detected	nlê	0.2010g/L	0.50 ug/L	
106-90-7     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	120-48-1	Dibromochioromethane	<b>├───</b> ┼		not	detected	1	0.14 09/1	0.50 ug/L	
100-41-4     Entypenzene     not detected     700     0.10 ug/L     0.30 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	108-90-7	Chlorobenzene	<b>├</b> ────┼		noL	detected	50	0.15 ug/L	0.50 ug/L	
1330-20-7 m+p-Xylenes not detected nie 0.27 ug/L 1.00 ug/L	620.20.6	Einyidenzene	<u> </u>		not	detected	700	0.10 ug/L	0.30 ug/L	
1 1 3 5 0 - 20 - 7 m+p-Xylenes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1220 20-0	1,1,1,2-tetrachioroethane	<b>├────</b> ╊		not	detected		0.13 ug/L	1.00 ug/L	
	1330-20-7	ntp-Aylenes			1101	detected	nie	0.27 ug/L	0.50 ug/L	
130-22-7 D-Aytene Holdetected nie 0.14 ug/2 0.50 ug/2	100 42 5	Charge a			not	detected		0.12 ug/L	0.50 ug/L	
$75_{25_{2}}$ By an $0$ $0.12$ $0.02$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$ $0.12$	75-25-2	Bromoform			not	detected	100	0.12/ug/L	1 00 119/1	
79.345 11.2.2.Tetrashprosthana not detected 1 0.19 ug/ 0.50 ug/	79-34-5	1 1 2 2-Tetrachloroathana			not	detected		0.121по/Л	0.50 110/1	
1/2-2-3     1/1,1,2,2-1 ctrationotocurants     not detected     1     0.12 (ap)     0.50 (ap)       5d1_73_1     1.3.Dichlorobenzene     not detected     con     0.12 (a)//     0.50 (ap)//	541_72_1	1.3-Dichlorobengene			1100	detected	600	0.12/ug/L	0.50 48/1	·
106-66-7 1 4 Dichloroberzana not detected 75 0.12 lug/J 0.50 ug/J	106-46-7	1.4-Dichlorobenzene			not	detected	75	0.12 110/1	0.50 ug/D	
95-50-1 12-Dichlorobenzene potidetected 600 0.12/ug/1 0.50/ug/1	95-50-1	1.2-Dichlorobenzene				detected	600	0.12.00/1	0.50 ug/I	

*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						
	١	OLATILE OR	GANICS A	NALYS	SIS DATA S	HEET	EPA S	SAMPLE	NO.
		TENTATIVE	LY IDENT	IFIED (	COMPOUN	IDS	750	1015/404	
Lab Name:	FMETL			C	ontract:			111111#04	A
Lab Code:	13461	Case	No.: <u>MW</u>		SAS No.:	S	DG No.:	90434	<b>.</b>
Matrix: (soil/v	vater)	WATER			Lab S	Sample ID:	904341	1	
Sample wt/vo	ol:	<u>5.0 (g</u>	/ml) <u>ML</u>		Lab I	File ID:	VA4853	.D	
Level: (low/n	ned)	LOW			Date	Received:	11/3/200	09	
% Moisture: r	not dec.				Date	Analyzed:	11/5/200	09	
GC Column:	RTX-V	M ID: <u>0.25</u>	_ (mm)		Diluti	on Factor:	1.0		
Soil Extract V	/olume:	(	uL)		Soil A	Aliquot Volu	me:		(uL)
				CONC	ENTRATIO	ON UNITS:			
Number TICs	s found:	0		(ug/L d	or ug/Kg)	UG/L			

COMPOUND NAME

RT

EST. CONC.

CAS NO.

FORM I VOA-TIC

**000047**^{3/90}

Q

# SEMI-VOLATILE ORGANICS

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		Page 1 of 2	(ب) مع 1000000						
Client Sample ID:9043402 FIELD BLANKLab Sample ID:JA32053-1Date SaMatrix:AQ - Field Blank WaterDate ReMethod:SW846 8270CSW846 3510CPercentProject:750						ampled: teceived: t Solids:	11/03/09 11/04/09 n/a		
Run #1 Run #2	File ID 3E23002.D	DF 1	Analyzed 11/17/09	By OYA	Prep D 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045	
Run #1 Run #2	Initial Volume 1000 ml	Final Volu 1.0 ml	me						
BN TCL42	! List								
CAS No.	Compound		Result	RL	MDL	Units	Q		
98-86-2 1912-24-9	Acetophenone Atrazine		ND ND	5.0 5.0	0.40 0.39	ug/l ug/l			• •
100-52-7 101-55-3	Benzaldehyde 4-Bromophenyl Butch harmed al	phenyl ethe	ND r ND ND	5.0 2.0 2.0	0.40	ug/1 ug/1 ug/1			
85-68-7 92-52-4	1,1'-Biphenyl		ND ND	2.0	0.42	ug/l ug/l			
91-38-7 106-47-8	4-Chloroaniline	)	ND	5.0 2.0	0.25	ug/l			
105-60-2	Carbazole Caprolactam	oral mothan	ND	2.0	0.20	ug/l		·	
111-91-1	bis(2-Chloroeth	iyl)ether	ND	2.0	0.31	ug/l			
108-60-1 7005-72-3	4-Chloropheny	propyitemer I phenyl ethe	r ND	2.0	0.35	ug/l			
121-14-2 606-20-2	2,4-Dinitrotolu 2,6-Dinitrotolu	ene	ND	2.0	0.22	ug/l		<u>~</u>	
91-94-1 132-64-9	3,3'-Dichlorob Dibenzofuran	enzidine	ND	5.0 5.0	0.30	ug/1			
84-74-2 117-84-0	Di-n-butyl phth Di-n-octyl phth	alate alate	ND ND	2.0 2.0	0.19	ug/l ug/l			
84-66-2 131-11-3	Diethyl phthala Dimethyl phtha	ite ilate	ND ND	2.0 2.0	$\begin{array}{c} 0.17 \\ 0.23 \end{array}$	ug/l ug/l			
117-81-7 87-68-3	bis(2-Ethylhex Hexachlorobut	yl)phthalate adiene	ND ND	2.0 1.0	0.33 0.37	ug/l ug/l			
77-47-4 67-72-1	Hexachlorocyc Hexachloroeth:	lopentadiene ane	ND ND	20 5.0	$0.67 \\ 0.26$	ug/l ug/l			
78-59-1 91-57-6	Isophorone 2-Methylnapht	halene	ND ND	2.0 2.0	0.25 0.66	ug/l ug/l			
88-74-4 99-09-2	2-Nitroaniline 3-Nitroaniline		ND ND	$\begin{array}{c} 5.0\\ 5.0\end{array}$	0.24 0.29	ug/l ug/l			
100-01-6 98-95-3	4-Nitroaniline Nitrobenzene	`	ND ND	5.0 2.0	0.18 0.25	ug/l ug/l			

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blankN = Indicates presumptive evidence of a compound



			Repor	t of Ana	alysis				Pa	ge 2 of
Client Sample ID:9043402 FIELD BLLab Sample ID:JA32053-1Matrix:AQ - Field Blank WMethod:SW846 8270C SWProject:750		ANK Vater V846 3510C		Date Sampled: Date Received: Percent Solids:		: 11/( : 11/( : n/a	03/09 04/09			
BN TCL42	List					-				
CAS No.	Compo	ound	Result	RL	MDL	Units	Q			
621-64-7 86-30-6	N-Nitr N-Nitr	oso-di-n-propylamine osodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l				
CAS No.	Surrog	gate Recoveries	Run# 1	Run# 2	Lim	its				
4165-60-0 321-60-8 1718-51-0	Nitrob 2-Fluo Terphe	enzene-d5 robiphenyl enyl-d14	79% 78% 79%		25-1 31-1 14-1	12% 106% 122%				
CAS No.	AS No. Tentatively Identified Compour		ounds	R.T.	Est.	Conc.	Units	Q		
	Interna Total 7	al standard added for Sl FIC, Semi-Volatile	IM test	11.50	4.3 0		ug/l ug/l	J		

MDL - Method Detection Limit ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $\tilde{B}$  = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 2 of 2

	Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043402 FIELD B e ID: JA32053-1 AQ - Field Blank SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date Sa Date R Percent	ampled: eceived: t Solids:	11/03/09 11/04/09 n/a	
Run #1 Run #2	File ID     DF       4M13243.D     1	Analyzed 11/11/09	By NAP	Prep Da 11/09/09	te )	Prep Batch OP40821A	Analytical Batch E4M610
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene	ND ND ND ND ND ND ND ND ND ND	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.20\\ 0.20\\ 0.20\\ 0.020\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00\\ 0.00$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.023 0.024 0.027 0.0090	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND	0.020 0.10 0.10 0.10 0.10	0.0099 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its		<b>_</b>
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	90% 77% 73%		18-1 18-1 13-1	19% 04% 09%		

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J = Indicates an estimated value

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THE PARTY ENGINE AN ACCOUNT

	Report of Analysis								
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043411 750MW04A e ID: JA32053-6 AQ - Ground Water SW846 8270C SW8 750	46 3510C		Date S Date F Percer	ampled: Received: nt Solids:	11/03/09 11/04/09 n/a			
Run #1 Run #2	File ID DF 3E23007.D 1	Analyzed 11/17/09	By OYA	Prep D 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045		
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	ne				·····			
BN TCL42	List								
CAS No.	Compound	Result	RL	MDL	Units	Q			
98-86-2	Acetophenone	ND	5.0	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	2.0	0.42	ug/l				
91-58-7	2-Chloronaphthalene	ND	5.0	0.42	ug/l				
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/l				
86-74-8	Carbazole	ND	2.0	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	0.37	ug/l				
77-47-4	Hexachlorocyclopentadiene	ND	20	0.67	ug/l				
67-72-1	Hexachloroethane	ND	5.0	0.26	ug/l				
78-59-1	Isophorone	ND	2.0	0.25	ug/l				
91-57-6	2-Methylnaphthalene	ND	2.0	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				

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

 $J \,=\, Indicates \; an \; estimated \; value$ 

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





E = Indicates value exceeds calibration range

### Report of Analysis

Client Samp Lab Sample Matrix: Method: Project:	ble ID: 9043411 750MW04A ID: JA32053-6 AQ - Ground Water SW846 8270C SW8 750	Date Sampled: Date Received: Percent Solids:			: 11/ l: 11/ s: n/a	/03/09 /04/09					
BN TCL42 List											
CAS No.	Compound	Result	RL	MDL	Units	Q					
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l						
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Li	Limits						
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	77% 78% 78%		25 31 14	-112% -106% -122%						
CAS No.	Tentatively Identified Compounds		R.T.	Es	t. Conc.	Units	Q				
	Internal standard added for SIM test Internal standard added for SIM test Total TIC, Semi-Volatile		11.49 14.94	4.5 4.3 0	4.5 ug 4.3 ug 0 ug		J J				

 $\begin{array}{ll} ND = Not \ detected & MDL - Method \ Detection \ Limit \\ RL = Reporting \ Limit \\ E = Indicates \ value \ exceeds \ calibration \ range \end{array}$ 

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J = Indicates an estimated value

 $\tilde{B}$  = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

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Page 2 of 2

	Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043411 750MW04 e ID: JA32053-6 AQ - Ground Wate SW846 8270C BY 750	4A r SIM SW846	3510C	Date S Date R Percen	ampled: .eceived t Solids	11/03/09 : 11/04/09 : n/a	
Run #1 Run #2	File IDDF4M13248.D1	Analyzed 11/11/09	By NAP	Prep Date 11/09/09		Prep Batch OP40821A	Analytical Batch E4M610
Run #1 Run #2	Initial Volume Final Vol 1000 ml 1.0 ml	ume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		·
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	87% 73% 68%	,	18-11 18-1( 13-1(	19% )4% )9%		

ND = Not detectedMDL - 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

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### 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: 1 / 10/ 10

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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.

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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



### ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

### PROJECT: UST/ Monitoring Program New Wells Round II

### SAMPLE LOCATION AND IDENTIFICATION

SITE: 750

LABORATORY ID #	MONITOR WELL#	NJDEP WELL ID#	SAMPLE DÅTE
9044704	750MW01A**		11/17/09
9044705	750MW02A		11/17/09
9044706	750MW03A		11/17/09
9044707	750MW04A		11/17/09

*New Wells Round II **DUP. Sample is 9044704.

NJDEP Laboratory Certification # 13461

12011

Dean Tardiff/Date: Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

3/15/10 Secularly

Dean Tardiff

# SAMPLING

 Fort Monmouth Environmental Testing Laboratory

 Elds. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.ml

 Chain of Custody

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**Chain of Custody Record** 

NJDEP Certifica	tion #13461						
Customer: JOE FALLON	Project No:			Analysis F	arameters		Comments:
Phone #: 732-532-6223	Location: 2 ND	Courd Security	0				
( )DERA ( )OMA ( )Other:		, ] 	11	51			
Samplers Name / Company: しとんしてじん F	UNIC/ TVS	Sample	ΨO #	+0			
LIMS/Work Order # Sample Location	Date Ti	me - Type b	ttles	B			Remarks / Preservation Method
GUNNT . OI 750 TRIP BLANK	50-LI-11	00 AQ	Z Z				
102 750 FELD TLANK	111 60.21.11	00 AQ	3 X	X			
,03 750 DUP.		0 H T	ЗЗ				
A)0HUM *051 40,	111 50-61-11	0 AQ	2	X			
105 750 MW#02A	111 60-21-11	20 AQ	3 X	X			
A 106 750 mu #03A	111 60-61-11	30 A Q	З X	X			
07 750 mm #04p	11-17-09 11	50 99	З Х	X			-
,			<u> </u>				
							-
						<u>.</u>	
Relinguished the (standature) Date/Time:	Roceived by (signa	durre): d. M. A.	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Relinquished by (signature): Date/Time:	Received by (sign	truje):	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Report Type: ()Full, ()Reduced, ()Standard, ()S Turnaround time: ()Standard 3 wks, ()Rush Wk.,_	creen / non-certified, ( ()ASAP Verbal	JEDD Hrs.	Com	lents:			
		Βοπο					1 VI 2410/000

## SAMPLE RECEIPT FORM

Date Received: _//-17-064	Work Order ID#:
Site/Proj. Name: 150/17/ 012-04	Cooler Temp (°C): 350C
Received By: J. U. MUM	Sign: Achulun
(Print name)	
<u>Check the approp</u>	priate box
<ol> <li>Did the samples come in a cooler?</li> </ol>	yes ∐ vo/ ∐ n/a
2. Were samples rec'd in good condition?	yes 🗌 no
3. Was the chain of custody filled out correctly a	Ind legibly?
4. Was the chain of custody signed in the approp	priate place? yes no
5. Did the labels agree with the chain of custody	/? Lyes I no
6. Were the correct containers/preservatives use	ed? ∠d 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 wit	hin 15 minutes □ yes□ no □ n/a

## Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
POULA-1-1	NA	ACL.			
1	-7.				
					,
·				· ·	
				<u> </u>	
					· · · · · · · · · · · · · · · · · · ·
·					
		·			

Comments:_____

Fort Monmouth Environmental Testing Laboratory

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Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

Chain of Custody Record

	Tel (732)532-4359 ]	Fax (732)532-( ion #13461	5263 EMail;	jacquelir	e.hame	r@us.army.mil	C	hain of Custody Record	
Customer: Jacqueli	ine Hamer	Project No:				Analy	sis Parameters	Comments:	
2hone #: (732)532-435	ó	Location: 750	New Wells	Rd. II					
)DERA ()OMA (	)Other:								
Samplers Name / Com	ıpany:			Sample	#	SI+			
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles	BN		Remarks / Preservation Method	
9044702	Field Blank	11/17/2009	11:00	AQ	~	×			
9044703	DUP.	11/17/2009	11:10	AQ		×		•	
9044704	750MW01A	11/17/2009	11:10	AQ		×			
9044705	750MW02A	11/17/2009	11:20	AQ	~	×			
9044706	750MW03A	11/17/2009	11:30	AQ	~	×			
9044707	750MW04A	11/17/2009	0.80625	AQ	۲	×			
									_
					   .				
									Í
									1
Refinquished by (signatu	rre): Date/Time:	Received by	Ksignaturef:	J.J	Reling	uished by (signature)	: Date/Time:	Received by (signature):	
Relinquished by (signati	rre): Date/Time:	Received by	(sígnature):		Relinc	uished by (signature)	: Date/Time:	Received by (signature):	
Report Type: ()Full, ( Turnaround time: (X)Sta	)Reduced, (X)Standard, ()Sc ndard 3 wks, ()Rush Wk.,_	rreen / non-certi ()ASAP Verba	fied, (JEDD 1Hrs.			Comments: C09-2	20650		
print legibly				Page_	<u>/</u> of	V I	bSeg/ ~	750 COC. 1.XLS11/18/2009	

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## US ARMY FORT MONMOUTH MONITOR WELL SAMPLING

LOCATION: 750A MW #:04A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/17/09 WEATHER: Sunny and cool. TIDE: High	OM-VINNELL S	Sampling C Accordance v SAM ERVICES	onducted in with TVS SOP -0205
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2' Purge Method: Peristaltic Pump/Ot Purge Rate: Not to Exceed Well D	' well or 0.65 for ther (Specify) raw Down of 0.5	- 4" well) x 3 = 5' 26/113	TDOW-19.25 5.98 ft 19.25 ft 13.27 ft 0.00 ppm 26 Gal. 25.87 Gal/Min.
Purge Data: Start Time of Purging: 09:53 End Time of Purging: 11:46 pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	Initial Value 3.89 su 17.62 (°C) 10848 us/cm 136 mv 2.18 mg/L 8.07 ft 8.14 ft 11:50 11:55	<b>Pre-Sample</b> 3.88 su 18.34 ( °C) 11797 us/cm 110 mv 1.82 mg/L	<b>Post-Sample</b> 3.87 su 18.61 ( °C) 12686 us/cm 110 mv 1.08 mg/L
	······································		· · · · · · · · · · · · · · · · · · ·

# CONFORMANCE/ NON-CONFORMANCE SUMMARY

# 90447 VOA

## GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	Indicate Yes No. N/A
Chromatograms labeled/Compounds identified (Field samples and method blanks)	Yes
Retention times for chromatograms provided	Yes
GC/MS Tune Specifications	
	405
<ul><li>a. BFB Meet Criteria</li><li>b. DFTPP Meet Criteria</li></ul>	NIA
GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series	Yes
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 .
GC/MS Calibration requirements	
e de la Challe Change de Mont Critoria	Yes
a. Calibration Check Compounds Meet Criteria b. System Performance Check Compounds Meet Criteria	Yes
Blank Contamination – If yes, List compounds and concentrations in each blank:	Na
a VOA Fraction	
b. B/N Fraction	
c. Acid Fraction	
Surrogate Recoveries Meet Criteria	Yes
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
VOA Fraction	
b B/N Fraction	·
c. Acid Fraction	
If not met, were the calculations checked and the results qualified as "estimated"?	· · · · · ·
A star for the Materix Spile Duplicate Recoveries Meet Criteria	No
Genet met liet these compounds and their recoveries, which fall	<del></del>
outside the acceptable range)	
NOA Fraction Several Confounds have high recoveries duet	o matrix in terference
a. VOA traction	
U. DANTIGORON	
	Chromatograms labeled/Compounds identified (Field samples and method blanks) Retention times for chromatograms provided GC/MS Tune Specifications a. BFB Meet Criteria b. DFTPP Meet Criteria GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series 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 GC/MS Calibration requirements a. Calibration Check Compounds Meet Criteria b. System Performance Check Compounds Meet Criteria Blank Contamination – If yes, List compounds and concentrations in each blank: a. VOA Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction c. Acid Fraction c. Acid Fraction b. B/N Fraction c. Acid

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

Indicate Yes, No, N/A

Yej

Yes

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

a.		VOA Fraction	 	
ь.	•	B/N Fraction	 	
c.		Acid Fraction	 	

11: Extraction Holding Time Met

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

12. Analysis Holding Time Met

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

Additional Comments:

Scanlard 1/20/10 Date: Laboratory Manager:____

11/30/09

# METHOD SUMMARY

## **Method Summary**

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

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

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

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

# LABORATORY CHRONICLE

# Laboratory Chronicle

Lab ID: 90447

Site: 750

	Date	Hold Time
Date Sampled	11/17/09	NA
<b>Receipt/Refrigeration</b>	11/17/09	NA

### Analyses

1.	Volatilės	11/25/09	14 Days
2.	Semi-Volatiles	11/24-12/02/09	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

VA4992.D Data File Operator Date Acquired

ROBERTS 25 Nov 2009 1:36 pm Sample Name Field ID Sample Multiplier 1

MB11250901 METHOD 624 11/25/09

C1 8#	Compound Name	рт	Resnanse	Result		Regulatory Level (agr)*	MDL		RL	Qualifiers
107029	Aoroloin		Response	not	detected	5	2.09	ug/L	5.00 ug/L	
107028	Acsolenitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	tert Butul sloopol			not	detected	100	1.89	ug/L	5.00 ug/L	
1634044	Method tert-Bubyl ether	<del>_</del>		not	detected	70	0.18	ug/L	0.50 ug/L	
109203	Di-isonronyl ether			not	detected	20000	0.12	ug/L	0.50 ug/L	
75719	Disblorodifluoromethane			not	detected	1000	0.22	ug/L	0.50 ug/L	
74 97 2	Chloromethene			not	detected	nle	0.10	ug/L	0.50 ug/L	
75-01-4	Winyl 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	m		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-Dichlomethane			not	detected	50	0.19	ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20	ug/L	0.50 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	<u> </u>
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	<u>.</u>
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	<u> </u>	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		L

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

J= Estimated concentration, value fails between R.L. and M.D.L.

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

11/30/2009 3:10 PM 000018

	EPA SAMPLE NO.						
•		TENTA	TIVELY IDENT	IFIED COMPOUNDS		MB11250901	
Lab Name:	FMETL			Contract:			
Lab Code:	<b>1</b> 3461	(	Case No.: <u>MW</u>	SAS No.:	S	DG No.: 90447	
Matrix: (soil/v	water)	WATER	<u> </u>	Lab San	nple ID:	MB11250901	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab File	ID:	VA4992.D	-
Level: (low/r	ned)	LOW		Date Re	ceived:	11/17/2009	-
% Moisture:	not dec.	. <u></u>		Date An	alyzed:	11/25/2009	-
GC Column:	RTX-V	<u>M</u> ID:	<u>0.25</u> (mm)	Dilution	Factor:	1.0	
Soil Extract V	/olume:		(uL)	Soil Aliq	uot Volu	ime:	. (uL)
					UNITS:		
Number TICs	s found:	0		(ug/L or ug/Kg)			<u> </u>
CAS NO.		COMP	OUND NAME	RT	ES	ST. CONC.	Q

### FORM I VOA-TIC



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

VA4998.D Data File ROBERTS Operator Date Acquired

25 Nov 2009 5:45 pm

Sample Name Field ID Sample Multiplier 1

9044701 750 TRIP BLANK

Regulatory Launt (unlikt

C'A 8#	Compound Name	R.T.	Response	Result		Regulatory Detai (up)	MDL	<u></u>	Qualifiers
107028	Aorolein			not	detected	5	2.09 ug/L	5.00 ug/L	
107028	Acrolonitrile			not	detected	2	1.64 ug/L	5.00 ug/L	
75650	tert-Butul alcohol		· · · ·	. not	detected	100	1.89 ug/L	5.00 ug/L	
1634.044	Methyd_tert_Butyl ether			not	detected	70	0.18 ug/L	0.50 ug/L	
108203	Di iconronul ether			not	detected	20000	0.12 ug/L	0.50 ug/L	
75718	Dichlorodifuoromethane			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	nie	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	<u>0.20 ug/L</u>	0.50 ug/L	
75-35-3	1.1-Dichloroethane			not	detected	50	0.19 ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20 ug/L	0.50 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		0.17 ug/L	0.50 ug/L	<u></u>
56-23-5	Carbon Tetrachloride			not	detected	1	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	I	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		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/1	<u> </u>
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	<u> </u>	0.18 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/L		
126-48-1	Dibromochloromethane			not	detected		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			<u> </u>	detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.2/lug/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	U.12 ug/L		
75-25-2	Bromoform			not	detected	4 .	U.14 ug/L		
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	<b>1</b>	0.12[ug/L		
541-73-1	1,3-Dichlorobenzene			not	detected	600	0.12 ug/L		
106-46-7	1,4-Dichlorobenzene			not	detected			0.50 ug/L	
95-50-1	1.2-Dichlorohenzene			not	detected	600	0.12 ug/L		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

	EPA SAMPLE NO.			
	TENTATIVELY IDEN	TIFIED COMPOUNDS	750 TRIP BL	ANK
Lab Name: FMET	L	Contract:		
Lab Code: 13461	Case No.: MW	SAS No.: S	SDG No.: <u>90447</u>	
Matrix: (soil/water)	WATER	Lab Sample ID:	9044701	<u> </u>
Sample wt/vol:	5.0 (g/ml) <u>ML</u>	Lab File ID:	VA4998.D	-
Level: (low/med)	LOW	Date Received:	11/17/2009	-
% Moisture: not dec.		Date Analyzed:	11/25/2009	<b>→</b>
GC Column: RTX	-VM_ID: <u>0.25</u> (mm)	Dilution Factor:	1.0	_
Soil Extract Volume:	(uL)	Soil Aliquot Vol	ume:	_ (uL)
		CONCENTRATION UNITS	· ·	
Number TICs found:	0	(ug/L or ug/Kg) UG/L		
CAS NO.	COMPOUND NAME	RT E	ST. CONC.	Q

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

VA4999.D Data File ROBERTS Operator 25 Nov 2009 6:16 pm Date Acquired

Sample Name Field ID Sample Multiplier 1

9044702 750 FIELD BLANK

CASH	Compaund 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	
107028	Acrulonitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	fort Butul alashai	•••		not	detected	100	1,89	ug/L	5.00 ug/L	
1624044	Nethed fort But d other			not	detected	70	0,18	ug/L	0.50 ug/L	
1024044	Di inappanul other			not	detected	20000	0.12	ug/L	0.50 ug/L	
108205	Di-Isopropyl euler			not	detected	1000	0.22	ug/L	0.50 ug/L	
73718	Clinerashan			not	detected	nle	0,10	ug/L	0.50 ug/L	
74-87-3	Chioroinemane			not	detected	1	0,22	ug/L	0.50 ug/L	
/5-01-4	Vinyi Chionde			not	detected	10	0,25	ug/L	0.50 ug/L	
74-83-9	Bromomethane	<u>-</u>		not	detected	nle	0.22	ug/L	0.50 ug/L	
75-00-3				not	detected	2000	0.18	ug/L	0.50 ug/L	
75-69-4	Inchlorofluoromethane			not	detected	1	0,20	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene		·	not not	detected	6000	0.18	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	700	0.18	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	100	0.16	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride	•		not	detected	100	0.20	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	50	0.19	ug/L	0.50 ug/L	·
75-35-3	1,1-Dichloroethane			not	detected	7000	0.20	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	/ 200	0.16	ng/I.	0.50 ug/L	
78-93-3	2-Butanone			not	detected	70	0.14	110/1.	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene		<u>.</u>	not	detected	70	0.21	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected		0.17	ng/L	0.50 ug/1.	
75-55-6	1,1,1-Trichioroethane	·			delected		0.27	ug/1	0.50 ug/L	
56-23-5	Carbon Tetrachloride	<u> </u>		not	delected		0.16	ug/f	050 ug/L	
71-43-2	Benzene	<del>.</del>		not	detected		0.10	ug/L	050 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	²	0.12	ug/L	0.50 ug/1	
79-01-6	Trichloroethene			not	detected		0.16	ug/I	0.50 ug/l	
78-87-5	1,2-Dichloropropane			not	detected		0.10	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane		<i></i>	not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether	<u></u> .		not	detected	nie	0.16	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0.10		0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone	<u></u>		not	detected	nle	0.20		0.50 ug/L	
108-88-3	Toluene	<u> </u>		not	detected	1000	0.13	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	_ <u>_</u>	0.12	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	Tetrachioroethene			not	detected		. 0,18	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20		0.50 ug/L	
126-48-1	Dibromochloromethane		'	not	detected	<u>I</u>	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		0.15	ug/L	<u>0.50 ug/1.</u>	
1330-20-7	m+p-Xylenes		ļ	not	detected	nle	0.27	ug/L	1.00 ug/L	ļ
1330-20-7	o-Xylene			not	detected	nle	0,14	ug/L	0.50 ug/L	<u> </u>
100-42-5	Styrene			not	detected	100	0.12	ug/L	0.50 ug/L	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		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-Dichlombenzene			not	detected	600	0.12	lug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

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

11/30/2009 3:06 PM 000022

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### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

						750 FIFLD BL	ANK
Lab Name:	FMETL			Contract:			
Lab Code:	13461	C:	ase No.: <u>MW</u>	SAS No.	: 8	DG No.: <u>90447</u>	
Matrix: (soil/v	vater)	WATER		Lab	Sample ID:	9044702	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4999.D	_
Level: (low/n	ned)	LOW		Dat	e Received:	11/17/2009	
% Moisture: 1	not dec.			Date	e Analyzed:	11/25/2009	_
GC Column:	RTX-V	/ <u>M</u> ID: <u>0</u>	.25 (mm)	Dilu	tion Factor:	1.0	-
Soil Extract V	/olume:		(uL)	Soil	Aliquot Volu	.me:	_ (uL)
					ON UNITS:		
Number TICs	s found:	0	- <u></u>	(ug/L of ug/itg)			
CAS NO.		COMPO	UND NAME		RT E	ST. CONC.	Q

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### 000000

EPA SAMPLE NO.

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

Data File	VA4997.D	Sample Name	9044707
Operator	ROBERTS	Field ID	750 MW#04A
Date Acquired	25 Nov 2009 5:14 pm	Sample Multiplier	1

						Regulatory Level (ug/l)*	MDT	рт	Qualifiers
CAS#	Compound Name	<u> </u>	Response	Result				5 00 µg/I	Quaimers
107028	Acrolein			not	detected	5		5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.04 ug/L	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100			
1634044	Methyl-tert-Butyl ether			not	detected	70	0.18 ug/L	0.50 ug/L	<u>.</u>
108203	Di-isopropyl ether			not	detected		0.12[ug/L	0.50 ug/L	
75718	Dichlorodifluoromethane			not	detected		0.2210g/L	0.50 ug/L	
74-87-3	Chloromethane			not	detected		0,10 ug/L	0.50 ug/L	· · · -
75-01-4	Vinyl Chloride		- <u></u>	not	detected			0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
74-83-9	Bromomethane			not	detected	0	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		
75-35-4	1,1-Dichloroethene			not	detected	1	0.20 ug/L	<u>0,50 ug/L</u>	
67-64-1	Acetone			not	detected	6000	0.18 ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected		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			nət	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	0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/L	0.50 ug/L	<u> </u>
156-59-2	cis-1,2-Dichloroethene			not	detected		0.14 ug/L	0.50 ug/L	
67-66-3	Chioroform			not	detected	70	0.21 ug/L	0.50 ug/L	<u> </u>
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	<b></b>
71-43-2	Benzene			not	detected		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	<u>0.50 ug/L</u>	
10061-01-5	cis-1,3-Dichloropropene			not	detected		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		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		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			nət	detected	50	0.15 ug/L	0.50 ug/L	
100-41-4	Ethylbenzene			net	detected	700	0.16 ug/L	0.50 ug/L	<u> </u>
630-20-6	1 1 1 2-tetrachloroethane			not	detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+n-Xylenes			not	detected	nte	0.27 ug/L	1.00 ug/L	
1330-20-7	o-Xvlene			not	detected	nle	0.14 ug/L	0.50 ug/L	
100-42-5	Shurene			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	
541-72-1	1 3 Dichlorahenzene			not	detected	. 600	0.12 ug/L	0.50 ug/L	
106-46-7	1.4-Dichlomhenzene			not	detected	75	0.12 ug/L	0.50 ug/L	
95_50_1	1.2.Dichlombenzene			not	detected	600	0.12 ug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQUs and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

- 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



		VOL	1E ATILE ORGANICS /	NALYSIS DATA SHEET	EPA SAMPLE	ENO.
		Т	ENTATIVELY IDEN	FIED COMPOUNDS	750 MW#0	4A
	Lab Name: F	METL		Contract:		
	Lab Code: <u>1</u>	3461	Case No.: MW	SAS No.:	SDG No.: <u>90447</u>	
	Matrix: (soil/wa	iter) <u>W</u>	ATER	Lab Sample ID	9044707	<u>.</u>
	Sample wt/vol:	5.0	) (g/ml) <u>ML</u>	Lab File ID:	VA4997.D	-
	Level: (low/me	ed) LC	W	Date Received:	11/17/2009	-
	% Moisture: no	ot dec.		Date Analyzed:	11/25/2009	
	GC Column:	RTX-VM	ID: <u>0.25</u> (mm)	Dilution Factor:	1.0	<b>→</b>
	Soil Extract Vo	lume:	(uL)	Soil Aliquot Vol	ume:	(uL)
				CONCENTRATION UNITS	;	
•	Number TICs f	ound:	0	(ug/L or ug/Kg) UG/L		
	CAS NO.	C	OMPOUND NAME	RT E	ST. CONC.	Q



# SEMI-VOLATILE ORGANICS

	<i>.</i>	Repo	rt of A	nalysis			Page 1 of
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044702 FIELD BLA e ID: JA33317-1 AQ - Field Blank Wa SW846 8270C SW8 750	ANK .ter 46 3510C		Date S Date F Percer	Sampled: Received: nt Solids:	11/17/09 11/18/09 n/a	
Run #1 Run #2	File ID DF R75635.D 1	Analyzed 12/02/09	By VN	Prep D 11/20/0	ate 19	Prep Batch OP41049	Analytical Batch ER2857
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	ne	•				
BN TCL42	List						
CAS No.	Compound	Result	RĹ	MDL	Units	Q	
98-86-2	Acetophenone	ND	5.0	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'-Biphenvl	ND	2.0	0.42	ug/l		
91-58-7	2-Chloronanhthalene	ND	5.0	0.42	ug/l		
106-47-8	· 4-Chloroaniline	ND	5.0	0.25	ug/l		
86-74-8	Carbazole	ND	2.0	0.17	ˈug/l		
105-60-2	Caprolactam	ND	2.0	0.20	ug/l		
111-91-1	his(2-Chloroethoxy)methane	ND	2.0	0.25	ug/l		
111-44-4	his(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/I		
87-68-3	Hexachlorobutadiene	ND	1.0	0.37	ug/I		
77-47-4	Hexachlorocyclopentadiene	ND	20	0.67	ug/l		
67-72-1	Hexachloroethane	ND	5.0	0.26	ug/l		
78-59-1	Isophorone	ND	2.0	0.25	ug/I		
91-57-6	2-Methylnaphthalene	ND	2.0	0.66	ug/I		
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		
08-05-3	Nitrobenzene	ND	2.0	0.25	ug/l		

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

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ACCUTEST. JA33317 Laboritorios



### Report of Analysis

Client Samp Lab Sample Matrix: Method: Project:	ole ID: 9044702 FIELD BLA D: JA33317-1 AQ - Field Blank Wa SW846 8270C SW8 750	9044702 FIELD BLANK JA33317-1 AQ - Field Blank Water SW846 8270C SW846 3510C 750				l: 11/ 1: 11/ s: n/a	11/17/09 11/18/09 n/a		
BN TCL42	List							•	
CAS No.	Compound	Result	RL	MDL	Units	Q			
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l				
CAS No.	Surrogate Recoveries	Run# 1	Run#2	Lim	its				
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	79% 71% 66%	·	25-1 31-1 14-1	12% 06% 22%				
CAS No.	Tentatively Identified Com	pounds	R.T.	Est.	Conc.	Units	Q		
	system artifact/aldol-conden Internal standard added for Total TIC, Semi-Volatile	sation SIM test	4.53 8.48	4.1 4.1 0		ug/l ug/l 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



Page 2 of 2

•	Page 1 of 1						
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9044702 FIELD B le ID: JA33317-1 AQ - Field Blank V SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date S Date R Percen	ampled: eceived t Solids	11/17/09 : 11/18/09 : n/a	
Run #1 Run #2	File ID         DF           4M13629.D         1	Analyzed 11/24/09	By NAP	Prep Da 11/20/09	ate 9	Prep Batch OP41049A	Analytical Batch E4M623
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo (a)anthracene Benzo (a)pyrene Benzo (b)fluoranthene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno (1,2,3-cd) pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	·	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	88% 79% 74%		18-1 18-1 13-1	19% 04% 09%	• •	

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

 $\begin{array}{l} J = \mbox{ Indicates an estimated value} \\ B = \mbox{ Indicates analyte found in associated method blank} \\ N = \mbox{ Indicates presumptive evidence of a compound} \end{array}$ 

(4) ***



Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044707 750MW04 e ID: JA33317-6 AQ - Ground Wate SW846 8270C SV 750	IA r V846 3510C		Date S Date F Percer	ampled: Received: It Solids:	11/17/09 11/18/09 n/a		
Run #1 Run #2	File ID DF R75646.D 1	Analyzed 12/02/09	By VN	Prep Date 11/20/09		Prep Batch OP41049	Analytica ER2858	l Batch
Run #1 Run #2	Initial Volume Final Vol 1000 ml 1.0 ml	ume						
BN TCL42	List							
CAS No.	Compound	Result	RL	MDL	Units	Q		
98-86-2	Acetophenone	ND	5.0	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 eth	er 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	2.0	0.42	ug/l			
91-58-7	2-Chloronaphthalene	ND	5.0	0.42	ug/l			
106-47-8	4-Chloroaniline	ND	5.0	0.25	ug/l			
86-74-8	Carbazole	ND	2.0	0.17	ug/l			
105-60-2	Caprolactam	ND	2.0	0.20	ug/l			
111-91-1	bis(2-Chloroethoxy)metha	ne ND	2.0	0.25	ug/I			
111-44-4	bis(2-Chloroethyl)ether	ND	2.0	0.31	ug/i			
108-60-1	bis(2-Chloroisopropyl)ethe	er ND	2.0	0.39	ug/l			
7005-72-3	4-Chlorophenyl phenyl eth	er ND	2.0	0.35	ug/l			
121-14-2	2,4-Dinitrotoluene	ND	2.0	0.22	ug/I			
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/I			
84-74-2	Di-n-butyl phthalate	ND	2.0	0.19	ug/I			
117-84-0	Di-n-octyl phthalate	ND	Z.U	0.40	ug/i			
84-66-2	Diethyl phthalate	ND.	2.U 2.0	0.17	ug/1 ug/1			
131-11-3	Dimethyl phthalate		4.U うろ	0,20 0,22	ug/1 110/1			
117-81-7	bis(2-Ethylhexyl)phthalate		2.U 1 N	0.33 A 27	ug/1 πσ/1			
87-68-3	Hexachioroputadiene		20	0.67	ug/1			
77-47-4	Hexachiorocyclopentatien		. 50	0.26	ug/1			
67-72-1	nexacinoroeurane		2.0	0.25	ug/1			
18-39-1	2 Máthulnanhthalana	ND	2.0	0.66	ug/l			
91-97-0	2 Nitroanilina	ND	5.0	0.24	ug/l			
00-14-4	2 Nitroaniline	ND	5.0	0.29	ug/1			
99-09-2 100.01.0	5-Mitroaniline	ND	5.0	0.18	ug/l			
100-01-0		ND	2.0	0.25	- <i>a</i> 110/1			

RL = Reporting Limit E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Report of Analysis

Client Sample ID: 9 Lab Sample ID: J. Matrix: A Method: S Project: 7		9044707 750MW04A JA33317-6 AQ - Ground Water SW846 8270C SW846 3510C 750			Date Sampled: Date Received: Percent Solids:			11/17/09 11/18/09 n/a			
BN TCL42	List	· · · ·									
CAS No.	Comp	ound	Result	RL	MDL	Units	Q				
621-64-7 86-30-6	N-Nit N-Nit	roso-di-n-propylamine rosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l					•
CAS No.	Surrogate Recoveries		Run# 1	Run# 2	2 Limits						
4165-60-0 321-60-8 1718-51-0	Nitrol 2-Fluo Terph	oenzene-d5 orobiphenyl enyl-d14	72% 68% 32%		25-1 31-1 14-1	12% 06% 22%				·	
CAS No.	Tentatively Identified Compounds			R.T.	Est.	Conc.	Units	Q		·	
	system artifact/aldol-condensation Internal standard added for SIM test Internal standard added for SIM test Total TIC, Semi-Volatile		4.52 8.48 12.68	4.6 4 4.6 0		ug/l ug/l ug/l ug/l	] J J				

 $\begin{array}{ll} ND = Not \ detected & MDL - Method \ Detection \ Limit \\ RL = Reporting \ Limit \\ E = Indicates \ value \ exceeds \ calibration \ range \end{array}$ 

- J = Indicates an estimated value
- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound

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Accutest Laboratories

Report of Analysis								
ple ID: 9044707 750MW04A e ID: JA33317-6 AQ - Ground Water SW846 8270C BY S 750	A SIM SW846 3510C		Date Sampled: Date Received: Percent Solids:		11/17/09 11/18/09 n/a	````		
File ID         DF           4M13634.D         1	Analyzed 11/24/09	By NAP	Prep Date 11/20/09		Prep Batch OP41049A	Analytical Batch E4M623		
Initial Volume Final Volu 1000 ml 1.0 ml	me							
Compound	Result	RL	MDL	Units	Q			
Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (b) fluoranthene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno (1,2,3-cd) pyrene Naphthalene Phenanthrene	ND ND ND ND ND ND ND ND ND ND ND ND	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\$	$\begin{array}{c} 0.029\\ 0.039\\ 0.026\\ 0.024\\ 0.031\\ 0.036\\ 0.029\\ 0.028\\ 0.022\\ 0.023\\ 0.023\\ 0.024\\ 0.027\\ 0.0099\\ 0.029\\ 0.019\\ 0.036\\ 0.022\\ \end{array}$	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		· · · · · · · · · · · · · · · · · · ·		
Pyrene Surrogate Recoveries Nitrobenzene-d5 2-Fluorobiphenyl Ternhenyl-d14	Run# 1 85% 75% 37%	Run# 2	2 Limits 18-119% 18-104% 13-109%		a			
	ple ID: 9044707 750MW04A e ID: JA33317-6 AQ - Ground Water SW846 8270C BY S 750 File ID DF 4M13634.D 1 Initial Volume Final Volu 1000 ml 1.0 ml Compound Acenaphthene Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (b) fluoranthene Benzo (c, h, i) perylene Benzo (k) fluoranthene Chrysene Dibenzo (a, h) anthracene Fluorene Hexachlorobenzene Indeno (1, 2, 3-cd) pyrene Naphthalene Phenanthrene Pyrene Surr ogate Recoveries Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	Reportple ID:9044707 750MW04Ae ID:JA33317-6AQ - Ground WaterSW846 8270C BY SIMSW846 8270C BY SIMSW846750750File IDDFAnalyzed4M13634.D111/24/09Initial VolumeFinal Volume1000 ml1.0 mlCompoundAcenaphtheneNDAcenaphthyleneNDAnthraceneNDBenzo(a) anthraceneNDBenzo(a) pyreneNDBenzo(b) fluorantheneNDBenzo(g, h, i) peryleneNDBenzo(a, h) anthraceneNDBenzo(a, h) anthraceneNDBenzo(a, h) peryleneNDBenzo(a, h) peryleneNDBenzo(a, h) anthraceneNDFluorantheneNDFluoreneNDHexachlorobenzeneNDHexachlorobenzeneNDNaphthaleneNDPyreneNDSurr ogate RecoveriesRun# 1Nitrobenzene-d585%2-Fluorobiphenyl75%Terphenyl-d1437%	Report of Allaple ID:9044707 750MW04Ae ID:JA33317-6AQ - Ground Water SW846 8270C BY SIMSW846 3510C750750File IDDFAnalyzedBy4M13634.D111/24/09Initial VolumeFinal Volume1000 ml1.0 mlCompoundResultRLAcenaphtheneND0.10AcenaphthyleneND0.10AcenaphthyleneND0.10Benzo(a) anthraceneND0.10Benzo(a) pyreneND0.10Benzo(b) fluorantheneND0.10Benzo(k) fluorantheneND0.10Benzo(k) fluorantheneND0.10ChryseneND0.10FluoreneND0.10FluoreneND0.10FluoreneND0.10FluoreneND0.10FluoreneND0.10FluoreneND0.10Surr ogate RecoveriesRun# 1Run# 2Nitrobenzene-d585%2-Fluorobiphenyl75%Terphenyl-d1437%	Report of Analysis         Report of Analysis         ple ID:       JA33317-6       Date S         AQ - Ground Water       Date R         SW846 8270C BY SIM       SW846 3510C         File ID       DF       Analyzed By       Prep Date Mailer Colspan="2">Prep Date Mailer Colspan="2">Prep Date Mailer Colspan="2">Compound         File ID       DF       Analyzed By       Prep Date Mailer Colspan="2">Prep Date Mailer Colspan="2">Prep Date Mailer Colspan="2">Compound       Result       By         File ID       DF       Analyzed By       Prep Date Mailer Colspan="2">Prep Date Mailer Colspan="2">Prep Date Mailer Colspan="2">Prep Date Mailer Colspan="2">Colspan="2">Colspan="2">Colspan="2">Prep Date Mailer Colspan="2">Colspan="2">Colspan="2">Prep Date Mailer Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2"Colspan="2	Report of Analysisple ID:9044707 750MW04ADate Sampled: Date Received: SW346 8270C BY SIM SW846 3510CDate Received: Percent Solids: Percent Solids: Percent Solids: Percent Solids:File IDDFAnalyzedBy Prep Date 11/20/09Prep Date 11/20/09Initial Volume 1000 mlFinal Volume 1.0 mlBy Prep Date 1.0 mlPrep Date 11/20/09CompoundResultRLMDLUnitsAcenaphthene Benzo(a) anthraceneND0.100.029ug/l Anthracene Benzo(a) pyreneND0.100.026ug/l UflBenzo(a) pyrene Perzo(a, h.) perylene Dibenzo(a, h) anthracene PhorantheneND0.100.028ug/l UflBenzo(b) fluoranthene Phoranthene Dibenzo(a, h) anthracene Dibenzo(a, h) anthracene NDND0.100.022ug/l I UflBenzo(b) fluoranthene Phoranthene ND0.100.022ug/l Ufl0.100.023ug/l I I I Dibenzo(a, h) anthracene NDND0.100.024ug/l I I I I ND0.100.022ug/l I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I <b< td=""><td>Report of Anlatysisple ID:9044707 750MW04A AQ - Ground Water SW846 8270C BY SIMDate Sampled:11/17/09 Date Received:11/18/09 Percent Solids:r/50Percent Solids:n/ar/50Prep Date 11/20/09Prep Batch OP41049Ar/11/20/09DF I 11/24/09Analyzed NAPBy 11/20/09Prep Batch OP41049AInitial Volume 1000 mlFinal Volume 1.0 mlND0.100.029 0.039 ug/lug/l Acenaphthylene NDND0.100.029 0.039 ug/lAcenaphthene Acenaphthylene NDND0.100.026 0.031 ug/lug/l Benzo(a)anthracene ND0.100.026 0.031 ug/lBenzo(a)filuoranthene NDND0.100.029 0.023 ug/lug/l Heres NDBenzo(g, h,i)perylene Houranthene NDND0.100.022 0.023 ug/lug/l Heres NDBenzo(g, h,i)perylene Huoranthene NDND0.100.024 0.023 ug/lug/l Heres NDFluoranthene Houranthene ND0.100.024 0.029 0.0099 ug/lug/l Heres NDNaphthalene NDND0.100.022 0.0099 ug/lug/l Heres NDNaphthalene PyreneND0.100.022 0.029ug/l ug/lSurrogate Recoveries NDRu#l 75%18-119% 18-104% 13-109%-</td></b<>	Report of Anlatysisple ID:9044707 750MW04A AQ - Ground Water SW846 8270C BY SIMDate Sampled:11/17/09 Date Received:11/18/09 Percent Solids:r/50Percent Solids:n/ar/50Prep Date 11/20/09Prep Batch OP41049Ar/11/20/09DF I 11/24/09Analyzed NAPBy 11/20/09Prep Batch OP41049AInitial Volume 1000 mlFinal Volume 1.0 mlND0.100.029 0.039 ug/lug/l Acenaphthylene NDND0.100.029 0.039 ug/lAcenaphthene Acenaphthylene NDND0.100.026 0.031 ug/lug/l Benzo(a)anthracene ND0.100.026 0.031 ug/lBenzo(a)filuoranthene NDND0.100.029 0.023 ug/lug/l Heres NDBenzo(g, h,i)perylene Houranthene NDND0.100.022 0.023 ug/lug/l Heres NDBenzo(g, h,i)perylene Huoranthene NDND0.100.024 0.023 ug/lug/l Heres NDFluoranthene Houranthene ND0.100.024 0.029 0.0099 ug/lug/l Heres NDNaphthalene NDND0.100.022 0.0099 ug/lug/l Heres NDNaphthalene PyreneND0.100.022 0.029ug/l ug/lSurrogate Recoveries NDRu#l 75%18-119% 18-104% 13-109%-		

MDL - Method Detection Limit ND = Not detected

RL = Reporting LimitE = 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

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#### 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 heid 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: _/ _/ 20/_/D

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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.

and 1/2 1/21/10

Dean Tardiff Laboratory Manager
### ATTACHMENT K

UST 750H File Review and Analyses



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

Date: August 31, 2016	Review Performed By: Kent Friesen, Parsons						
Site ID: <b>750H</b> Registration ID: None							
Recommended Status of Site: Change to	Case Closed						
Based on the file review, were there indicat	ions of a contaminant release? [ X ] Yes [ ] No						
NJDEP Release No. or DICAR (If applicable):	09-07-28-1554-16						
Did NJDEP approve No Further Action (NFA)	for this site? [ ] Yes [ X ] No [ ] Not Applicable						
Tank Description: [X] Steel [] Fiberglass	Size: <u>1000 gals.</u> Contents: <u>No. 2 Fuel Oil</u>						
[X] Residential [] Commercial/Indu	strial						
Tank Removed? [X]Yes [] No If "yes,	" removal date:7/28/2009						
Were closure soil samples taken? [X] Yes	] No Analyses: <u>TPH</u>						
Comparison criteria: <u>5,100 mg/kg TPH</u>							
Were closure soil sample results less than co	omparison criteria? [X]Yes []No						

### **Brief Narrative**

UST 750H was initially identified as anomaly P51_31 in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_31 location, a steel tank was located and removed on 7/28/09. Stained soil as well as holes in the tank were observed, and a sheen was noted on groundwater at 6.5 feet below ground surface. Visibly contaminated soil was removed from the excavation, and soil samples (750-H-1 through 750-H-4) were collected from the side walls and bottom of the excavation on 7/30/09 and 8/11/09, and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). TPH concentrations ranged from not detected (ND) to 79 milligrams per kilogram (mg/kg). The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Therefore, no additional soil sampling or remedial action was warranted.

Groundwater well 750MW07 was installed on 10/14/09 in the immediate vicinity of the removed UST 750H, and sampled on 11/3/09 and 11/17/09 for analysis of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), plus VOC and SVOC tentatively identified compounds (TICs). As noted in the analytical data reports (see the sheet preceding the Chain of Custody Form), well 750MW07 was initially designated as "750MW03A". The SVOC bis(2-ethylhexl)phthalate was detected at 2.6 ug/L in one round of sampling, which is below the respective Class IIA Ground Water Quality Criteria (GWQC) of 3 ug/L. No other SVOCs or VOCs were detected in the groundwater samples. Therefore, there is no indication of a release to groundwater at UST 750H.

In conclusion, the analytical results support changing the UST Case Status to "Case Closed."

Recommendations (if any): <u>Change to "Case Closed", request NFA from NJDEP</u>

Signed:

Kent A. Friesen, Parsons

## Fort Monmouth UST Status Summary Report

### **UST REGISTRATION INFORMATION SUMMARY**

*LOCATION:* 750 H

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:	7/28/2009	REMOVAL CONTRACTOR: TVS Inc.
SRF SEND DATE:		TMS:
DICAR NO.	09-07-28-1554-16	LEAK DETECT:
REMEDIATION COMMENTS:	Discharge observed. Soil remove requirements CA.	ed and sit eis being assessed as per NJDEP
REGISTRATION COMMENTS:	UHOT as per BRAC 2005 Legal fees to be paid	determination. Not to be reg. with NJDEP. No
SAS DONE:	NO	CONSULTANT:
MWs NEEDED:	1	MONITORING WELLS:
SUB-SURFACE EVALUATOR:	Appleby	

### **CURRENT UST STATUS**

UST STATUS: REMEDIATION ON-GOING	CASE STATUS:	Case Open
SUBMITTAL DATE:	APPROVAL DATE:	

US ARMY, SELFM-PW-EV	
BLDG. #: 750-H REG. #: NA. DATE: 7-28-09 TOA: 1515 TOD: 1715 SSE: Chink Applied / Florent Preserved They NJDEP CERT. #: REMOVAL CONTRACTOR: TVS Inc. PWS-007 CLOSURE SUPERVISOR: Florent Accord NJDEP CERT. #:	
ACTIVITY	YES/ NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	5-1
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)	475
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	a.A.
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (877)927-6337),	· · · · · · · · · · · · · · · · · · ·
CASE# 09-07-28-1554-16 Operata 18	
PHOTOS HAVE UST#, BLDG. #, DATE, TIME, NAME OF SSE AND DESCR. WRITTEN ON BACK	FA.
GROUNDWATER WAS ENCOUNTERED AT $6.5$ FEET BG, A SHEEN (WAS/WAS NOT) OBSERVED ON GW	
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	415
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)	None
Database UPDates CA. 8-3-08.	
I certify under penalty of law that tank decommissioning activities were perf in compliance with N.J.A.C. 7:14B-9.2(b)3 and 7:26 et seq I am aware that are significant penalties for submitting false, inaccurate, or incom information, including fines and/or imprisonment.	NO BLANKS Ormed there plete

Subsurface Evaluator (print Name) : Chalis Applic	Date: 7-28-04
SIGNATURE:	· · · · · · · · · · · · · · · · · · ·
ca\ms\ust\removal\sites1s499.doc	

- USS Rilled 9:45 Dre. Jochy - Hermed Syverth Any FRANK Aclore, on-site

- C. Applely on-size Afthe Renard mal Ust tooke Hosig - holes in UST his per FRANK A. - Virill Contronsattan - adars, stains, Free Product globentes.

- Site will be called in for DICAR

- TUS is Examiting Visually Contaminated Soils.

- NJDEP Discharge Ppt - UST # 750-H Building. - US. ARMy Ft. Monmarte 07703 DPWENV - No Assitum Regional - Not Registrical - UHOT As per US ARM BRace legal - Phone (732) 532-2692. POC. Charles Apple - Responsible PAITY - U.S. ARMY - Cleanup inprograss - 1000gal - A2 H-oil. DICAR # 09-07-28-1554-16 op. 18,

### US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG. #: 750 REG. #: $V57'H'$ -	
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 AND NO RESIDUAL LIQUIDS WERE LEFT IN THE TANK	4
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)	
DRUMS OF WASTE WERE TRANSPORTED TO THE (MP, CW, EV) HWSA	
GALLONS OF WASTE WERE REMOVED (MANIFEST#:)	
60 CUBIC YARDS OF PETROL. CONT. SOIL WERE EXCAVATED+TRANS TO (T-80, 2624)-	4
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT. (WHO) C. A. P. P. LEBY	r
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 $10\%$ 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):	FRANK	ACCORSI	· · · · · · · · · · · · · · · · · · ·
SIGNATURE:	Frank C	Levorsi	DATE:	7-28-09

ca\ms\ust\removal\sitec499.doc

US ARMY, SELFM-PW-EV	
DAILY UST SUBSURFACE REMOVAL LOG	
BLDG. #: 750 REG. #: UST H DATE: 7.39 ro TOA: TOD: SSE: FRANK ACCORSI NJDEP CERT. #: 00/0042 REMOVAL CONTRACTOR: TVS Inc. PWS-007 CLOSURE SUPERVISOR: " " " NJDEP CERT. #: " WEATHER: HARY HOT HUMIO MID 80'S	
ACTIVITY	YES/ NO
THE TECHNICIAN (CLOSURE CERT.) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	r
THE SSE WAS ON-SITE DURING UST REMOVAL AND SITE SCREENING AND SAMPLING ACTIVITIES	r
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	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 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)	$\gamma$
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	Ý
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)	
CHECK ALL BOXES, LEAV	E NO BLANKS
certify under penalty of law that tank decommissioning activities were per n compliance with N.J.A.C. 7:14B-9.2(b)3 and 7:26 <u>et seq</u> . I am aware that re significant penalties for submitting false, inaccurate, or incom nformation, including fines and/or imprisonment.	formed there nplete

Closure Tech	(print Name):_	FRANK A	ICCORSI	Date:	1-29-09
GNATURE : _	Frank	Accori	· · · · · · · · · · · · · · · · · · ·		

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## FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

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



### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0/002.11		
Field Sample Location	Laboratory	Matrix	Date and Time	Date
_	Sample ID#		of Collection	Received
750-H-1, Bottom	9032101	Soil	30-July-09 08:20	07/30/09
750-H-2, East Wall	9032102	Soil	30-July-09 09:30	07/30/09
750-H-3, West Wall	9032103	Soil	30-July-09 13:40	07/30/09
750-H-4, South Wall	9032104	Soil	30-July-09 14:00	07/30/09
750-H, Duplicate	9032105	Soil	30-July-09 09:30	07/30/09

### Bldg. 750/UST # H

### ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

coucline Hamer/Date QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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GPS Coordinated	4-5
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Conformance/Non-Conformance Summary	10-11
Total Petroleum Hydrocarbons Result Summary Calibration Summary Surrogate Results Summary MS/MSD Results Summary LCS Results Summary Raw Sample Data	12 13 14-32 33 34 35 36-49
Laboratory Deliverable Check List	50
Laboratory Authentication Statement	51

# CHAIN OF CUSTODY

	Record	-				vation Method	ICE				-			
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### **SAMPLE RECEIPT FORM**

. : 1

Date Received:	Work Order ID#:
Site/Proj. Name: B/dy GO/M.P.	Cooler Temp (°C):
Received By: Canduna	Sign: plugud
(Print name) /	
<u>Check the appropr</u>	<u>riate box</u>
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 an	nd legibly? 🖉 yes 🗌 no
4. Was the chain of custody signed in the appropriate the second	riate place? 🛛 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes □ no
6. Were the correct containers/preservatives used	d? 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 with	iin 15 minutes □ yes□ no □ n/a

### Fill out the following table for each sample bottle

Lims ID	pН	Preservative	Sample ID	рН	Preservative
			-		

Comments:_____



## **GPS COORDINATED**

### U.S. ARMY - FT. MONMOUTH, NJ

### BUILDING 750 - UST 'H'

### **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)

750H1 BOTTOM 750H2 EAST WALL 750H3 WEST WALL 750H4 SOUTH WALL 750H5 NORTH WALL

537881.361	617428.394
537885.308	617440.3
537880.13	617420.335
537871.883	617432.982
537890.793	617425.13

# FIELD DUPLICATE IDENTIFICATION



### **Field Duplicate Identification**

Lab ID: 90321

Site: Bldg. 750 UST # 750-H

The Field Duplicate was performed on 750-H-2, East Wall (Lab ID 9032102).



## 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 CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

	Indicate Yes, No, N/A
Method Detection Limits Provided	yes
Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	<u>60</u>
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	yes
Duplicate Results Summary Meet Criteria	yes
IR Spectra submitted for standards, blanks and samples	NA
Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted	yes
Analysis holding time met (If not met, list number of days exceeded for each sample)	<u></u>

Additional comments:

Laboratory Manager:	Margan.	0,	Harmon	Date:	9/17/09
	O. C.	G- 9000	)		

# TOTAL PETROLEUM HYDROCARBONS



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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDG	. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	30-Jul-09
Matrix:	Soil	Date Extracted:	31-Jul-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	6-Aug-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00	- , ,	

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	<b>TPHC Result</b>	Qualifiers
	~	Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB07310901	MB07310901	1.00	15.00	100.00	23	333	0.00	
LCS0730902	LCS0730902	1.00	15.00	100.00	23	333	1161.47	
MB08050901	MB08050901	1.00	15.02	100.00	23	333	0.00	
LCS08050901	LCS08050901	1.00	15.08	100.00	23	332	995.59	
9032101	750-H-1 BOTTOM	1.00	15.53	75.5	30	426	0.00	
9032102	750-H-2 EAST WALL	1.00	15.23	77.4	30	424	0.00	
9032103	750-H-3 WEST WALL	1.00	15.21	76.4	30	430	79.64	J
9032104	750-H-4 SOUTH WALL	1.00	15.16	81.1	28	407	0.00	
9032105	750-H DUPLICATE	1.00	15.09	77.1	30	430	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 <u>and</u> in the main body of the report.

2. Table of Contents submitted.	
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	$\mathcal{V}$
4. Document paginated and legible.	
5. Chain of Custody submitted.	$\checkmark$
6. Samples submitted to lab within 48 hours of sample collection.	$\boldsymbol{\nu}$
7. Methodology Summary submitted.	$\underline{\nu}$
8. Laboratory Chronicle and Holding Time Check submitted.	
9. Results submitted on a dry weight basis.	$\underline{\vee}$
10. Method Detection Limits submitted.	$\overline{\mathcal{V}}$
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	$\overline{\mathcal{U}}$

Laboratory Manager or Environmental Consultant's Signature		hunner	Le l	DUNE
Date: <u>7117109</u>	7	y 0		~~~~ <u>~</u> ~

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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.

tanon 9/17/09 oqueline Hamer /QC Supervisor

## FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

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



### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

### Bldg. 750/UST # H

Field Sample Location	Laboratory	Matrix	Date and Time	Date
	Sample ID#		of Collection	Received
750-H-5, North Wall	9033801	Soil	11-Aug-09 11:20	08/11/09
750-H, Duplicate	9033802	Soil	11-Aug-09 11:20	08/11/09

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

acqueline Hamer/Date A/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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Laboratory Authentication Statement	32

# CHAIN OF CUSTODY

Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil Chain of Custody Record NJDEP Certification #13461	: CHUCK APLED' Project No: 09-123690 Analysis Parameters Comments:	X26292 Location: BLP 6. 750,	() OMA () Other. 057 'H	Name / Company: FRH NK ACEASI / TVS Sample # 2 2	rk Order # Sample Location Date Time Type bottles D	8 01/750-4-5, NORTH WARD 8-11-09 1120 5016 1 × × 1 2 75-8 215-8	- 2 750-4, DUPLICATE I X X   1 75-8							ed by (signature): Date/Time: Received by (signature): Bate/Time: Received by (signature): Date/Time: Received by (signature):	ed by (signature): Date/Time: (Received by (signature): Date/Time: Received by (signature): Date/Time: Received by (signature):	:: ()Full, ()Reduced, ()Standard, ()Screen / non-certified, ()EDD Comments: time: ()Standard 3 wks, (X)Rush 7 Wkr, _()ASAP Verbal Hrs.	
	OMER: CHUCK	e#: X2629	ERA ( )OMA ( <u>%</u> )Otl	plers Name / Compan	[S/Work Order # ]	1338 01 750	J 750							rquished by (signature):	aquished by (signature):	rt Type: ()Full, ()Redu around time: ()Standard	

Fort Monmouth Environmental Testing Laboratory

C

### SAMPLE RECEIPT FORM

Date Received: 8-11-04	Work Order ID#: <u>40338</u>								
Site/Proj. Name: <u>9/04 150/M.I.</u>	Cooler Temp (°C): 45°C								
Received By: J. Veryan	Sign: Alllun								
(Print name) /									
Check the appropriate box									
1. Did the samples come in a cooler?	, 🛛 yès 🗍 no 🗆 n/a								
2. Were samples rec'd in good condition?	yes 🗆 no								
3. Was the chain of custody filled out correctly a	nd legibly?								
4. Was the chain of custody signed in the approp	priate place? 🖉 yes 🗌 no								
5. Did the labels agree with the chain of custody	? yes no								
6. Were the correct containers/preservatives use	ed? yes 🗆 no								
7. Was a sufficient amount of sample supplied?	🖉 yes 🗆 no								
8. Were air bubbles present in VOA vials?	n/a 🗌 yes 🗆 no								
9. Were samples received on ice?	yes no								

10. Were analyze-immediately tests perform within 15 minutes  $\Box$  yes  $\Box$  no  $\Box$  n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
	1				
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	-	······································			
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Comments:_____

## GPS COORDINATED

### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 - UST 'H'

### 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)

750H1 BOTTOM 750H2 EAST WALL 750H3 WEST WALL 750H4 SOUTH WALL 750H5 NORTH WALL 537881.361 537885.308 537880.13 537871.883 537890.793

617428.394 617440.3 617420.335 617432.982 617425.13

# FIELD DUPLICATE IDENTIFICATION

## Field Duplicate Identification

Lab ID: 90338

Site: Bldg. 750 UST # 750-H

The Field Duplicate was performed on 750-H-5, North Wall (Lab ID 9033801 ).

## 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.

aamay

# CONFORMANCE/ NON-CONFORMANCE SUMMARY
		Indicate Yes, No, N/A
1.	Method Detection Limits Provided	<u>105</u>
2.	Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	<u>N9</u>
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	WA
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)	4es
Addit	tional comments:	
Laho	ratory Manager: Mussed un the sung Date: 9/17/09	
LUUU	Contraction and the second sec	+ .

### TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

# TOTAL PETROLEUM HYDROCARBONS



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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDG.	750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	11-Aug-09
Matrix:	Soil	Date Extracted:	12-Aug-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	13-Aug-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB08120901	MB08050901	1.00	15.02	100.00	23	333	0.00	
LCS08120901	LCS08050901	1.00	15.08	100.00	23	- 332	996.45	
9033801	750-H-5 NORTH WALL	1.00	15.25	77.7	30	422	0.00	
9033802	750-H DUPLICATE	1.00	15.19	76.7	30	429	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 <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.	$\checkmark$
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	<u> </u>
4.	Document paginated and legible.	
5.	Chain of Custody submitted.	$\overline{\vee}$
6.	Samples submitted to lab within 48 hours of sample collection.	V
7.	Methodology Summary submitted.	_i/_
8.	Laboratory Chronicle and Holding Time Check submitted.	$\underline{\vee}$
9.	Results submitted on a dry weight basis.	$\mathcal{U}$
10.	Method Detection Limits submitted.	V
11.	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.	$\checkmark$

Laboratory Manager or Environmental Consultant's Signature Date: <u>いいいついつ</u>		gunque Due Hermes
	/ \	

6MMM1:{1

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.

9117. lacqueline Hamer QA/QC Supervisor

### FORT MONMOUTH ENVIRONMENTAL

**TESTING LABORATORY** 

DIRECTORATE OF PUBLIC WORKS PHONE: (732)532-6224 FAX: (732)532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING



ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

PROJECT: UST/ Monitoring Program

### SAMPLE LOCATION AND IDENTIFICATION

<u>SITE</u>: 750

LABORATORY	MONITOR	NJDEP WELL ID#	SAMPLE
ID #	WELL#		DATE
9043404	750MW01**	29-28992	11/03/09
9043405	750MW02	29-28993	11/03/09
9043406	750MW03	29-28994	11/03/09
9043407	750MW04	29-28995	11/03/09
9043408	750MW01A***		11/03/09
9043409	750MW02A*	فت تند ترم بن برا زبر برد ارد ا	11/03/09
9043410	750MW03A*		11/03/09
9043411	750MW04A*		11/03/09

*New Wells Round I

**Duplicate Sample for VOA and TAL Metals is 9043404.

*** Duplicate Sample for BN is 9043408.

NJDEP Laboratory Certification # 13461

20/10 Dean Tardiff/Date:

Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

Seantural 3/15/10

Dean Tardiff

SAMPLING

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	• 514	Customer: J	Phone #: 73	()DERA ()C	Samplers Nam	LIMS/Work Or	all 4 gy a	~	2			<b>د</b> ر .	<i>6</i> <b>6 7</b>			ى ب	J			Relinquished Kill	Relinquished by (	Report Type: UF Turnaround time:	print legibly

new coc._1.XLS8/18/2009

### SAMPLE RECEIPT FORM

Date Received: 11-4-09	Work Order ID#: <u>404-34</u>
Site/Proj. Name:	Cooler Temp (°C): <u>3.0</u>
Received By: J. URiguit	Sign: plugeline
(Print name)	
<u>Check the appropriate the appropriate the appropriate the second /u>	<u>riate box</u>
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 ar	nd legibly? 🔄 yes 🗆 no
4. Was the chain of custody signed in the approp	riate place? 🖉 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes □ no
6. Were the correct containers/preservatives used	d? 🖉 yes 🗆 no
7. Was a sufficient amount of sample supplied?	yes 🗆 no
8. Were air bubbles present in VOA vials?	🗌 yeş 🖉 no 🗌 n/a
9. Were samples received on ice?	yes 🗌 no
10. Were analyze-immediately tests perform with	iin 15 minutes □ yes□ no ☑ n/a

### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
1049411-11	NHA	HCL			
· · · · · · · · · · · · · · · · · · ·	7				
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Comments:_____

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	Fort M		uth E	'nvi	ronm	ental T	esting	Laboratory	7
	Bldg. 173, SELFM	-PW-EV, Fort Fax (732)532- tion #13461	Monmouth, -6263 EMail	NJ 0770 Ljacqueli	3 ae.hamer@u	s.army.mil		, Chain of Custod	y Record
Customer: Jacquel	ine Hamer	Project No:				Analvsis	Parameters	Comments:	
Phone #: (732)532-435	6	Location: 75	0						
()DERA ()OMA (	)Other:								
Samplers Name / Con	ıpany:			Sample	<b>;</b> ]+				
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles <b>BX</b>			Remarks / Prese	rrvation Method
9043402	Field Blank	11/3/2009	12:20	AQ	۲ ۲				
9043408	750MW01A	11/3/2009	12:30	AQ	1 X				
9043408DUP.	750MW01A	11/3/2009	12:30	AQ	۲ ۲				
9043409	750MW02A	11/3/2009	12:50	AQ	1 X				
9043410	750MW03A	11/3/2009	13:00	AQ	1 X				e
9043411	750MW04A	11/3/2009	13:20	AQ	1 X				
					-				
			/	0					
Relinquished by (signatur	:e): Date/Time: 11-4/00/1410	Received by	sjensture): ZM/w	J)	Relinquished	by (signature):	Date/Time:	Received by (signature):	-
Relinquished by (signatu	:e): Date/Time:	Received by (	signature):		Relinquished	by (signature):	Date/Time:	Received by (signature):	
Report Type: UFull, Ul	Reduced, (X)Standard, ()Scr	een / non-certifi	led, ()EDD		Comn	tents: DK9/2009	-389 (PO C	99-20650)	
Turnaround time: (X)Stan	dard 3 wks, ()Rush Wk,_(	)ASAP Verbal	Hrs.						
print legibly	T			age	of /		No se	.A / new coc. 1.	(LS11/4/2009

### **US ARMY FORT MONMOUTH MONITOR WELL SAMPLING**

LOCATION: 750A MW #:03A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/03/09 WEATHER: Sunny and cool. TIDE: N/A	OM-VINNELL SI	Sampling C Accordance v SAM ERVICES	conducted in with TVS SOP -0205
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2' Purge Method: Peristaltic Pump/Ot Purge Rate: Not to Exceed Well D	' well or 0.65 for ther (Specify) raw Down of 0.5	4" well) x 3 = 25/109	TDOW-21.50 8.75 ft 21.50 ft 12.75 ft 0.00 ppm 25 Gal. 24.86 Gal/Min.
Purge Data: Start Time of Purging: 11:06 End Time of Purging: 12:55 pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	Initial Value 4.67 su 16.25 (°C) 3831 us/cm 145 mv 1.92 mg/L 11.04 ft 11.11 ft 13:00 13:12	<b>Pre-Sample</b> 4.67 su 16.64 ( °C) 4031 us/cm 147 mv 2.71 mg/L	<b>Post-Sample</b> 4.54 su 16.44 ( °C) 3921 us/cm 139 mv 2.20 mg/L

## CONFORMANCE/ NON-CONFORMANCE SUMMARY



### GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

			Indicate Yes, No, N/A
·1.	Chromatograms labe (Field samples a	led/Compounds identified nd method blanks)	<u>Yes</u>
2.	Retention times for c	hromatograms provided	Yes
3.	GC/MS Tune Specif	ications	
	a. b.	BFB Meet Criteria DFTPP Meet Criteria	<u>Yes</u> <u>NA</u>
4.	GC/MS Tuning Freq series and 12 hours f	uency – Performed every 24 hours for 600 or 8000 series	Yes
5.	GC/MS Calibration - analysis and continui sample analysis for 6	- Initial Calibration performed before sample ing calibration performed within 24 hours of 00 series and 12 hours for 8000 series	Yes
6.	GC/MS Calibration	equirements	
	a. b.	Calibration Check Compounds Meet Criteria System Performance Check Compounds Meet Criteria	<u>Yes</u> Yes
7.	Blank Contamination	- If yes, List compounds and concentrations in each blank:	No
	a.	VOA Fraction	
	b.	B/N Fraction NA	
	с.	Acid Fraction <u>NA</u>	
8.	Surrogate Recoveries	Meet Criteria	Yes
	If not met, list th outside the accep	ose compounds and their recoveries, which fall otable range:	
	а	VOA Fraction	
	ц. b.	B/N Fraction NA	
	c.	Acid Fraction <u>NA</u>	
	If not met, were as "estimated"?	the calculations checked and the results qualified	
0	Matrix Snike/Matrix	Snike Dunlicate Recoveries Meet Criteria	No
	(If not met. list those	compounds and their recoveries, which fall	
	outside the acceptable	e range).	
	a.	VOA Fraction: <u>Several compounds have high recoveries</u> , see summary form	
	b.	B/N Fraction <u>NA</u>	

c. Acid Fraction <u>NA</u>

			Indicate Yes, No, N/A
10.	Internal Standard (If not met, list th	Area/Retention Time Shift Meet Criteria ose compounds, which fall outside the acceptable range)	Yes
	a.	VOA Fraction	
	b.	B/N Fraction <u>NA</u>	
	с.	Acid Fraction <u>NA</u>	
11.	Extraction Holdir	ng Time Met	<u>NA</u>
	If not met, list the	number of days exceeded for each sample:	
12.	Analysis Holding	Time Met	<u>Yes</u>
	If not met, list the	number of days exceeded for each sample:	
Ađđ	itional Comments:		
•			
Lab	pratory Manager: _	Scantenary Date: 1/20/10	

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



N

### CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Fort Monmouth Environmental Testing Lab.

Job No JA33317

**Report Date** 

12/6/2009 6:26:47 PM

Site: 750

On 11/18/2009, 5 Sample(s), 0 Trip Blank(s) and 1 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.5 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of JA33317 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:	OP41049		

* All samples were extracted within the recommended method holding time.

* All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) JA33267-2MS, JA33267-2MSD were used as the QC samples indicated.

- Blank Spike Recovery(s) for Atrazine are outside control limits.
- Matrix Spike Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for Atrazine are outside control limits. Probable cause due to matrix interference.

Sample(s) OP41049-MSD have surrogates outside control limits. Probable cause due to matrix interference.

#### Extractables by GCMS By Method SW846 8270C BY SIM

Γ	Matrix AQ	Batch ID: OP41049	A
101	All samples were extracted within	the recommended method holding ti	me.

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA33267-2MS were used as the QC samples indicated.

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

Sunday, December 06, 2009



### METALS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Lab ID:	90434	Indicate Yes, No, N/A
1.	Initial and Continuing Calibration Verifications Meet Criteria	Yes
2	ICP Interference Check Sample Results Meet Criteria	Yes
3	Serial Dilutions Meet Criteria	Yes
4	Laboratory Control Samples Meet Criteria	Yes
5	Preparation, Method and Calibration Blank Contamination If yes, list compounds and concentrations in each blank	No
6	Spike Sample Recoveries Meet Criteria 9043103: Al = 55.9%	Yes
7	Duplicates Meet Criteria	Yes
8	Analysis Holding Time Met If not met, list number of days exceeded for each sample	Yes
	Additional Comments:	
	Laboratory Manager: Dean Tandy Date: /	120/10

METHOD SUMMARY



### Method Summary

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

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

### EPA Method 3510/8270 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.

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

#### Milestone MLS 1200 MEGA

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

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

#### Perkin Elmer OPTIMA 3000 DV

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

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

#### Varian SpectrAA-640, VGA-77

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

## LABORATORY CHRONICLE



### **Laboratory Chronicle**

Lab ID: 90447

Site: 750 LTM

	Date	Hold Time
Date Sampled	11/03/09	NA
Receipt/Refrigeration	11/03/09	NA

### Analyses

Volatiles	11/14,15/09	14 Days
Base Neutral	11/11,17/09	7 Days
TAL Metals	11/10/09	6 Months
Arsenic	11/17/09	6 Months
Mercury	11/13/09	28 Days
Thallium	11/16/09	6 Months
	Volatiles Base Neutral TAL Metals Arsenic Mercury Thallium	Volatiles       11/14,15/09         Base Neutral       11/11,17/09         TAL Metals       11/10/09         Arsenic       11/17/09         Mercury       11/13/09         Thallium       11/16/09

000021

## 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	VA4841.D		Sample Name	MB11040902
Operator	ROBERTS		Field ID	METHOD 624 11/04/09
Date Acquired	4 Nov 2009	7:26 pm	Sample Multiplier	1

CAS#	Compound Name	RТ	Resnanse	Result		Regulatory Level (ug/l)*	MDL	$\mathbf{RL}$	Oualifiers
107028	Acrolein			pot	detected	5	2.09 ug	/L 5.00 ug/L	
107131	Acrylonitrile	1		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	1		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 1.00 ug/L	
74-87-3	Chloromethane	1		not	detected	nle	0.10 ug	/L 1.00 ug/L	
75-01-4	Vinyl Chloride	1		not	detected	1	0.22 ug	/L 1.00 ug/L	
74-83-9	Bromomethane	1		not	detected	10	0.25 ug	/L 1.00 ug/L	
75-00-3	Chloroethane			not	detected	пle	0,22 ug	/L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug	/L 1.00 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	Vinvl Acetate			not	detected	7000 ·	0.20 ug	/L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug	/L 1.00 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	1		not	detected	1	0.16 ug	/L 0.50 ug/L	
107-06-2	1 2-Dichioroethane			not	detected	2	0.19 ug	/L 0.50 ug/L	
79-01-6	Trichloroethene			not	detected	I	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	I	0.14 ug	/L 0.50 ug/L	
110-75-8	2-Chloroethyl vinvl ether .			not	detected	nle	0,25 ug	/L 1.00 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 1,00 ug/L	
108-88-3	Toluene			not	detected	1000	0.15 ug	/L 0.50 ug/L	
10061-02-6	trans-1 3-Dichloronropene			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	Ethylhenzene			not	detected	700	0.16 ug	/L 0.50 ug/L	
630-20-6	1 1 1 2-tetrachloroethane			not	detected	j	0.15 ug	/L 0.50 ug/L	
1330-20-7	m+p-Xvlenes			not	detected	nle	0.27 ug	/L 1.00 ug/L	
1330-20-7	o-Xvlene			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 1.00 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-Dichlorohenzene			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



VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

		TENTATI	VELY IDEN	TIFIED COMP	POUND	S <u>.</u>	ND44040	
Lab Name:	FMETL			Contra	ct:		WB11040	902
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS	No.:	S	DG No.: 90434	1 .
Matrix: (soil/v	vater)	WATER	-	¢	Lab Sa	mple ID:	MB11040902	
Sample wt/vo	ol:	5.0	(g/ml) ML		Lab File	e ID:	VA4841.D	_
Level: (low/n	ned)	LOW	-		Date R	eceived:	11/3/2009	
% Moisture: r	not dec.				Date A	nalyzed:	11/4/2009	
GC Column:	RTX-V	<u>M</u> ID: <u>0.2</u>	2 <u>5</u> (mm)		Dilution	Factor:	1.0 ·	
Soil Extract V	olume:		(uL)		Soil Ali	quot Volu	Ime:	_ (uL)
Number TICs	found:	0	_	CONCENTF (ug/L or ug/l	RATION Kg)	UNITS: UG/L		
CAS NO.		COMPOU	ND NAME		R	r es	ST. CONC.	Q

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

Regulatory Level (ug/l)*

Data File Operator Date Acquired	VA4843.D ROBERTS 4 Nov 2009	8:28 pm	Sample Name Field ID Sample Multiplier	9043401 750 TRIP BLANK 1	

CAS#	Compound Name	вт	Resnonse	Result	ł	Regulatory Level (ug/l)*	MDL	RL	Oualifiers
107028	Acrolein			not	detected	5	2.09 ug/	L 5.00 ug/L	
107131	Acrylonitrile			not	detected	2	1.64 ug/	( 5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	001	1.89 ug/	L 5.00 ug/L	
1634044	Methyl-tert-Butyl ether		<u></u>	not	detected	70	0.18 ug/	L 0.50 ug/L	
108203	Di-isopronyl ether			not	detected	20000	0.12 ug/	L 0,50 ug/L	,
75718	Dichlorodifluoromethane	1		not	detected	1000	0,22 ug/	L 1.00 ug/L	
74-87-3	Chloromethane		· · · · · · · · · · · · · · · · · · ·	not	detected	nle	0,10 ug/	L 1.00 ug/L	
75-01-4	Vinvi Chloride			not	detected	1	0.22 ug/	L 1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25 ug/	L 1.00 ug/L	
75-00-3	Chloroethane	1		not	detected	ole	0.22 ug/	L 1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/	L 1,00 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	1		not	detected	. 700	0.18 ug/	L 0.50 ug/L	
75-09-2	Methylene Chloride	1		not	detected	3	0.16 ug/	L 0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene	1	-	not	detected	100	0.20 ug/	L 0.50 ug/L	
75-35-3	1.1-Dichloroethane	1		not	detected	50	0,19 ug/	L 0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.20 ug/	L 0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/	L 1.00 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	1		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 1.00 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 1.00 ug/L	<b></b>
108-88-3	Toluene			not	detected	1000	0.15 ug/	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	1	0.12 ug/	0.50 ug/L	
79-00-5	1.1.2-Trichloroethane			not	detected	3	0.14 ug/	0.50 ug/L	
127-18-4	Tetrachloroethene			not	detected	1	0.18 ug/	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/	0.50 ug/L	
126-48-1	Dibromochloromethane			not	detected	1	0.14 ug/	0.50_ug/L	
108-90-7	Chlorobenzene			not	detected	50	0.15 ug/	. 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		0.15 ug/	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.27 ug/l	_ <u>1.00 ug/L</u>	
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/J	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.12 ug/	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/	<u>0.50 ug/L</u>	
95-50-1	1,2-Dichlorobenzene			not	detected	600	0.12 ug/l	<u>  0.50 ug/L</u>	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

#### VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

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		TENTATI	VELY IDEN	TIFIED COMPOU	NDS		
Lab Name:	FMETL			750 TRIP BL	ANK		
Lab Code:	13461	Ca	se No.: <u>MW</u>	SAS No.		SDG No.: 90434	
Matrix: (soil/v	vater)	WATER	_	Lab	Sample II	D: 9043401	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab	File ID:	VA4843.D	_
Level: (low/n	ned)	LOW	_	Date	e Receive	d: <u>11/3/2009</u>	-
% Moisture: r	not dec.		<u></u>	Date	e Analyzeo	d: <u>11/4/2009</u>	_
GC Column:	RTX-V	<u>/M_</u> ID; <u>0.2</u>	25 (mm)	Dilu	tion Facto	r: <u>1.0</u>	_
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	. (uL)
				CONCENTRATI		S:	
Number TICs	s found:	0	<u> </u>	(ug/L or ug/Kg)	UG/L		
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q

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3/90 000027

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

Data File	VA4844.D	Sample Name	9043402
Operator	ROBERTS	Field ID	750 FIELD BLANK
Date Acquired	4 Nov 2009 8:59 pm	Sample Multiplier	1

<u> </u>		5.00	<b>D</b>	Decult		Regulatory Level (ug/l)*	MDI		рĭ	Qualifiers
CAS#	Compound Name	<u>R.1.</u>	Response	Result	datastad		2 00	11 <i>m</i> /T	5.00 ug/f	Quanners
107028	Acrolein			not	detected		1.64	<u>цель</u> ма/Г	5.00 ug/L	
107131	Acrylonitrile			not	detected	- 2	1.04	ug/L ug/T	5.00 ug/L	
75650	tert-Butyl alcohol			not	detected	100	0.19		0.50 ug/L	
1634044	Methyl-tert-Butyl ether			not	detected	70	0.10	ид/С	0.50 ug/L	
108203	Di-isopropyl ether			not	detected	20000	0.12	ug/L v.~/T	0.00 ug/L	
75718	Dichlorodifluoromethane			not	detected	1000	0.22	<u>ug/L</u>	1.00 ug/L	····
74-87-3	Chloromethane			not	detected	nle	0.10	ug/L /r	1.00 ug/L	· · · · - ·
75-01-4	Vinyl Chloride			not	detected		0.22	ug/L	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25	ид/ш	1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22	ug/L	1.00 ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.10	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	0,10	ug/L væ/T	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	700	0,16	ug/L ua/T	0.50 ug/L	
75-09-2	Methylene Chloride			not	detected	3	0.10	ugyr.	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	100	0.20	ugyr.	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	0.50 ug/L	1
78-93-3	2-Butanone			not	detected	300	0.10	ug/L	1.00 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	defected		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 Tetrachioride			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	I	0,18	ug/L	0.50 ug/L	
78-87-5	1,2-Dichloropropane	-		not	detected		0.16	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane			not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not	detected	nle.	0.25	ug/L	1.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0,16	ug/L	0.50 ug/L	···
108-10-1	4-Methyl-2-Pentanone			not	detected	nle	0,26	ug/L	<u>1.00 ug/L</u>	
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		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	nie	0.27	ug/L	1.00 ug/L	
1330-20-7	o-Xylene			not	detected	nie	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	1.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	1	0.1 <u>2</u>	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	ļ
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

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VOLATILE ORGANICS ANALYSIS DATA SHEET	
TENTATIVELY IDENTIFIED COMPOUNDS	

EPA SAMPLE NO.

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					NDO		
Lab Name:	FMETL			Contract:			DEANN
Lab Code:	13461	Ca	se No.: MW	SAS No.	:	SDG No.: 90	)434
Matrix: (soil/v	vater)	WATER	-	Lab	Sample II	D: 9043402	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4844.D	
Level: (low/n	ned)	LOW	_	Dat	e Receive	d: <u>11/3/2009</u>	
% Moisture: r	not dec.			Dat	e Analyzeo	d: <u>11/4/2009</u>	
GC Column:	RTX-V	/ <u>M_</u> ID: <u>0.2</u>	25(mm)	Dilu	ition Facto	r: <u>1.0</u>	
Soil Extract V	/olume:		(uL)	Soil	Aliquot Vo	olume:	(uL)
Number TICs	s found:	0	_	CONCENTRAT (ug/L or ug/Kg)	ION UNIT	S:	
CAS NO.		COMPOU	ND NAME		RT	EST. CONC.	Q



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

Data File	VA4852.D		Sample Name	9043410
Operator	ROBERTS		Field ID	750 MW#03A
Date Acquired	5 Nov 2009	1:08 am	Sample Multiplier	1

<b>A</b> . A			_			Regulatory Level (ug/l)*		~ *	0 114
CAS#	Compound Name	<u>R,T,</u>	Response	Result				RL	Qualifiers
107028	Acrolein		-	noi	detected	5	2.09 ug/L	5.00 ug/L	
107131	Acrylonitrile			noi	detected	2	1.64 ug/L	<u>5.00 ug/L</u>	-
75650	tert-Butyl alcohol			not	detected	100	1.89 ug/L	5.00 ug/L	
1634044	Methyl-tert-Butyl ether		·	not	Idetected	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	1.00 ug/L	
74-87-3	Chloromethane			not	detected	nle	0.10 ug/L	1,00 ug/L	
75-01-4	Vinyl Chloride			not	detected	1	0.22 ug/L	1.00 ug/L	
74-83-9	Bromomethane			not	detected	10	0.25 ug/L	1.00 ug/L	
75-00-3	Chloroethane			not	detected	nle	0.22 ug/L	1.00 Ug/L	
75-69-4	Trichlorofluoromethane			not	detected	2000	0.18 ug/L	1.00 ug/L	
75-35-4	1,1-Dichloroethene			not	detected	1	0.20 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
67-64-1	Acetone		- <b>.</b>	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	<u>0.50 ug/L</u>	
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	0.50 ug/L	
78-93-3	2-Butanone			not	detected	300	0.16 ug/L	1.00 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	nte	0.25 ug/L	1.00 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	1.00 ug/L	
108-88-3	Toluene			not	defected	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	1.00 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

	IENIATI	VELY IDEN	TIFIED COMPOL	INDS			
FMETL		<u>.</u>	Contract:		75	0 MW#03	SA
13461	Cas	e No.: MW	SAS No	.:	SDG No.:	90434	
ater)	WATER	-	Lab	Sample I	D: 904341	0	
:	5.0	(g/ml) <u>ML</u>	Lat	File ID;	VA4852	2.D	
ed)	LOW		Dat	e Receive	ed: 11/3/20	009	
ot dec.		<u>.</u>	Dát	e Analyze	d: 11/5/20	09	
RTX-V	<u>M</u> ID: <u>0.2</u>	5(mm)	Dilu	ition Facto	or: 1.0		-
olume:		(uL)	Soi	Aliquot V	olume:		(uL)
			CONCENTRAT	ION UNIT	S:		
found:	0		(ug/L or ug/Kg)	UG/L	, 		
	COMPOU	ND NAME		RT	EST. CON	C.	Q
	FMETL 13461 ater) : ed) ot dec. <u>RTX-V</u> olume:	FMETL         13461       Case         ater)       WATER         :       5.0         ed)       LOW         ot dec.	FMETL         13461       Case No.: MW         ater)       WATER         :       5.0       (g/ml) ML         ed)       LOW         ot dec.	FMETL       Contract:         13461       Case No.:       MW       SAS No.         ater)       WATER       Lab         :       5.0       (g/ml)       ML       Lab         ed)       LOW       Dat         ot dec.       Dat <u>RTX-VM</u> ID:       0.25       (mm)       Dilu         plume:	FMETL       Contract:         13461       Case No.:       MW       SAS No.:         ater)       WATER       Lab Sample I         :       5.0       (g/ml)       ML       Lab File ID:         ed)       LOW       Date Receive         ot dec.       Date Analyze         RTX-VM       ID:       0.25       (mm)         olume:	FMETL         Contract:         75           13461         Case No.:         MW         SAS No.:         SDG No.:           ater)         WATER         Lab Sample ID:         904341           :         5.0         (g/ml)         ML         Lab File ID:         VA4852           ed)         LOW         Date Received:         11/3/20           ot dec.         Date Analyzed:         11/5/20           RTX-VM         ID:         0.25         (mm)         Dilution Factor:         1.0           olume:	FMETL       Contract:       750 MW#03         13461       Case No.:       MW       SAS No.:       SDG No.:       90434         ater)       WATER       Lab Sample ID:       9043410         :       5.0       (g/ml) ML       Lab File ID:       VA4852.D         ed)       LOW       Date Received:       11/3/2009         ot dec.       Date Analyzed:       11/5/2009         RTX-VM       ID:       0.25       (mm)         olume:



EPA SAMPLE NO.

## SEMI-VOLATILE ORGANICS

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#### Accutest Laboratories

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	Page 1 of 2	(ر) است الاست							
Client Sample ID:9043402 FIELD BLALab Sample ID:JA32053-1Matrix:AQ - Field Blank WaMethod:SW846 8270CProject:750		ANK ater 846 3510C	NK Date Sampled: 11/03/09 ter Date Received: 11/04/09 46 3510C Percent Solids: n/a						
Run #1 Run #2	File ID DF 3E23002.D 1		Analyzed 11/17/09	By Prep Date OYA 11/09/09		Prep Batch OP40821	Analytical Batch E3E1045	L	
Run #1 Run #2	Initial Volume 1000 ml	Final Volu 1.0 ml	me						
BN TCL42	2 List								
CAS No.	Compound		Result	RL	MDL	Units	Q		
98-86-2 1912-24-9	Acetophenone Atrazine		ND ND	5.0 5.0	0.40 0.39	ug/l ug/l			• •
100-52-7	Benzaldehyde 4-Bromopheny	l phenyl ethe	r ND ND	5.0 2.0 2.0	0.40	ug/1 ug/1 ug/1			
85-68-7 92-52-4	1,1'-Biphenyl	halana	ND ND	2.0	0.42	ug/l 119/l			
91-38-7 106-47-8	4-Chloroanilin	e	ND	5.0	0.25	ug/l			
105-60-2	Carbazole Caprolactam	hove)mothan	ND ND	2.0 2.0	0.20	ug/l			
111-44-4	bis(2-Chloroet	hyl)ether	ND ND	2.0	0.31	ug/l ug/l			
7005-72-3	4-Chloropheny	d phenyl ethe	r ND ND	2.0	0.35	ug/l ug/l			
606-20-2	2,6-Dinitrotolu	iene iene	ND ND	2.0 5.0	0.33	ug/l ug/l		2	
132-64-9	Dibenzofuran		ND ND	5.0 2.0	0.30	ug/l ug/l			
04-74-2 117-84-0	Di-n-octyl phil	nalate	ND ND	2.0	0.40	ug/l			
84-00-2 131-11-3	Dimethyl phtha bic(2 Ethylbor	alate	ND ND	2.0	0.23	ug/l			
117-01-7 87-68-3 77 47 4	Hexachlorobut	y primarate adiene	ND	1.0 20	0.37	ug/l			
67-72-1	Hexachloroeth	ane	ND	5.0 2.0	0.26	ug/l 110/l			
78-59-1 91-57-6	2-Methylnapht	halene	ND	2.0 2.0 5.0	0.66	ug/1 110/1			
88-74-4 99-09-2 100-01-6	2-INITOANIINE 3-Nitroaniline 4-Nitroaniline		ND ND ND	5.0 5.0 5.0	0.24 0.29 0.18	ug/l ug/l			
98-95-3	Nitrobenzene		ND	2.0	0.25	ug/l			

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blankN = Indicates presumptive evidence of a compound



### Accutest Laboratories

Report of Analysis									Page 2 of		
Client Samp Lab Sample Matrix: Method: Project:	ple ID: 904 a ID: JA AQ SW 756	<ul> <li>9043402 FIELD BLANK</li> <li>JA32053-1</li> <li>AQ - Field Blank Water</li> <li>SW846 8270C SW846 3510C</li> <li>750</li> </ul>			Date Sampled: Date Received: Percent Solids:			03/09 04/09			
BN TCL42	List	· · ·				-					
CAS No.	Compoun	d	Result	RL	MDL	Units	Q				
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine		ND ND	2.0 5.0	0.44 0.22	ug/l ug/l					
CAS No. Surrogate Recoveries		Run# 1	Run# 2	Lim	its						
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14		79% 78% 79%	25-112% 31-106% 14-122%							
CAS No. Tentatively Identified Com		ounds	R.T.	Est.	Conc.	Units	Q				
Internal standard added for SIM test Total TIC, Semi-Volatile			11.50	4.3 0		ug/l ug/l	J				

MDL - Method Detection Limit ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $\tilde{B}$  = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 2 of 2

### Accutest Laboratories

	Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043402 FIELD B e ID: JA32053-1 AQ - Field Blank SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date Sa Date R Percent	ampled: eceived: t Solids:	11/03/09 11/04/09 n/a	
Run #1 Run #2	File ID         DF           4M13243.D         1	Analyzed 11/11/09	By NAP	Prep Date 11/09/09		Prep Batch OP40821A	Analytical Batch E4M610
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene	ND ND ND ND ND ND ND ND ND ND ND	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.20\\ \end{array}$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Hexachlorobenzene Indeno(1,2,3-cd)pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND	0.020 0.10 0.10 0.10 0.10	0.0099 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its		<u>~</u>
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	90% 77% 73%		18-1 18-1 13-1	19% 04% 09%		

MDL - Method Detection Limit ND = Not detected

RL = Reporting LimitE = 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




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		Repo	rt of A	nalysis			Page 1 of 2
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9043410 750MW03A e ID: JA32053-5 AQ - Ground Water SW846 8270C SW84 750	46 3510C		Date S Date F Percer	ampled: Received: nt Solids:	11/03/09 11/04/09 n/a	
Run #1 Run #2	File ID         DF         A           3E23006.D         1         1	Analyzed 1/17/09	By OYA	Prep D 11/09/0	ate 9	Prep Batch OP40821	Analytical Batch E3E1045
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	10					
BN TCL42	List						
CAS No.	Compound	Result	RL	MDL	Units	Q	
98-86-2 1912-24-9 100-52-7 101-55-3 85-68-7 92-52-4 91-58-7 106-47-8	Acetophenone Atrazine Benzaldehyde 4-Bromophenyl phenyl ether Butyl benzyl phthalate 1,1'-Biphenyl 2-Chloronaphthalene 4-Chloroaniline	ND ND ND ND ND ND ND	5.0 5.0 2.0 2.0 2.0 5.0 5.0 5.0	0.40 0.39 0.40 0.35 0.25 0.42 0.42 0.25 0.17	ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
105-60-2 111-91-1 111-44-4 108-60-1 7005-72-3 121-14-2	Caprolactam bis(2-Chloroethoxy)methane bis(2-Chloroethyl)ether bis(2-Chloroisopropyl)ether 4-Chlorophenyl phenyl ether 2,4-Dinitrotoluene	ND ND ND ND ND ND	2.0 2.0 2.0 2.0 2.0 2.0 2.0	0.20 0.25 0.31 0.39 0.35 0.22	ug/l ug/l ug/l ug/l ug/l ug/l		
606-20-2 91-94-1 132-64-9 84-74-2 117-84-0 84-66-2	2,6-Dinitrotoluene 3,3'-Dichlorobenzidine Dibenzofuran Di-n-butyl phthalate Di-n-octyl phthalate Diethyl phthalate	ND ND ND ND ND ND	2.0 5.0 5.0 2.0 2.0 2.0	0.33 0.30 0.30 0.19 0.40 0.17	ug/l ug/l ug/l ug/l ug/l ug/l		
131-11-3 117-81-7 87-68-3 77-47-4 67-72-1 78-59-1	Dimethyl phthalate bis(2-Ethylhexyl)phthalate Hexachlorobutadiene Hexachlorocyclopentadiene Hexachloroethane Jonhorone	ND 2.6 ND ND ND	2.0 2.0 1.0 20 5.0 2.0	0.23 0.33 0.37 0.67 0.26 0.25	ug/l ug/l ug/l ug/l ug/l ug/l		
91-57-6 88-74-4 99-09-2 100-01-6 98-95-3	2-Methylnaphthalene 2-Nitroaniline 3-Nitroaniline 4-Nitroaniline Nitrobenzene	ND ND ND ND ND	2.0 5.0 5.0 5.0 2.0	0.66 0.24 0.29 0.18 0.25	ug/l ug/l ug/l ug/l ug/l		

ND = Not detectedMDL - 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

000106





Client Sample ID:

Lab Sample ID:

BN TCL42 List

Matrix:

Method:

Project:

CAS No.

621-64-7

86-30-6

CAS No.

4165-60-0

321-60-8

1718-51-0

CAS No.

ND = Not detected	MDL - Method Detection Limit
RL = Reporting Limit	
E = Indicates value exce	eeds calibration range

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

Page 2 of 2

Report	of	Analy	SIS
--------	----	-------	-----

RL

2.0

5.0

Run#2

R.T.

11.50

19.90

Result

ND

ND

Run#1

80%

80%

79%

Date Sampled:

Date Received:

MDL

0.44

0.22

Limits

25-112%

31-106%

14-122%

4.6

4.1

0

Percent Solids: n/a

Units

ug/l

ug/l

Est. Conc. Units Q

ug/l

ug/l

ug/l

J

J

11/03/09

11/04/09

Q

9043410 750MW03A

AO - Ground Water

SW846 8270C SW846 3510C

JA32053-5

N-Nitroso-di-n-propylamine

Tentatively Identified Compounds

Internal standard added for SIM test

Internal standard added for SIM test

Total TIC, Semi-Volatile

N-Nitrosodiphenylamine

Surrogate Recoveries

Nitrobenzene-d5

2-Fluorobiphenyl

Terphenyl-d14

750

Compound





000107

J = Indicates an estimated value

#### , where we have a state of the 
#### Accutest Laboratories

		Repo	rt of Ana	alysis			Page 1 of
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9043410 750MW03 le ID: JA32053-5 AQ - Ground Wate SW846 8270C BY 750	BA r SIM SW846	3510C	Date S Date R Percen	ampled: eceived: t Solids:	11/03/09 11/04/09 n/a	
Run #1 Run #2	File ID DF 4M13247.D 1	Analyzed. 11/11/09	By NAP	Prep Da 11/09/09	1te 9	Prep Batch OP40821A	Analytical Batch E4M610
Run #1 Run #2	Initial Volume Final Vol 1000 ml 1.0 ml	ume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129 00-0	Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (b) fluoranthene Benzo (k) fluoranthene Chrysene Dibenzo (a, h) anthracene Fluorene Hexachlorobenzene Indeno (1, 2, 3-cd) pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
129-00-0 ĈAS No.	ryrene Surrogate Recoveries	Run# 1	Run# 2	Lim	its		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	90% 79% 71%		18-1 18-1 13-1	19% 04% 09%		

MDL - Method Detection Limit ND = Not detected

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

Page 1 of 1







### 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: 1 / 10/ 10

ian laro

()(M):34

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.

relio

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



# ANALYTICAL DATA REPORT FOR Directorate of Public Works Fort Monmouth, NJ 07703

# PROJECT: UST/ Monitoring Program New Wells Round II

# SAMPLE LOCATION AND IDENTIFICATION

SITE: 750

LABORATORY ID #	MONITOR WELL#	NJDEP WELL ID#	SAMPLE DÅTE
9044704	750MW01A**		11/17/09
9044705	750MW02A		11/17/09
9044706	750MW03A		11/17/09
9044707	750MW04A		11/17/09

*New Wells Round II **DUP. Sample is 9044704.

NJDEP Laboratory Certification # 13461

12011

Dean Tardiff/Date: Laboratory Manager

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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The following well designations: 750MW01A, 750MW02A, 750MW03A, and 750MW04A refer to 750MW05, 750MW06, 750MW07, and 750MW08 respectively.

3/15/10 Secularly

Dean Tardiff

# SAMPLING

 Fort Monmouth Environmental Testing Laboratory

 Elds. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.ml

 Chain of Custody

са ( C. Holdenseith

1 1 1

8 #<u>11</u>

**Chain of Custody Record** 

NJDEP Certifica	tion #13461						
Customer: JOE FALLON	Project No:			Analysis F	arameters		Comments:
Phone #: 732-532-6223	Location: 2 ND	Courd Security	0				
( )DERA ( )OMA ( )Other:		, ] 	11	51			
Samplers Name / Company: しとんしてじん F	UNIC/ TVS	Sample	ΨO #	+0			
LIMS/Work Order # Sample Location	Date Ti	me - Type b	ttles	B			Remarks / Preservation Method
GUNNT . OI 750 TRIP BLANK	50-LI-11	00 AQ	Z Z				
102 750 FELD DLANK	111 60.21.11	00 AQ	3 X	X			
,03 750 DUP.		0 H T	ЗЗ				
A)0HUM *051 40,	111 50-61-11	0 AQ	2	X			
105 750 MW#02A	111 60-21-11	20 AQ	3 X	X			
A 106 750 mu #03A	111 60-61-11	30 A Q	З X	X			
07 750 mm #04p	11-17-09 11	50 99	З Х	X			-
,							
							-
						<u>.</u>	
Relinguished the (standature) Date/Time:	Roceived by (signa	durre): d. M. A.	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Relinquished by (signature): Date/Time:	Received by (sign	truje):	Relinquished	by (signature):	Date/Time:	Received by	(signature):
Report Type: ()Full, ()Reduced, ()Standard, ()S Turnaround time: ()Standard 3 wks, ()Rush Wk.,_	creen / non-certified, ( ()ASAP Verbal	JEDD Hrs.	Com	lents:			
		Βοπο					1 VI 2410/000

# SAMPLE RECEIPT FORM

Date Received: _//-17-064	Work Order ID#:
Site/Proj. Name: 150/17/ 012-04	Cooler Temp (°C): 350C
Received By: J. U. MUM	Sign: Achulun
(Print name)	
<u>Check the approp</u>	priate box
<ol> <li>Did the samples come in a cooler?</li> </ol>	yes ∐ vo/ ∐ n/a
2. Were samples rec'd in good condition?	yes 🗌 no
3. Was the chain of custody filled out correctly a	Ind legibly?
4. Was the chain of custody signed in the approp	priate place? yes no
5. Did the labels agree with the chain of custody	/? Lyes I no
6. Were the correct containers/preservatives use	ed? ∠d 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 wit	hin 15 minutes □ yes□ no □ n/a

# Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	pH	Preservative
POULA-1-1	NA	ACL.			
1	-7.				
					,
·				· ·	
			<u>.,</u>	<u> </u>	
					· · · · · · · · · · · · · · · · · · ·
·					
		·			

Comments:_____

Fort Monmouth Environmental Testing Laboratory

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Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703 Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil

Chain of Custody Record

	Tel (732)532-4359 ]	Fax (732)532-( ion #13461	5263 EMail;	jacquelir	e.hame	r@us.army.mil	C	hain of Custody Record	
Customer: Jacqueli	ine Hamer	Project No:				Analy	sis Parameters	Comments:	
2hone #: (732)532-435	ó	Location: 750	New Wells	Rd. II					
)DERA ()OMA (	)Other:								
Samplers Name / Com	ıpany:			Sample	#	SI+			
LIMS/Work Order #	Sample Location	Date	Time	Type I	ottles	BN		Remarks / Preservation Method	
9044702	Field Blank	11/17/2009	11:00	AQ	~	×			
9044703	DUP.	11/17/2009	11:10	AQ		×		•	
9044704	750MW01A	11/17/2009	11:10	AQ		×			
9044705	750MW02A	11/17/2009	11:20	AQ	~	×			
9044706	750MW03A	11/17/2009	11:30	AQ	~	×			
9044707	750MW04A	11/17/2009	0.80625	AQ	۲	×			
									_
					   .				
									Í
									1
Refinquished by (signatu	rre): Date/Time:	Received by	Ksignaturef:	J.J	Reling	uished by (signature)	: Date/Time:	Received by (signature):	
Relinquished by (signati	rre): Date/Time:	Received by	(sígnature):		Relinc	uished by (signature)	: Date/Time:	Received by (signature):	
Report Type: ()Full, ( Turnaround time: (X)Sta	)Reduced, (X)Standard, ()Sc ndard 3 wks, ()Rush Wk.,_	rreen / non-certi ()ASAP Verba	fied, (JEDD 1Hrs.			Comments: C09-2	20650		
print legibly				Page_	<u>/</u> of	V I	bSeg/ ~	750 COC. 1.XLS11/18/2009	

000004

print legibly

# US ARMY FORT MONMOUTH MONITOR WELL SAMPLING

LOCATION: 750A MW #:03A NJDEP ID # NJDEP CERT. # 13461 SAMPLING CONTRACTOR: TEC SAMPLER: WALTER FUNK DATE: 11/17/09 WEATHER: Sunny and cool. TIDE: High	OM-VINNELL SI	Sampling C Accordance v SAM SAM	onducted in with TVS SOP -0205
Initial Readings: Elevation of Casing Survey Mark: Depth of Well: Height of Water in Well: PID/FID Reading: Gallons of Water to be Purged: Formula: ht.of water x (0.163 for 2' Purge Method: Peristaltic Pump/Ot Purge Rate: Not to Exceed Well D	' well or 0.65 for ther (Specify) raw Down of 0.5	4" well) x 3 = 25/109	TDOW-21.50 9.03 ft 21.50 ft 12.47 ft 0.00 ppm 25 Gal. 24.31 Gal/Min.
Purge Data: Start Time of Purging: 09:38 End Time of Purging: 11:27 pH: Temperature: Specific Conductivity: ORP: DO: Depth to Water Post Purge: Depth to Water Post Sampling: Sampling Start Time: Sampling End Time:	Initial Value 4.68 su 14.98 (°C) 3606 us/cm 115 mv 2.78 mg/L 11.78 ft 11.84 ft 11:30 11:34	<b>Pre-Sample</b> 4.63 su 15.52 (°C) 3904 us/cm 87 mv 4.17 mg/L	<b>Post-Sample</b> 4.52 su 15.47 ( °C) 3797 us/cm 92 mv 3.04 mg/L
Comments:			

# CONFORMANCE/ NON-CONFORMANCE SUMMARY

# 90447 VOA

# GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

	Indicate Yes No. N/A
Chromatograms labeled/Compounds identified (Field samples and method blanks)	Yes
Retention times for chromatograms provided	Yes
GC/MS Tune Specifications	
	405
<ul><li>a. BFB Meet Criteria</li><li>b. DFTPP Meet Criteria</li></ul>	NIA
GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series	Yes
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 .
GC/MS Calibration requirements	
e de la Challe Change de Mont Critoria	Yes
a. Calibration Check Compounds Meet Criteria b. System Performance Check Compounds Meet Criteria	Yes
Blank Contamination – If yes, List compounds and concentrations in each blank:	Na
a VOA Fraction	
b. B/N Fraction	
c. Acid Fraction	
Surrogate Recoveries Meet Criteria	Yes
If not met, list those compounds and their recoveries, which fall outside the acceptable range:	
VOA Fraction	
b B/N Fraction	·
c. Acid Fraction	
If not met, were the calculations checked and the results qualified as "estimated"?	· · · · · ·
A star for the Materix Spile Duplicate Recoveries Meet Criteria	No
Genet met liet these compounds and their recoveries, which fall	<del></del>
outside the acceptable range)	
NOA Fraction Several Confounds have high recoveries duet	o matrix in terference
a. VOA traction	
U. DANTIGORON	
	Chromatograms labeled/Compounds identified (Field samples and method blanks) Retention times for chromatograms provided GC/MS Tune Specifications a. BFB Meet Criteria b. DFTPP Meet Criteria GC/MS Tuning Frequency – Performed every 24 hours for 600 series and 12 hours for 8000 series 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 GC/MS Calibration requirements a. Calibration Check Compounds Meet Criteria b. System Performance Check Compounds Meet Criteria Blank Contamination – If yes, List compounds and concentrations in each blank: a. VOA Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction c. Acid Fraction b. B/N Fraction c. Acid Fraction c. Acid Fraction c. Acid Fraction b. B/N Fraction c. Acid

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

Indicate Yes, No, N/A

Yej

Yes

000011

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

a.		VOA Fraction	 	
ь.	•	B/N Fraction		
c.		Acid Fraction	 	

11: Extraction Holding Time Met

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

12. Analysis Holding Time Met

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

Additional Comments:

Scanlard 1/20/10 Date: Laboratory Manager:____

11/30/09

# METHOD SUMMARY

# **Method Summary**

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

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

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

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

# LABORATORY CHRONICLE

# Laboratory Chronicle

Lab ID: 90447

Site: 750

	Date	Hold Time
Date Sampled	11/17/09	NA
Receipt/Refrigeration	11/17/09	NA

# Analyses

1.	Volatilės	11/25/09	14 Days
2.	Semi-Volatiles	11/24-12/02/09	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

VA4992.D Data File Operator Date Acquired

ROBERTS 25 Nov 2009 1:36 pm Sample Name Field ID Sample Multiplier 1

MB11250901 METHOD 624 11/25/09

C1 8#	Compound Name	рт	Resnanse	Result		Regulatory Level (agr)*	MDL		RL	Qualifiers
107029	Aoroloin		Response	not	detected	5	2.09	ug/L	5.00 ug/L	
107028	Acsolenitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	tert Butul sloopol			not	detected	100	1.89	ug/L	5.00 ug/L	
1634044	Method tert-Bubyl ether	<del>_</del>		not	detected	70	0.18	ug/L	0.50 ug/L	
109203	Di-isonronyl ether			not	detected	20000	0.12	ug/L	0.50 ug/L	
75719	Disblorodifluoromethane			not	detected	1000	0.22	ug/L	0.50 ug/L	
74 97 2	Chloromethene			not	detected	nle	0.10	ug/L	0.50 ug/L	
75-01-4	Winyl 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	m		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-Dichlomethane			not	detected	50	0.19	ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20	ug/L	0.50 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	<u> </u>
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	<u>.</u>
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	<u> </u>	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		L

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

B = Compound found in related blank

E = Value above linear range

D = Value from dilution

PQL = Practical Quantitation Limit

J= Estimated concentration, value fails between R.L. and M.D.L.

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

11/30/2009 3:10 PM 000018

	· · · · · · · · · · · · · · · · · · ·	/OLATILI	1E E ORGANICS A	NALYSIS DATA SHE	ET	EPA SAMPLE	NO.
•		TENTA	TIVELY IDENT	IFIED COMPOUNDS		MB112509	01
Lab Name:	FMETL			Contract:			
Lab Code:	<b>1</b> 3461	(	Case No.: <u>MW</u>	SAS No.:	S	DG No.: 90447	
Matrix: (soil/v	water)	WATER	<u> </u>	Lab San	nple ID:	MB11250901	
Sample wt/vo	ol:	5.0	(g/ml) ML	Lab File	ID:	VA4992.D	-
Level: (low/r	ned)	LOW		Date Re	ceived:	11/17/2009	-
% Moisture:	not dec.	. <u></u>		Date An	alyzed:	11/25/2009	-
GC Column:	RTX-V	<u>M</u> ID:	<u>0.25</u> (mm)	Dilution	Factor:	1.0	
Soil Extract V	/olume:		(uL)	Soil Aliq	uot Volu	ime:	. (uL)
					UNITS:		
Number TICs	s found:	0		(ug/L or ug/Kg)			<u> </u>
CAS NO.		COMP	OUND NAME	RT	ES	ST. CONC.	Q

### FORM I VOA-TIC



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

VA4998.D Data File ROBERTS Operator Date Acquired

25 Nov 2009 5:45 pm

Sample Name Field ID Sample Multiplier 1

9044701 750 TRIP BLANK

Regulatory Launt (unlikt

C'A 8#	Compound Name	R.T.	Response	Result		Regulatory Detai (up)	MDL	<u></u>	Qualifiers
107028	Aorolein			not	detected	5	2.09 ug/L	5.00 ug/L	
107028	Acrolonitrile			not	detected	2	1.64 ug/L	5.00 ug/L	
75650	tert-Butul alcohol		· · · ·	. not	detected	100	1.89 ug/L	5.00 ug/L	
1634.044	Methyd_tert_Butyl ether			not	detected	70	0.18 ug/L	0.50 ug/L	
108203	Di iconronul ether			not	detected	20000	0.12 ug/L	0.50 ug/L	
75718	Dichlorodifuoromethane			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	nie	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	<u>0.20 ug/L</u>	0.50 ug/L	
75-35-3	1.1-Dichloroethane			not	detected	50	0.19 ug/L	0.50 ug/L	
108-05-4	Vinvl Acetate			not	detected	7000	0.20 ug/L	0.50 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		0.17 ug/L	0.50 ug/L	<u></u>
56-23-5	Carbon Tetrachloride			not	detected	1	0.27 ug/L	0.50 ug/L	
71-43-2	Benzene			not	detected	I	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		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/1	<u> </u>
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	<u> </u>	0.18 ug/L	0.50 ug/L	· · · · · · · · · · · · · · · · · · ·
591-78-6	2-Hexanone			not	detected	nle	0.20 ug/L		
126-48-1	Dibromochloromethane			not	detected		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			<u> </u>	detected	1	0.15 ug/L	0.50 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.2/lug/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	U.12 ug/L	0.50 ug/L	
75-25-2	Bromoform			not	detected	4 .	U.14 ug/L		
79-34-5	1,1,2,2-Tetrachloroethane			not	detected	<b>1</b>	0.12[ug/L		
541-73-1	1,3-Dichlorobenzene			not	detected	600	0.12 ug/L		
106-46-7	1,4-Dichlorobenzene			not	detected			0.50 ug/L	
95-50-1	1.2-Dichlorohenzene			not	detected	600	0.12 ug/L		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	EPA SAMPLE	E NO.
	TENTATIVELY IDEN	TIFIED COMPOUNDS	750 TRIP BL	ANK
Lab Name: FMET	L	Contract:		
Lab Code: 13461	Case No.: MW	SAS No.: S	SDG No.: <u>90447</u>	
Matrix: (soil/water)	WATER	Lab Sample ID:	9044701	<u> </u>
Sample wt/vol:	5.0 (g/ml) <u>ML</u>	Lab File ID:	VA4998.D	-
Level: (low/med)	LOW	Date Received:	11/17/2009	-
% Moisture: not dec.		Date Analyzed:	11/25/2009	<b>→</b>
GC Column: RTX	-VM_ID: <u>0.25</u> (mm)	Dilution Factor:	1.0	_
Soil Extract Volume:	(uL)	Soil Aliquot Vol	ume:	_ (uL)
		CONCENTRATION UNITS	· ·	
Number TICs found:	0	(ug/L or ug/Kg) UG/L		
CAS NO.	COMPOUND NAME	RT E	ST. CONC.	Q

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

VA4999.D Data File ROBERTS Operator 25 Nov 2009 6:16 pm Date Acquired

Sample Name Field ID Sample Multiplier 1

9044702 750 FIELD BLANK

CASH	Compaund 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	
107028	Acrulonitrila			not	detected	2	1.64	ug/L	5.00 ug/L	
75650	fort Butul alashai	•••		not	detected	100	1,89	ug/L	5.00 ug/L	
1624044	Nethed fort But d other			not	detected	70	0,18	ug/L	0.50 ug/L	
1024044	Di inappanul other			not	detected	20000	0.12	ug/L	0.50 ug/L	
108205	Di-Isopropyl euler			not	detected	1000	0.22	ug/L	0.50 ug/L	
73718	Clinerashan			not	detected	nle	0,10	ug/L	0.50 ug/L	
74-87-3	Chioroinemane			not	detected	1	0,22	ug/L	0.50 ug/L	
/5-01-4	Vinyi Chionde			not	detected	10	0,25	ug/L	0.50 ug/L	
74-83-9	Bromomethane	<u>-</u>		not	detected	nle	0.22	ug/L	0.50 ug/L	
75-00-3				not	detected	2000	0.18	ug/L	0.50 ug/L	
75-69-4	Inchlorofluoromethane			not	detected '	1	0,20	ug/L	0.50 ug/L	
75-35-4	1,1-Dichloroethene		·	not not	detected	6000	0.18	ug/L	0.50 ug/L	
67-64-1	Acetone			not	detected	700	0.18	ug/L	0.50 ug/L	
75-15-0	Carbon Disulfide			not	detected	100	0.16	ug/L	0.50 ug/L	
75-09-2	Methylene Chloride	•		not	detected	100	0.20	ug/L	0.50 ug/L	
156-60-5	trans-1,2-Dichloroethene			not	detected	50	0.19	ug/L	0.50 ug/L	·
75-35-3	1,1-Dichloroethane	· · · · ·		not	detected	7000	0.20	ug/L	0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	/ 200	0.16	ng/I.	0.50 ug/L	
78-93-3	2-Butanone			not	detected	70	0.14	110/1.	0.50 ug/L	
156-59-2	cis-1,2-Dichloroethene		<u>.</u>	not	detected	70	0.21	ug/L	0.50 ug/L	
67-66-3	Chloroform			not	detected		0.17	ng/L	0.50 ug/1.	
75-55-6	1,1,1-Trichioroethane	·			delected		0.27	ug/1	0.50 ug/L	
56-23-5	Carbon Tetrachloride	<u> </u>		not	delected		0.16	ug/f	050 ug/L	
71-43-2	Benzene	<del>.</del>		not	detected		0.10	ug/L	050 ug/L	
107-06-2	1,2-Dichloroethane			not	detected	²	0.12	ug/L	0.50 ug/1	
79-01-6	Trichloroethene			not	detected		0.16	ug/I	0.50 ug/l	
78-87-5	1,2-Dichloropropane			not	detected		0.10	ug/L	0.50 ug/L	
75-27-4	Bromodichloromethane		<i></i>	not	detected		0.14	ug/L	0.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether	<u></u> .		not	detected	nie	0.16	ug/L	0.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not	detected		0.10		0.50 ug/L	
108-10-1	4-Methyl-2-Pentanone	<u></u>		not	detected	nle	0.20		0.50 ug/L	
108-88-3	Toluene			not	detected	1000	0.13	ug/L	0.50 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not	detected	_ <u>_</u>	0.12	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	Tetrachioroethene			not	detected		. 0,18	ug/L	0.50 ug/L	
591-78-6	2-Hexanone			not	detected	nle	0.20		0.50 ug/L	
126-48-1	Dibromochloromethane		'	not	detected	<u>I</u>	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		0.15	ug/L	<u>0.50 ug/1.</u>	
1330-20-7	m+p-Xylenes		ļ	not	detected	nle	0.27	ug/L	1.00 ug/L	ļ
1330-20-7	o-Xylene			not	detected	nle	0,14	ug/L	0.50 ug/L	<u> </u>
100-42-5	Styrene			not	detected	100	0.12	ug/L	0.50 ug/L	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		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-Dichlombenzene			not	detected	600	0.12	lug/L	0.50 ug/L	

*Results between MDL and RL are estimated values

Qualifiers

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

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

11/30/2009 3:06 PM 000022

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## VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

						750 FIFLD BL	ANK
Lab Name:	FMETL			Contract:			
Lab Code:	13461	C:	ase No.: <u>MW</u>	SAS No.	: 8	DG No.: <u>90447</u>	
Matrix: (soil/v	vater)	WATER		Lab	Sample ID:	9044702	
Sample wt/vo	ol:	5.0	(g/ml) <u>ML</u>	Lab	File ID:	VA4999.D	_
Level: (low/n	ned)	LOW		Dat	e Received:	11/17/2009	
% Moisture: 1	not dec.			Date	e Analyzed:	11/25/2009	_
GC Column:	RTX-V	/ <u>M</u> ID: <u>0</u>	.25 (mm)	Dilu	tion Factor:	1.0	-
Soil Extract V	/olume:		(uL)	Soil	Aliquot Volu	.me:	_ (uL)
					ON UNITS:		
Number TICs	s found:	0	- <u></u>	(ug/L of ug/itg)			
CAS NO.		COMPO	UND NAME		RT E	ST. CONC.	Q

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# 000000

EPA SAMPLE NO.

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

Data FileVA4996,DSample Name90OperatorROBERTSField ID75Date Acquired25 Nov 20094:43 pmSample Multiplier1

Name 9044706 750 MW#03A Multiplier 1

						Regulatory Level (ug/l)*		~ ~	o
CAS#	Compound Name	R.T.	Response	Result	·	·,	MDL	RL	Quanners
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	300	1.89	ug/L 5.00 ug/L	<u> </u>
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	Vigyl Chloride			not	detected	11	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-Dichloraethene			not	detected		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-Dichlomethane			not	detected	50	0,19	ug/L 0.50 ug/L	
108-05-4	Vinyl Acetate			not	detected	7000	0.20	ug/L 0.50 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			nət	detected	70	0.21	ug/L 0.50 ug/L	
75-55-6	1 1 L 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	Banzene			not	detected	1	0.16	ug/L0.50_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	
79 97 5	1 2 Dishlorapropaga		u	not	detected	1	0.16	ug/L 0.50 ug/L	
75 27 4	Promodichloromethane			not	detected	1	0.14	ug/L 0.50 ug/L	
110.75.9	2 Chlososthul vinut ether	~	······································	not	detected	nle	0,25	ug/L 0.50 ug/L	
10061 01 5	2-Childroeniyi vinyi emer		· · · · · · · · · · · · · · · · · · ·	not	detected	1	0,16	ug/L 0.50 ug/L	
108 10 1	A Methul 2. Pentanone			not	detected	nle	0.26	ug/L 0.50 ug/L	
108-10-1	Teluene			not	detected	1000	0.15	ug/L 0.50 ug/L	
10061 02 6	from 1.2 Dichloropropena			not	detected	1	0.12	ug/L 0.50 ug/L	
70.00.5	1 1 2 Trickloroothane			not	detected	3	0.14	ug/L 0.50 ug/L	
127 18 /	Tatrashlorosthene			not	detected	1	0,18	ug/L 0.50 ug/L	
501 79 6	2 Uninnone			not	detected	ліе	0.20	ug/L 0.50 ug/L	
126 49 1	Dibromochloramethane			not	detected	1	0.14	ug/L 0.50 ug/L	
102 00 7	Chlorahangano		<del>_</del>	not	detected	50	0.15	ug/L 0.50 ug/L	
100 41 4	Ethuthongapo			not	detected	700	0.16	ug/L 0.50 ug/L	
620.20.6	Laryioenzene	·••~	•	not	detected	1	0.15	ug/L 0.50 ug/L	
1220-0 7	1,1,1,2-terracinor demane		• ~	not	detected	nle	0.27	ug/L 1.00 ug/L	
1330-20-7	m+p-Xylenes			not	detected	nle	0.14	ug/L 0.50 ug/L	
1330-20-7	o-Xylene	· · · · · ·		not	detected	100	0.12	ug/L 0,50 ug/L	
100-42-5	Stylene	<u> </u>		not	detected	4	0.14	ug/L 0.50 ug/L	
10-20-2	Bromotorm		· ·····	not	detected	1	0.12	ug/L 0.50 ug/L	
/9-34-3	1,1,2,2-1 etrachloroethane	· . · ·		not	detected	600	0.12	ug/L 0.50 ug/L	
541-73-1	1,3-Dichloropenzene			not	detected	75	0.12	ug/L 0.50 ug/L	
100-46-7	1,4-Dichlorobenzene			not	detected	600	0 12	ug/L 0.50 ug/L	
95-50-1	1.2-Dichlorobenzene			IIOL	deletica	1 000	0.12		

*Results between MDL and RL are estimated values

Qualifiers

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*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9C 07Nov2005

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.

		TENTATIVELY IDEN	TIFIED COMPOUNDS		750 5515/40	2.4
Lab Name:	FMETL		Contract:		750 10100#0	5A
Lab Code:	13461	Case No.: MV	SAS No.:	SD	G No.: 90447	
Matrix: (soil/	water)	WATER	Lab Sample	ID: 9	9044706	
Sample wt/vo	ol:	5.0 (g/ml) <u>ML</u>	Lab File ID:	1	VA4996.D	_
Level: (low/r	ned)	LOW	Date Receiv	ed:	11/17/2009	-
% Moisture; I	not dec.		Date Analyz	ed: _	11/25/2009	_
GC Column:	RTX-\	/M_ID: <u>0.25</u> (mm)	Dilution Fac	tor:	1.0	
Soil Extract \	/olume:	(uL)	Soil Aliquot '	Volum	ne:	_ (uL)
			CONCENTRATION UNI	TS:		
Number TICs	s found:	0	(ug/L or ug/Kg) UG/	'L		
CAS NO.		COMPOUND NAME	RT	EST	F. CONC.	Q

# SEMI-VOLATILE ORGANICS

		Repo	rt of A	nalysis			Page 1 of
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044702 FIELD BLA le ID: JA33317-1 AQ - Field Blank Wa SW846 8270C SW8 750	ANK .ter 46 3510C		Date S Date F Percer	11/17/09 11/18/09 n/a		
Run #1 Run #2	File ID DF R75635.D 1	Analyzed 12/02/09	By VN	Prep D 11/20/0	ate 19	Prep Batch OP41049	Analytical Batch ER2857
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	ne	•				
BN TCL42	List						
CAS No.	Compound	Result	RĹ	MDL	Units	Q	
98-86-2	Acetophenone	ND	5.0	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	2.0	0.42	ug/l		
91-58-7	2-Chloronanhthalene	ND	5.0	0.42	ug/l		
106-47-8	· 4-Chloroaniline	ND	5.0	0.25	ug/l		
86-74-8	Carbazole	ND	2.0	0.17	ˈug/l		
105-60-2	Caprolactam	ND	2.0	0.20	ug/l		
111-91-1	his (2-Chloroethoxy) methane	ND	2.0	0.25	ug/l		
111-44-4	his(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	0.37	ug/l		
77-47-4	Hexachlorocyclopentadiene	ND	20	0.67	ug/l		
67-72-1	Hexachloroethane	ND	5.0	0.26	ug/l		
78-59-1	Isophorone	ND	2.0	0.25	ug/l		
91-57-6	2-Methylnaphthalene	ND	2.0	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		
08-05-3	Nitrohenzene	ND	2.0	0.25	ug/l		

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

000069

6 of 182

ACCUTEST. JA33317 Laboritorios



# Report of Analysis

Client Sample ID:9044702 FIELD BLALab Sample ID:JA33317-1Matrix:AQ - Field Blank WaMethod:SW846 8270CProject:750		ANK ater 846 3510C		Date Sampled: Date Received: Percent Solids:				11/17/09 11/18/09 n/a		
BN TCL42	List							•		
CAS No.	Compound	Result	RL	MDL	Units	Q				
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l					
CAS No.	Surrogate Recoveries	Run# 1	Run#2	Lim	its					
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	79% 71% 66%	·	25-1 31-1 14-1	12% 06% 22%					
CAS No.	Tentatively Identified Com	pounds	R.T.	Est.	Conc.	Units	Q			
	system artifact/aldol-conden Internal standard added for Total TIC, Semi-Volatile	sation SIM test	4.53 8.48	4.1 4.1 0		ug/l ug/l ug/l	] J			

ND = Not detected MDL - Method Detection Limit RL = Reporting LimitE = 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



Page 2 of 2

•	Report of Analysis							
Client Sam Lab Samp Matrix: Method: Project:	nple ID: 9044702 FIELD B le ID: JA33317-1 AQ - Field Blank V SW846 8270C BY 750	LANK Water SIM SW846	3510C	Date S Date R Percen	ampled: eceived: t Solids:	11/17/09 : 11/18/09 : n/a		
Run #1 Run #2	File ID         DF           4M13629.D         1	Analyzed 11/24/09	By NAP	Prep Da 11/20/09	ite 9	Prep Batch OP41049A	Analytical Batch E4M623	
Run #1 Run #2	Initial Volume Final Vo 1000 ml 1.0 ml	lume						
CAS No.	Compound	Result	RL	MDL	Units	Q		
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo (a)anthracene Benzo (a)pyrene Benzo (b)fluoranthene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (g,h,i)perylene Benzo (a,h)anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno (1,2,3-cd) pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	$\begin{array}{c} 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\ 0.10\\$	0.029 0.039 0.026 0.024 0.031 0.036 0.029 0.028 0.022 0.023 0.024 0.027 0.0099 0.029 0.029 0.019 0.036 0.022	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	·		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts			
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	88% 79% 74%		18-1 18-1 13-1	19% 04% 09%	• •		

MDL - Method Detection Limit ND = Not detected

RL = Reporting Limit E = Indicates value exceeds calibration range

 $\begin{array}{l} J = \mbox{ Indicates an estimated value} \\ B = \mbox{ Indicates analyte found in associated method blank} \\ N = \mbox{ Indicates presumptive evidence of a compound} \end{array}$ 

(4) ***



		Repo	rt of A	nalysis			Page 1 of 2
Client Sam Lab Sample Matrix: Method: Project:	ple ID: 9044706 750MW03A e ID: JA33317-5 AQ - Ground Water SW846 8270C SW84 750	6 3510C		Date S Date F Percer	Sampled: Received nt Solids	11/17/09 : 11/18/09 : n/a	
Run #1 Run #2	File ID DF A R75645.D 1 1	nalyzed 2/02/09	By VN	Prep D 11/20/0	ate 19	Prep Batch OP41049	Analytical Batch ER2858
Run #1 Run #2	Initial Volume Final Volum 1000 ml 1.0 ml	e		,			
BN TCL42	List	,					
CAS No.	Compound	Result	RL	MDL	Units	Q	
98-86-2	Acetophenone	ND ND	5.0 5.0	0.40	ug/l ug/l		
1914-44-9	Renzaldehyde	ND	5.0	0.40	ug/l		
101-55-3	4-Bromonhenvl phenvl ether	ND	2.0	0.35	ug/l		
25_68_7	Butyl henzyl nhthalate	ND	2.0	0.25	ug/l		
92-52-4	1 1'-Binhervl	ND	2.0	0.42	ug/l		
91-58-7	2-Chloronanhthalene	ND	5.0	0.42	ug/l		
106.47-8	4-Chloroaniline	ND	5.0	0.25	ug/l		
26-74-8	Carbazole	ND	2.0	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 nhenyl 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	uğ/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	0.37	ug/l		
77-47-4	Hexachlorocyclopentadiene	ND	20	0.67	ug/l		
67-72-1	Hexachloroethane	ND	5.0	0.26	ug/l		
78-59-1	Isophorone	ND	2.0	0.25	ug/l		
91-57-6	2-Methylnaphthalene	ND	2.0	0.66	ug/l		
88-74-4	2-Nitroaniline	ND	5.0	0.24	ug/I		
99-09-2	3-Nitroaniline	ND	5.0	0.29	ug/I		
100-01-6	4-Nitroaniline	ND	5.0	0.18	ug/l		
98-95-3	Nitrobenzene	ND	2.0	0.25	ug/l		

MDL - Method Detection Limit ND = Not detected

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



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Report of Analysis

Client Samp Lab Sample Matrix: Method: Project:	ble ID: 9044706 750MW03A D: JA33317-5 AQ - Ground Water SW846 8270C SW8 750	<ul> <li>9044706 750MW03A</li> <li>JA33317-5</li> <li>AQ - Ground Water</li> <li>SW846 8270C SW846 3510C</li> <li>750</li> </ul>			Sampled Acceived at Solids	: 11/1 : 11/1 : n/a	11/17/09 11/18/09 n/a		
BN TCL42	List		· · · · · · · · · · · · · · · · · · ·						
CAS No.	Compound	Result	RL	MDL	Units	Q			
621-64-7 86-30-6	N-Nitroso-di-n-propylamine N-Nitrosodiphenylamine	ND ND	2.0 5.0	0.44 0.22	ug/l ug/l				
CAS No.	Surrogate Recoveries	Run# 1	Run#2	Lin	nits				
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	73% 72% 38%		25- 31- 14-	112% 106% 122%				
CAS No.	Tentatively Identified Con	pounds	R.T.	Est	. Conc.	Units	Q		
	system artifact/aldol-conden Benzene, -dichloro-chloroet Internal standard added for Total TIC, Semi-Volatile	isation henyl SIM test	4.54 13.44 18.37	4 7.7 4.1 7.7		ug/l ug/l ug/l ug/l	] ] ]		

ND = Not detectedMDL - Method Detection LimitRL = Reporting LimitE = Indicates value exceeds calibration range

- J = Indicates an estimated value
- B = Indicates analyte found in associated method blank

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N = Indicates presumptive evidence of a compound



Page 2 of 2
Accutest Laboratories

	Page 1 of 1						
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: 9044706 750MW03 e ID: JA33317-5 AQ - Ground Wate SW846 8270C BY 750	BA r SIM SW846	3510C	Date Sa Date R Percent	ampled: eceived: t Solids:	11/17/09 11/18/09 n/a	
Run #1 Run #2	File ID DF 4M13633.D 1	Analyzed 11/24/09	By NAP	Prep Da 11/20/09	.te )	Prep Batch OP41049A	Analytical Batch E4M623
Run #1 Run #2	Initial Volume Final Vol 1000 ml 1.0 ml	ume					
CAS No.	Compound	Result	RL	MDL	Units	Q	
83-32-9 208-96-8 120-12-7 56-55-3 50-32-8 205-99-2 191-24-2 207-08-9 218-01-9 53-70-3 206-44-0 86-73-7 118-74-1 193-39-5 91-20-3 85-01-8 129-00-0	Acenaphthene Acenaphthylene Anthracene Benzo (a) anthracene Benzo (a) pyrene Benzo (b) fluoranthene Benzo (b) fluoranthene Benzo (k) fluoranthene Chrysene Dibenzo (a,h) anthracene Fluoranthene Fluorene Hexachlorobenzene Indeno (1,2,3-cd) pyrene Naphthalene Phenanthrene Pyrene	ND ND ND ND ND ND ND ND ND ND ND ND ND N	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	$\begin{array}{c} 0.029\\ 0.039\\ 0.026\\ 0.024\\ 0.031\\ 0.036\\ 0.029\\ 0.028\\ 0.022\\ 0.023\\ 0.024\\ 0.027\\ 0.0099\\ 0.029\\ 0.019\\ 0.036\\ 0.022 \end{array}$	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run#2	2 - Lim:	its		
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	88% 80% 45%		18-1 18-1 13-1	19% 04% 09%		

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



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#### 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 heid 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: _/ _/ 20/_/D

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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.

and 1/2 1/21/10

Dean Tardiff Laboratory Manager

## ATTACHMENT L

UST 750I File Review and Analyses



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

Date: August 31, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: <b>7501</b>	Registration ID: None
Recommended Status of Site: Chang	e to Case Closed
Based on the file review, were there in	dications of a contaminant release? [ ] Yes [ X ] No
NJDEP Release No. or DICAR (If applica	ble): <u>None</u>
Did NJDEP approve No Further Action (	(NFA) for this site? [ ] Yes [ X ] No [ ] Not Applicable
Tank Description: [X] Steel [] Fiber	rglass Size: <u>1000 gals.</u> Contents: <u>No. 2 Fuel Oil</u>
[X] Residential [] Commercial	/Industrial
Tank Removed? [ X ] Yes [ ] No If	"yes," removal date: <u>8/13/2009</u>
Were closure soil samples taken? [X]	Yes [ ] No Analyses: <u>TPH</u>
Comparison criteria:5,100 mg/kg ⁻	<u>TPH</u>
Were closure soil sample results less th	nan comparison criteria? [X]Yes []No

#### **Brief Narrative**

UST 750I was initially identified as anomaly P51_5 in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_5 location, a steel tank was located and removed on 8/13/09. No evidence of fuel oil contamination was observed. Soil samples (750-I-1 through 750-I-5) were collected from the side walls of the excavation and below piping on 8/13/09, and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). TPH in all of the soil samples was not detected (ND). The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Therefore, there is no indication of a release to soil or groundwater at UST 750F, 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): <u>Change to "Case Closed", request NFA from NJDEP</u>

Signed:

Kent A. Friesen, Parsons

5		
LOCITION	750 I	NJDEP REG ID
, RESIDENTIAL?	YES	
JST CONSTR		
size (Gallons)	1000	CONSTRUCTION STEEL
PRODUCT	#2 FUEL OIL	YEAR INSTALLED
REMOVAL DATE	8/13/2009	REMOVAL CONTRACTOR TVS
REMOVAL DATE	, 8/13/2009	REMOVAL CONTRACTOR TVS
REMOVAL DATE SRF SEND DATE DICAR NO	8/13/2009	<i>REMOVAL CONTRACTOR</i> TVS <i>TMS</i> <i>LEAK DETECT</i>
REMOVAL DATE SRF SEND DATE DICAR NO REMEDIATION COMMENTS	8/13/2009	<i>REMOVAL CONTRACTOR</i> TVS <i>TMS</i> <i>LEAK DETECT</i>
REMOVAL DATE SRF SEND DATE DICAR NO REMEDIATION COMMENTS REGISTRATION COMMENTS	y 8/13/2009	REMOVAL CONTRACTOR TVS TMS LEAK DETECT UST as per BRAC Legal Office
REMOVAL DATE SRF SEND DATE DICAR NO REMEDIATION COMMENTS REGISTRATION COMMENTS SAS DONE	8/13/2009 unregulated Heating oil	REMOVAL CONTRACTOR TVS TMS LEAK DETECT UST as per BRAC Legal Office
REMOVAL DATE SRF SEND DATE DICAR NO REMEDIATION COMMENTS REGISTRATION COMMENTS SAS DONE MWS NEEDED	8/13/2009 unregulated Heating oil	REMOVAL CONTRACTOR TVS TMS LEAK DETECT UST as per BRAC Legal Office CONSULTANT MONITORING WELLS

APPROVAL DATE

SUBMITTAL DATE

# US ARMY, FORT MONMOUTH DAILY UST CLOSURE LOG

	BLDG #	750	REG #	UST I		
DATE	8-12	-09	TOA		TOD	
CLOSURĒ	TECH	FRANK	ACCORSI	NJDEP CER	т # _	0010042
PERSONNEL						

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 EXCAVATIO 1 WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	Y
ALL UST PIPING WAS BLOWN BACK AND DRAINED PRIOR TO ANY EXCAVATION WITH BACKHOE	NA
ALL UST PIPING WAS REMOVED PRIOR TO UST EXCAVATION	4
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	NA
THE UST WAS CEATED 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	4
<u>$700$</u> gallons of $H_{,0}$ waste were removed (manifest#)	4
O CUBIC YARDS OF PETROL CONT SOIL WERE EXCAVATED+TRANS TO (T 80 2624)	NA
THE DPW WAS NOTIFIED OF ANY DISCHARGE TO THE ENVIRONMENT (WHO)	NA
ALL PETROL CONT SOILS WERE SECURED FROM THE WEATHER BY CLOSE OF BUSINESS TODAY	NA
THE DPW AUTHORIZED BACKFILLING THE EXCAVATION SSE INITIAL REQUIRED	
THE UST WAS TRANSPORTED TO 108 YAPD 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	

CHECK ALL BOXES LEAVE NO BLANKS

1

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	ACCORS!		, ⁴ . y
SICNATURE	Trank	anori	DATE	8-12-09	۲ ۲

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ca\~s\ust\removal\sitec499 doc

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US ARMY, SELFM-PW-EV	
DAILY UST SUBSURFACE REMOVAL LOG	
BLDG # 750 DATE <u>8-13-09</u> SSE <u>FRANK ACCORS1</u> REMOVAL CONTRACTOR TVS Inc PWS-007 CLOSURE SUPERVISOR <u>FRANK ACCORS1</u> WEATHER <u>MOSTLY CLOUDY, OCC LT RAIN, 80'S</u>	,
ACTIVITY	YES/ NO
THE TECHNICIAN (CLOSURE CERT ) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	4
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)	7 -
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
PFOTOS HAVE UST# BLDG # DATE TIME, NAME OF SSE AND DESCR WRITTEN ON BACK	Y
GROUNDWATER WAS ENCOUNTERED AT 55 FEET BG A SHEEN (WAS MAS 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	P
ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7 26E-3 6 et seq	TY -
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	
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 <u>DAILY UST CLOSURE LOG</u> 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 LEAV	Eormed

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 D	ate	8-13-01	1
SIGNATURE	Frank anoris				

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# FORT MONMOUTH ENVIRONMENTAL SESTING LABORATORY DIRECTORATE OF PUBLIC WORKS HONE (732) 532-4359 FAX (732) 532-6263 WET-CHEM - METALS - ORGANICS - FIELD SAMPLING NJDEP CERTIFICATION #13461

### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT 09-123690

Didg / Sol Col II I									
Field Sample Location	Laboratory	Matrix	Date and Time	Date					
_	Sample ID#		of Collection	Received					
750-1-1, North Wall	9034101	Soil	13-Aug-09 09 00	08/13/09					
750-I 2 South Wall	9034102	Soil	13 Aug-09 09 15	08/13/09					
750 I-3 East Wall	9034103	Soil	13 Aug-09 09 35	08/13/09					
750-I-4 West Wall	9034104	Soil	13 Aug 09 09 55	08/13/09					
750 I 5 Piping	9034105	Soil	13 Aug-09 10 10	08/13/09					
750 I Duplicate	9034106	Soil	13 Aug-09 09 00	08/13/09					

### Bldg 750/UST # I

#### ANALYSIS FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

9 2200 ine Hamer/Date Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced except in full without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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# CHAIN OF CUSTODY



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		Tel (732)5 NJDEP C	32-4359	Fax (7 ion #	32)532 1 <b>3461</b> 	2 6263 EMa	il jac	quel	ine ha	amer@1	is army	y mil				4110 O		corc
Customer Ch	WCA A	PPLES	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Proje	ct No	09-12	36	90	,				sis Param	neters			Comments	
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Samplers Name /	Company	FRANK	Acc	20RSI (TVS				Sample #		24					1	Barradia ( Decomposition		
LIMS/Work Order	# Sai	mple Locat	ion	D	ate	Time	Ty	pe	bottle	s		┞╍╍╌┠╌		<u> </u>			Kemarks / Preservation	Method
40341 (	1/1/30-1 ///////////	- I NORTH	WAL	8-1	3~01	0400	50	12		<u>×</u>	<u>×</u>	┝╼╌┠╴				5-3,5	•	100
		2 500/1	WALL			0 115	+		+		<u>                                     </u>				┟┹	57.5		<u>                                     </u>
	2, 130 1- 1/ 750 -T	<u>3, 11957</u>	WALL			0137	┝╴╢		-+-							5-55		
	F1 75A-T	5 01011	WAFL			1010	$\left  \right $		+							2-2-0		
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Fimla	ina	8-13-09	1100	H	<u>L</u>	MIL	Ac	2										
Relinquished by (signature) Date/Time Received by (signature)					Relinquished by (signature)					Date/	/Time	Recei	ved by (	(signature)				

# SAMPLE RECEIPT FORM

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<u>ر</u>

Date Received 8-13-09	Work Order ID# <u>90341</u>						
Site/Proj Name Bldy 750 M. Pal	Cooler Temp (°C) $45$						
Received By J. Mergin A Sign Allulut							
(Print name) /							
<u>Check the appropriate the appropriate the second s</u>	<u>riate box</u>						
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? $1 \text{ yes} \square$ no							
4 Was the chain of custody signed in the approp	riate place? 🖉 yas 🗌 no						
5 Did the labels agree with the chain of custody	>Eyes□no						
6 Were the correct containers/preservatives use	d? 🖉 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 $\Box$ yes $\Box$ n/a							

# Fill out the following table for each sample bottle

Lims ID	рН	Preservative	Sample ID	pН	Preservative
	-	······································			
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#### Comments _____

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# GPS COORDINATED

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#### **US ARMY - FT MONMOUTH, NJ**

#### BUILDING 750 - UST 'I'

#### **SOIL SAMPLING GPS POSITIONS & COORDINATES**

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

#### (IN US SURVEY FEET)

#### SAMPLE POINTS

#### **POSITION/DESCRIPTION**

Ling

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### Y COORDINATE (NORTHING) X COORDINATE (EASTING)

51

750I 1 NORTH WALL UST 750I 2 SOUTH WALL UST 750I 3 EAST WALL UST 750I 4 WEST WALL UST **750I 5 PIPING** 

X

537967 346	617191 513
537960 191	617195 418
537966 868	617198 354
537960 093	617185 556
537967 685	617199 558

# FIELD DUPLICATE IDENTIFICATION

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# **Field Duplicate Identification**

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Lab ID 90341

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Site Bldg 750 UST # 750-1

The Field Duplicate was performed on 750-I-1, North Wall (Lab ID 9034101 )

# METHOD SUMMARY

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# Method Summary

### NJDEP Method OQA-QAM-025 02/08 Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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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

110-

#### **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

1

	Indicate Yes No N/2
Method Detection Limits Provided	yes
Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank	_kg_
Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	<u>485</u>
Duplicate Results Summary Meet Criteria	yes.
IR Spectra submitted for standards blanks and samples	_WA
Chromatograms submitted for standards blanks and samples if GC fingerprinting was conducted	-4rs-
Analysis holding time met (If not met, list number of days exceeded for each sample)	- yer

Additional comments

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Laboratory Manager James Que Anne House Date 9/17/09

# TOTAL PETROLEUM HYDROCARBONS

2

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1,-

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

Client	US Army	Project #	09 123690
	DPW SELFM-PW EV	Location BLDG	750 MOTOR POOL
	Bldg 173	ECP	
	Ft Monmouth NJ 07703	Work Order	
Analysis	OQA QAM 025	Date Received	13 Aug-09
Matrix	Soil	Date Extracted	13 Aug 09
Inst ID	GC TPHC INST #1	Extraction Method	Shake
Column Type	RTX 5 0 32mm ID 30 m	Analysis Complete	14 Aug-09
Injection Volume	1 uL	Analyst	Robert Szot
Blank Conc	0 00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB08130901	MB08130901	1 00	15 04	100 00	23	332	0 00	
LCS08130901	LCS08130901	1 00	15 09	100 00	23	331	931 64	
9034101	750-I 1 NORTH WALL	1 00	15 12	84 9	27	390	0 00	
9034102	750-I-2 SOUTH WALL	1 00	15 32	78 1	29	418	0 00	
9034103	750-I 3 EAST WALL	1 00	15 13	836	28	395	0 00	
9034104	750-I-4 WEST WALL	1 00	15 34	81.2	28	401	0 00	
9034105	750-I-5 PIPING	1 00	15 23	88 5	26	371	0 00	
9034106	750 I DUPLICATE	1 00	15 29	82 1	28	398	0 00	

Qualifiers

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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 summanzed 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	_ <u>/</u>
2	Table of Contents submitted	<u> </u>
3	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted	
4	Document paginated and legible	<u> </u>
5	Chain of Custody submitted	<u> </u>
6	Samples submitted to lab within 48 hours of sample collection	$\checkmark$
7	Methodology Summary submitted	~
8	Laboratory Chronicle and Holding Time Check submitted	$\checkmark$
9	Results submitted on a dry weight basis	<u> </u>
10	Method Detection Limits submitted	<u> </u>
11	Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP	<u>_</u>

Laboratory Manager or Environmental Consultant's Signature _ Date	James las Hours
1	

Laboratory Certification # 13461

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



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## Laboratory Authentication Statement

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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

9/17/03 rowe acqueline Hamer QA/QC Supervisor

## ATTACHMENT M

UST 750J File Review and Analyses



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

Date: August 31, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: <b>750J</b>	Registration ID: None
Recommended Status of Site: Change to	Case Closed
Based on the file review, were there indicat	ions of a contaminant release? [X] Yes [] No
NJDEP Release No. or DICAR (If applicable):	09-08-20-0915-22
Did NJDEP approve No Further Action (NFA)	for this site? [ ] Yes [ X ] No [ ] Not Applicable
Tank Description: [X] Steel [] Fiberglass	Size: <u>1000 gals.</u> Contents: <u>No. 2 Fuel Oil</u>
[X] Residential [] Commercial/Indu	strial
Tank Removed? [X]Yes [] No If "yes,	" removal date: <u>8/25/2009</u>
Were closure soil samples taken? [X] Yes	] No Analyses: <u>TPH</u>
Comparison criteria: <u>5,100 mg/kg TPH</u>	
Were closure soil sample results less than co	omparison criteria? [ X ] Yes [ ] No

#### **Brief Narrative**

UST 750J was initially identified as anomaly P51_27 in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_27 location, a steel tank was uncovered on 8/19/09. Petroleum contaminated soils and holes in the top of the tank were observed. The contamination was noted to have possibly resulted from historic overfill of the tank. The tank was removed from the excavation on 8/25/09, and stained soil was observed, as well as a sheen on groundwater at 6.5 feet below ground surface. On 9/2/09 approximately 24 cubic yards of petroleum contaminated soil was removed from the excavation, and then soil samples (750-J-1 through 750-J-5) were collected from the side walls and bottom of the excavation, and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). TPH was not detected (ND) in all of the soil samples. The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. 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

TOCATION 750 J NJDEP REGID	I OCATION	750 J	NJDEP REG ID
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**RFSIDENTIAL'** YLS

### UST CONSTRUCTION INFORMATION SUMMARY

SIZE (GALLONS)	1000	CONSTRUCTION	STEEL
PRODUCT	#2 FUEL OIL	YEAR INSTALLED	

#### UST REMOVAL/INVESTIGATION SUMMARY

REMOVAL DATE	9/2/2009	REMOVAL CONTRACTOR IVS Inc
SRF SFND DATE	₃ 🐺	TMS
DICAR NO	09 08 200915 22	I EAK DETECT
REMEDIATION COMMENTS	Discharge to GW hpprox 24 cu TPH final assessment shmples w required	vds of TPH contaminated soil was removed All services than 5600PPM GW Assessment
REGISTRATION COMMENTS	unregulated UST as per BRAC I	Legal Office
SAS DONE	NO	CONSULTANT
MWN NEEDED		MONITORING WEILS
SUB-SURFACE EVALUATOR	I rank Accorsi	

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### **CURRENT UST STATUS**

UST STATUS REMOVED RI ON GOING	CASE STATUS	Case Open
SUBMITTAI DATE	APPROVAL DATE	



US ARMY, SELFM-PW-EV	
<b>DAILY UST SUBSURFACE REMOVAL LOG</b>	
$\begin{array}{c c} & & & & & & & & & & & & & & & & & & &$	
À ĂCTIVITY	YES/ NO
THE TECHNICIAN (CLOSURE CERT ) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	905
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)	405
A CONFINED TENTRY 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# ? to il Be done	NO
PHOTOS HAVE UST# BLDG # DATE TI IE 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	wa
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	475
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)	None
CHECK ALL BOXES LEAVE	NO BLANKS
I certify under penalty of law that tank decommissioning activities were performed and compliance with N J A C 7 14B-9 2(b)3 and 7 26 et seq I am aware that are significant penalties for submitting false inaccurate or incominformation including fines and/or imprisonment	formed there mplete

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Subsurface	Evaluator (pront Name)	have Applely	Date	8-19-09
SIGNATURE	C.A.S.			

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ŧ. 8-19-09 CA · Site Voit - UST un countinto tor of UST was - Stree 1000 for # 2 .. - louted in Parky Lot ... Based on Would & alors observed the " is tonk discharged oil, to the environments - holes in top of ust - Passible over Kill this resulted in Soils When UST Bets imported by Juck oil, - GII Dischage into NJDEP - TTD

US ARMY, SELFM-PW-EV DAILY UST SUBSURFACE REMOVAL LOG 0 Bo Re Bronfflee. 750-5 BLDG # REG # NA -DATE 12 8-20 -07 NA TOD TOA Charles Applel NJDEP CERT # SSE 9974 REMOVAL CONTRACTOR TVS Inc PWS-007 CLOSURE SUPERVISOR FRAnk NJDEP CERT # Aursi WEATHER A. 6 24 4 X X YES/ ACTIVITY NO 1011 NJULP THE TECHNICIAN (CLOSURE CERT ) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES υØ 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) S 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) 19-08-00-915 -00 CASE# 425 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) NB IF SAMPLES/WEREATAKEN 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 5 NA 1 X ~ ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM 925 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 Nar 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 seg I am aware that there significant penalties for submitting false, inaccurate are or incomplete information, including fines and/or imprisonment

Subsurface	Evaluator (print Name)	Charl	tropp	Date	8-20-09
SIGNATURE	- J - J - J - J - J - J - J - J - J - J		. 3		

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5-20-09 ¢ 750 - J. Site - Charles Applely NTPEP into - Discharge Colled ~~732.532.2692 يتراج US BRMy # 2 Fund oil 1000gal Steel Blag 173 Rouside Aux Fr Morrouth NJ נעדט Site Constan: - FERRER AL Sin UST Removed - Approx -S=19=09-160-Not Done teday - No import to hoterway - NO Assistance Required Case # 09-08-200915-22. CA. 5 

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BLDG # 750-J REG # NA DATE <u>8-35-09</u> TOA <u>1230</u> TOD <u>1300</u> SSE <u>CLAL Appley</u> NJDEP CERT # <u>9974</u> REMOVAL CONTRACTOR TVS Inc PWS-007 CLOSURE SUPERVISOR <u>FCMK Bacas</u> ; TVS NJDEP CERT #	
, ACTIVITY	YES NO
THE TECHNICIAN (CLOSURE CERT ) WAS ON-SITE DURING ALL CLOSURE RELATED ACTIVITIES	m
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)	6-5
A CONFINED ENTRY PERMIT WAS COMPLETED AND POSTED ON-SITE BY THE CONTRACTOR	MA
THE UST WAS PLACED ONTO PLASTIC SCRAPED OFF INSPECTED FOR HOLES AND PHOTOGRAPHED	NO
A DISCHARGE WAS REPORTED BT THE DPW TO THE NJDEP (877)927-6337) CASE# Preses ly Dore 8-20-09	
PHOTOS HAVE UST # BLDG # DATE TIME NAME OF SSE AND DESCR WRITTEN ON BACK	NA
GROUNDWATER WAS ENCOUNTERED AT LIS FEET BG A SHEEN (WAS NOT) OBSERVED ON GW	
	415
IF OVA WAS USED WAS IT CAL AND FOUND TO BE OPERATIONAL (cal data on COC)	41S NA
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)	YIS NA NA
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) ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM 2005 August	YIS NA NA
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) ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM 2005 August ALL SAMPLING WAS BIASED TOWARD HIGHEST OVA/FID RECORDED SITES IAW 7 26E-3 6 et seq	YIS NA NA NA
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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) ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM 2005 August 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	YIS NA NA NA NA NA NA NA
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) ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM 2005 August 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 ADDITIONAL NOTES WERE TAKEN AND ARE RECORDED ON THE BACK OF THIS FORM	415 NA NA NA NA NA NA NA NA NA NA NA NA

тгу. under 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 incomplete or information, including fines and/or imprisonment

Date <u>5-35-09</u> Acply Thailes . Subsurface Evaluator (print Name) SIGNATURE BAK. 9 ۲

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US ARMY, SELFM-PW-EV	
DAILY UST SUBSURFACE REMOVAL LOG	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	_
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	NIA
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 _6_ FEET EG A SHEEN WAS WAS NOT) OBSERVED ON GW	7
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)	
ALL SAMPLE COLLECTION ACTIVITIES WERE AS DESCRIBED IN THE NJDEP FSPM, 1992	r
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	
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)	
CHECK ALL BOXES LEAVE	I O 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 seg 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 ACCORS	_ Date _	9-2-07
SIGNATURE	First	anoras		

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## US ARMY, FORT MONMOUTH

DAILY UST CLOSURE LOG

BLDG # 750 REG # UST J	
DATE TOA TOD	
PERSONNEL ANTHONY FORGIONE, MARC THYLOR	
	Y = 5 /
	но
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	З Г
ALL ON-SITE PERSONNEL HAVE CURRENT TRAINING IAW ALL SAFETY REQ (E G 29CFR)	ې ۲
ALL UTILITIES WERE MARKED OUT PRIOR TO ANY EXCAVATION (VISUAL CONFIRM YES/NO)	4
HAND EXCAVATION WAS DONE WHEN EXCAVATING WITHIN 4 FT OF ANY UTILITIES	μA
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	4-
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)	
DRUMS OF WASTE WERE TRANSPORTED TO THE (MP CW EV) HWSA	
GALLONS OF WASTE WERE REMOVED (MANIFEST#)	
24 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	
THE UST WAS TRANSPORTED TO 169 YARD FOR DISPOSAL (ATTACH SCRAP TICKET)	ř
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	

CHECK ALL BOXES LEAVE NO BLAFTS

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) <u>FRANK ACCORSI</u> SIGNATURE <u>FRANK ACCORSI</u> DATE <u>9-2-09</u>

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# FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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

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#### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

Field Sample Location	Laboratory	Matrix	Date and Time	Date
1	Sample ID#		of Collection	Received
750-J-1, North Wall	9036701	Soil	02-Sept-09 13:00	09/02/09
750-J-2, South Wall	9036702	Soil	02-Sept-09 13:20	09/02/09
750-J-3, East Wall	9036703	Soil	02-Sept-09 13:35	09/02/09
750-J-4, West Wall	9036704	Soil	02-Sept-09 13:50	09/02/09
750-J-5, Bottom	9036705	Soil	02-Sept-09 11:30	09/02/09
750-J, Duplicate	9036706	Soil	02-Sept-09 13:20	09/02/09

#### Bldg. 750 UST 'J'

#### ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

MER 9 10/09 acqueline Hamer/Date QA/QC Supervisor

The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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# CHAIN OF CUSTODY

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Fort Mc	onmouth F	Inviro	nmental	<b>Festing L</b>	uboratory
Bldg. 173, SELFM-1 Tel (732)532-4359 I NJDEP Certificati	PW-EV, Fort Monmouth Fax (732)532-6263 EMa ion #13461	, NJ 07703 il:jacquefine.ha	mer@us.army.mil	Cha	in of Custody Record
Customer: CHUCK APPLEBY	Project No: 09-12	3690	Analy	sis Parameters	Comments:
Phone #: X26292	Location: BLNG, 73	T' TOU OF	<i>350</i>		
()DERA ()OMA (MOther:			11.7 _ 1	<i>udb</i>	
Samplers Name / Company: FRANK ACO	SNL/ ISN	Sample #	175 V	//0	HLA
LIMS/Work Order # Sample Location	Date Time	Type bottles	26	<i>i</i>	Remarks / Preservation Method
163207 CM 750-5-1, worth wheel	9-2-09 1300	SOIL	XX		6655 1CE
Man Hundr's-2-2-25 Hold	1320		XX	~	6 ¢. 5
(2) 750-5-3, EM ST WALL	1335		X X		6-6.5
UN 730 J. 4, WEST WALL	0551		XX	× × •	6-6.5
Metter 7-2 202	1 1/30		XX	. 66	5.1.1
100 750- J OUMICATE	V 1350	Å Å	XX	2	6-6.5
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				, ,	
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Relinquished by (signature): Date/Time: (	Received by (signature):	Relin	quished by (signature):	Date/Time: Recei	ved by (signature):
Report Type: ()Full, (&Reduced, ()Standard, ()Scree Turnaround time: ()Standard 3 wks, &)Rush 2 Wk., (	en / non-certified, ()EDD )ASAP VerbalHrs,		Remarks: FBN-41 TPH, 0.	5 0N 35% 0F	5AMPLES > 1000 PPM
DA 2	5	Page / of			new coc. XLS12/19/2008

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new coc. XLS12/19/2008

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## **SAMPLE RECEIPT FORM**

Date Received: <u>9-2-09</u>	Work Order ID#: <u>103/04</u>
Site/Proj. Name	Cooler Temp (°C): <u>ICE</u>
Received By: J. MANA	sign: Jalley
(Print name)	77 /
Check the appropr	<u>iate Box</u> / ]
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 an	id legibly? 🖉 yes 🗌 no
4. Was the chain of custody signed in the appropriate	riate place? 🖉 yes 🗌 no
5. Did the labels agree with the chain of custody?	∕ L yes □ no
6. Were the correct containers/preservatives used	i?
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 with	in 15 minutes □ yes□ no □ n/a

#### Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
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## Comments:_____

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# GPS COORDINATES

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#### U.S. ARMY - FT. MONMOUTH, NJ

#### BUILDING 750 - UST 'J'

#### 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)

750J1 NORTH WALL 750J2 SOUTH WALL 750J3 EAST WALL 750J4 WEST WALL 750J5 BOTTOM

F

537974.645 537961.751 537974.068 537963.765 537969.84

617355.029 617363.889 617367.42 617353.758 617360.04

# FIELD DUPLICATE IDENTIFICATION

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## **Field Duplicate Identification**

Lab ID: 90367

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Site: Bldg. 750[°] UST 'J'

The Field Duplicate was performed on 750-J-4, West Wall (Lab ID 9036704).

# METHOD SUMMARY

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## 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

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#### Indicate Yes, No, N/A yes 1. Method Detection Limits Provided 2. Method Blank Contamination - If yes, list the sample and the _10 corresponding concentrations in each blank _ yes 3. Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range) _____ <u>yes</u> 4. **Duplicate Results Summary Meet Criteria** 5. IR Spectra submitted for standards, blanks and samples NA 6. Chromatograms submitted for standards, blanks and samples <u>yes</u> if GC fingerprinting was conducted 7. Analysis holding time met (If not met, list number of days exceeded for each sample)

#### **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

Additional comments:

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Laboratory Manager: Musery 1. In Atom Date:	99	09
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# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDG	. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	2-Sep-09
Matrix:	Soil	Date Extracted:	3-Sep-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	8-Sep-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB09030901	MB09030901	1.00	15.11	100.00	23	331	0.00	
LCS09030901	LCS09030901	1.00	15.08	100.00	23	332	760.65	
9036701	750-J-1 NORTH WALL	1.00	15.05	89.0	26	373	0.00	
9036702	750-J-2 SOUTH WALL	1.00	15.06	82.9	28	400	0.00	
9036703	750-J-3 EAST WALL	1.00	15.22	81.8	28	402	0.00	
9036704	750-J-4 WEST WALL	1.00	15.07	84.0	28	395	0.00	
9036705	750-J-5 BOTTOM	1.00	15.17	81.0	28	407	0.00	
9036706	750-J DUPLICATE	1.00	15.06	83.6	28	397	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 <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.	<u> </u>
2.	Table of Contents submitted.	$\checkmark$
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	V
4.	Document paginated and legible.	<u> </u>
5.	Chain of Custody submitted.	
6.	Samples submitted to lab within 48 hours of sample collection.	V
7.	Methodology Summary submitted.	
8.	Laboratory Chronicle and Holding Time Check submitted.	$\overline{}$
9.	Results submitted on a dry weight basis.	$\checkmark$
10.	Method Detection Limits submitted.	ν
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		museup due form -
Date: <u>1/10/07</u>	(	0

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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.

cqueline Hamer QC Supervisor

## ATTACHMENT N

Anomaly P51_1 File Review and Analyses



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

Date: September 1, 2016	Review Performed By: Kent Friesen, Parsons
Site ID: Anomaly P51_1	Registration ID: None
Recommended Status of Site: <b>NFA</b>	
Based on the file review, were there	indications of a contaminant release? [ ] Yes [ X ] No
NJDEP Release No. or DICAR (If applied	cable): <u>None</u>
Did NJDEP approve No Further Action	n (NFA) for this site? [ ] Yes  [ X ] No  [ ] Not Applicable
Tank Description: [ ] Steel [ ] Fibe	erglass Size: Contents:
[ ] Residential [ ] Commerci	al/Industrial No tank found
Tank Removed? [ ] Yes [ X ] No	If "yes," removal date:
Were closure soil samples taken? [X	[]Yes [] No Analyses: <u>TPH</u>
Comparison criteria:5,100 mg/k	<u>g TPH</u>
Were closure soil sample results less	than comparison criteria? [X]Yes []No

#### **Brief Narrative**

Anomaly P51_1 was initially identified in the 2008 Environmental Condition of Property (ECP) Site Investigation (SI) Report, and was one of 9 geophysical anomalies located south of Echo Avenue within ECP Parcel 51 that were suspected USTs.

At the anomaly P51_1 location, soil excavation was performed but there was no tank found. No evidence of fuel oil or other contamination was observed. One soil sample (750-P51-1) was collected from 6 to 6.5 feet below ground surface in the excavation on 9/3/09, and analyzed by the Fort Monmouth Environmental Laboratory for total petroleum hydrocarbons (TPH). TPH in this soil sample was not detected (ND). The results were less than 5,100 mg/kg for TPH, which is the current remediation criterion. Therefore, there is no indication of a release to soil or groundwater at Anomaly P51_1, and no additional sampling or remedial action was warranted.

Recommendations (if any): <u>Request NFA from NJDEP</u>

Signed:

Kent A. Friesen, Parsons

## FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

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



#### ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: 09-123690

Bldg. 751 Anomaly P51-1

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Field Sample Location	Laboratory	Laboratory Matrix Date and Time		Date
	Sample ID#		of Collection	Received
750-P51-1	9036801	Soil	03-Sept-09 11:00	09/03/09

#### ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB TPHC, % SOLIDS

May 9/16/09 acquelline Hamer/Date QA/QC Supervisor

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# CHAIN OF CUSTODY

Fort Monmouth Environmental Testing Laboratory þ 1 BIDO 173 SET EN DW --**#**## 2025... 

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Fair Field (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mil 01017 

359 Fax (732)532-6263 EMail:jacqueline.hamer@us.army.mii Chain of Custody Record ication #13461	20 Analysis Parameters Comments:		<u> </u>	Sample # 71	bottles	1 × 10E							Relinquished by (signature): Date/Time: Received by (signature):	Relinquished by (signature): Date/Time: Received by (signature):	Comments:	) and / nf /	
Tel (732)532-4359 Fax (732)532-6263 EMail:jacqueline.hamer@	Customer: CHUCK APPLEBY Project No: 09-123690	Phone #: $\chi \mathcal{2} \mathcal{E} \mathcal{A} \mathcal{P} \mathcal{A}$ Location: $\beta \mathcal{L} \mathcal{N}, \gamma \mathcal{S} \mathcal{O},$	()DERA ()OMA (yOther: ANOWOLY P57-1	Samplers Name / Company: FRANK ACCORS/ /7VS Sample #	LIMS/Work Order # Sample Location Date Time Type bottles	41318421 757-157-1 9-3-09 1100 5012 1 +								Relinquished by (signature): Date/Time: Redeived by (signature); Relinquishe	Relinquished by (signature): Date/Time: Keceived by (signature): Relinquishe	Report Type: UFull, OReduced, UStandard, UScreen / non-certified, UEDD Turnaround time: UStandard 3 wks, ORush [Wk.,_UASAP VerbalHrs.]	print legibly Page ( of (

1 X1 CA1812000

## SAMPLE RECEIPT FORM

Date Received: <u>9-3-09</u>	Work Order ID#: <u>10368</u>
Site/Proj. Names 750 / M.I.	Cooler Temp (°C): MA
Received By: J. Jengum	Sign: p. Milum
(Print name) 7	
<u>Check the appropr</u>	<u>iate box</u>
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 an	d legibly? 🖉 yes 🗆 no
4. Was the chain of custody signed in the appropriate	riate place? 🗇 yes 🗆 no
5. Did the labels agree with the chain of custody?	yes 🗆 no
6. Were the correct containers/preservatives used	i?
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 with	in 15 minutes □ yes□ no □ n/a

## Fill out the following table for each sample bottle

Lims ID	pH	Preservative	Sample ID	рН	Preservative
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#### Comments:_____

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# **GPS COORDINATES**

#### U.S. ARMY - FT. MONMOUTH, NJ

#### PARCEL 51-ANOMOLY 51-1

#### SOIL SAMPLING GPS POSITIONS & COORDINATES

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

#### (IN US SURVEY FEET)

#### SAMPLE POINT

POSITION/DESCRIPTION EXCAVATION BOTTOM Y COORDINATE (NORTHING) 537902.712 X COORDINATE (EASTING) 617157.741



# 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

#### Indicate Yes, No, N/A 1. Method Detection Limits Provided <u>_____</u> 2. Method Blank Contamination - If yes, list the sample and the -NO corresponding concentrations in each blank _____ yes 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 1/es ____ 5. IR Spectra submitted for standards, blanks and samples -NA 6. Chromatograms submitted for standards, blanks and samples yes if GC fingerprinting was conducted 7. Analysis holding time met yes (If not met, list number of days exceeded for each sample)

#### **TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT**

Additional comments:

Laboratory Manager: Multighe Holmon Date: 9/10/09

nnnng

# TOTAL PETROLEUM HYDROCARBONS

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

Client:	U.S. Army	Project #:	09-123690
	DPW. SELFM-PW-EV	Location: BLDC	G. 750 MOTOR POOL
	Bldg. 173	ECP:	
	Ft. Monmouth, NJ 07703	Work Order:	
Analysis:	OQA-QAM-025	Date Received:	3-Sep-09
Matrix:	Soil	Date Extracted:	3-Sep-09
Inst. ID:	GC TPHC INST. #1	Extraction Method:	Shake
Column Type:	RTX-5, 0.32mm ID, 30 m	Analysis Complete:	8-Sep-09
Injection Volume:	1 uL	Analyst:	Robert Szot
Blank Conc.:	0.00		

Lab ID	Field ID	Dilution	Weight	%	MDL	RL	TPHC Result	Qualifiers
		Factor	(g)	Solid	(mg/kg)	(mg/kg)	(mg/kg)	
MB09030901	MB09030901	1.00	15.11	100.00	23	331	0.00	
LCS09030901	LCS09030901	1.00	15.08	100.00	23	332	760.65	
9036801	750-P51-1 NORTH WALL	1.00	15.19	84.1	27	391	0.00	1

#### 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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#### 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.	L
2.	Table of Contents submitted.	
3.	Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.	<u> </u>
4.	Document paginated and legible.	$\underline{\checkmark}$
5.	Chain of Custody submitted.	<u> </u>
6.	Samples submitted to lab within 48 hours of sample collection.	$\checkmark$
7.	Methodology Summary submitted.	
8.	Laboratory Chronicle and Holding Time Check submitted.	$\nu$
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.	<u> </u>

Laboratory Manager or Environmental Consultant's Signature Date: <u> </u>	\ 7	Anne	ki (	int	ano	7
------------------------------------------------------------------------------	--------	------	------	-----	-----	---

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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.

acqueling Hamer A/QC Supervisor

#### ATTACHMENT O

#### Building 750 Motor Pool Area Groundwater Monitoring Supporting Documents

#### Contents:

- Enclosure 1 Map showing monitoring wells within "Building 750 Motor Pool Area" and vicinity
- Enclosure 2 Table with monitor well construction for wells within the 750 Motor Pool Area
- Enclosure 3 Bldg. 750, Main Post, Fort Monmouth, New Jersey (showing estimated direction of groundwater flow).
- Enclosure 4 Shallow Groundwater Elevation Map from the Brinkerhoff (2010) Modflow Groundwater Modeling Report
- Enclosure 5 Monitor Well Records for:
  - 1. 750MW01
  - 2. 750MW02
  - 3. 750MW03
  - 4. 750MW04
  - 5. 750MW05
  - 6. 750MW06
  - 7. 750MW07
  - 8. 750MW08

Analytical Data Reports for groundwater are provided in attachments for specific USTs within the Building 750 Motor Pool Area


# Enclosure 2

Site	Well Permit #	Y Coord. (North)	X Coord. (East)	Installation Date	Depth	Casing Length	Screen Length	Top of Casing	Slot Size	Comments
							eet		inches	
Bldg. 750								Non-IRP, Former UST Site		
750MW01	29-28992	537932.960	617839.829	10/30/1992	15.00	5.00	10.00	16.77	0.02	Surveyed 7/23/09
750MW02	29-28993	537892.603	617863.274	10/30/1992	15.00	5.00	10.00	16.82	0.02	Surveyed 7/23/09
750MW03	29-28994	537832.089	617902.314	11/2/1992	15.00	5.00	10.00	21.04	0.02	Surveyed 7/23/09
750MW04	29-28995	537842.326	617925.502	11/3/1992	15.00	5.00	10.00	20.79	0.02	Surveyed 7/23/09
750MW05	200908988	537982.804	617692.391	10/15/2009	20.00	5.00	15.00	20.20	0.01	Surveyed 1/19/10, well cap mislabeled as MW01A
750MW06	200908989	537982.607	617653.660	10/14/2009	20.00	5.00	15.00	20.46	0.01	Surveyed 1/19/10, well cap mislabeled as MW02A
750MW07	200908990	537860.082	617437.379	10/14/2009	20.00	5.00	15.00	20.99	0.01	Surveyed 1/19/10, well cap mislabeled as MW03A
750MW08	200908991	538042.847	617560.396	10/16/2009	20.00	5.00	15.00	17.36	0.01	Surveyed 1/19/10

#### Non-Installation Restoration Program (Non-IRP) Main Post

# **Enclosure 3**





	• •				
DWR-138 M 1291	New Jersey Departme Bur	nt of Environm agu of Water J	entel Protection Mocation	und Energy	j
•	MONITO	RING WE	LL RECOR	^י סוּ	
	`	Wei	Permit No.	29 28 	3992 
		Atla	s Sheet Coord	inates	
OWNER IDENTIFICATION - Owner	U.S. ABRY 513 HOTOR POOL. B	LDG. 750			
Address	FORT HONHOUTH	·	State NJ		Zip Code
				750	/W01
County	as owner please give addre Municioality <b>(YXANF</b>	nent Roen	rner si vvenuvo. I	Lot No. 1	
Address			•		
TYPE OF WELL (as per Well Permit	Categorie NON L'TORING		Date v	vell complete	d 10130192
Regulatory Program Requiring Well	UST		Case I	D. #	
CONSULTING FIRM/FIELD SUPER	VISOR (if applicable)	S. Arm	¥		
WELL CONSTRUCTION		Depth to	Depth to	Diameter	
Total depth drilledft.		Top (It.)* From la	Bottom(It.) nd surface]	(inches)	Type and Materia
Vell finished to 15 ft.	Inner Casing		· ·		· · · · · · · · · · · · · · · · · · ·
Borehole diameter: Top <u>12</u> in.	Outer Casing	6 ^a	51	44	· PILL C. d
Bottom 12 [*] in.	(Not Protective Casing) Screen		15		RUL FIU
Well was finished: 🛄 above grade	(Note slot size)		1.0	7	P.V.C. K.V.
K flush mounted	Tail Piece	- and a M			· · · · · · · · · · · · · · · · · · ·
If finished above grade, casing	Gravel Pack	36	15	12	SAND
surfacett.	Annular Seal/Grout	6	3'6	12"	BONSON -
Was steel protective casing installed	Method of Grouting				
Li Yes Litho Static water leve, after drillion 7	6 M 16	GE	V OLOGIC LOC	(Copies	s of other geologic logs a
Water level was measured using 4	ATHE TROG	í –	H = 1	goopiny	skar kys shord og and
Well was developed for <u>20 mm</u> h	pors atgpm	0	- 8' -	- GW	
Method of development <u>6.45</u>	punp	8	- 13° =	SW	81
Was permanent pumping equipment Pump capacity dom	installed? L Yes LANO		1. 1 <b>7</b> 1	×1	
Pump type:		1.	5-15	Kee has	GRUN
Drilling Method		. 1	INTAL	nT -	オノノド
Drilling Fluid Typ	xe of Rig 1361 AUB6	han "			
Name of Driller <u>(AB\(D\(f</u> 12) Health and Safety Pian submitted?	Yes De No				
Level of Protection used on site (circle	one) Nono D C B A			•	
N.J. License No. 1098	Ko,	1 11	M 10 31		
Name of Drilling Company	ANDER STATE DRILLI	NG-COMPA			······
I certify that I have drilled the above State rules and regulations.	ve-referenced well in acci	ordance wit	h all well per	mit requiren	nents and all applicable
	1 Court	R	4		11.71.91
Driller's Sig	nature Lower	10000	2012	Da	110 10-31-76
COPIES: W	ille & Green - DEPE Cana	ry • Driller	Pink - Owner	Goldenrod •	Health Depi.
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Name of Owner: U. S. Army, Directorate of Public Work	8
Name of Facility: Fort Monmouth	
Location:	
Case Number(s):	(UST #, ISRA #, Incident #, or EPA #)
LAND SURVEYOR'S CERTIFICATION Well Permit Number:	
(This number must be permanently affixed to the well casing.	) 29-28992
Owners Well Number (As shown on application or plans):	0750MW01
Geographic Coordinate NAD 83 (to nearest 1/10 of second):	
Longitude: West <u>74° 02' 57.1"</u> I	Latitude: 40° 18' 33.8"
New Jersey State Plane Coordinates NAD 83 to nearest 10 fee	t:
North 537,930	East 617,840
Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'):	16.77
Source of elevation datum (benchmark, number/description a datum is used, identify here, assume datum of 100', and give a NAVD 88 – North American Vertical Datum – 1988; as derived	nd elevation/datum. If an on-site approximated actual elevation.) from Bench Mark # CW -201;
Elevation 38.74' @ the southwest corner of a culvert headwall	at the northwest corner of
Intersection of Guam Lane and Corregidor Road (approximate	ely 3.9' above ground).
Significant observations and notes:	

#### AUTHENTICATION

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

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

<u>July 23, 2009</u> DATE

 
 Michael C. Nolan
 Lic. # 24 GS 03448800

 PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER (Please print or type)
 Certificate of Authorization No. 24GA28159000

Chester, Ploussas, Lisowsky Partnership, LLC 100 Matawan Road, Matawan, New Jersey 07747 732-566-0297 PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

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WR-138 M 2:91	New Jersey Daparenen Burn	it of Environmen agu of Water Alk	ital Protection al ocation	ng Euergy	¢ .	
<b>5</b> 4	MONITOF	RING WEL	L RECORI	D		*
		Well F Atlas	Permit No. 29 Sheet Coordin	289 29- nates	93 <u>14</u> 441	
	J.S. ADMY		.63.8			
Address	13 HOTOR POOL, B	LUG. 75C				
City		<u></u>	State		2ip Code	
WELL LOCATION - If not the same as	owner please give addre	ss. Own	er's Well No	750MV	/02	
County	Municipality OCRAHE	ORT BORO		Lot No. 1	Block No3	
Address	······································			· · · · · · · · · · · · · · · · · · ·	12 . 29 . 41	<del></del>
TYPE OF WELL (as per Well Permit C	ategori <b>4001TTORTEG</b>	<u> </u>	Date w	all completer	10 130176	
Regulatory Program Requiring Well	IST	10	Case I.t	J. #	Tala # 918-527	7-622
CONSULTING FIRM/FIELD SUPERVI	SOR (if applicable)	- mery				
WELL CONSTRUCTION		Depth to	Depth to	Diameter	Tune and Materia	,
Total depth drilled <u>5</u> ft.	•	From lan	d surface)	(inches)	Type and materia	
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Bornhole diameter;	Outer Casing	11	51	44	DUNGT	
Bottom 12 tin.	(Not Protective Casing) Screen	0			Par F. V	
	(Note slot size)	1.5	15	<u> </u>	P. 6 F. 0.	
Z Hush mounted	- Tail Piece					
Il linished above grade, casing	Gravel Pac	3'6'	15	12"	SAND	
height (stick up) above land	Annular Seal/Grout	6"	3'6'	12"	BENSBAL	
L Yes <b>IX</b> No Static water level after drilling <b>2</b> Water level was measured using <b>1</b> Well was developed for <b>20</b> minuhe Method of development <b>6AS</b>	1 it. Tosk TAPE ors at 5 gpm	GE		Copie geoph GW SW	s of other geologic logs a vsical logs should be atta	ind/or ached.)
Was permanent pumping equipment	nstalled?	40 <b>8</b>	- ( ) 			
Pump capacity gpm	- -	13	151	CL	GRUUN	
Pump type:	••••••		Ne .	·	-1,H	
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Name of Driller CLAUDE	BRITTOF	·····	· · · ·			
Health and Safety Plan submitted?	Ves 24No					
Level of Protection used on site (circle	one) Mone O C B /	N 1/2A 1	10110 3	ç		
N.J. License No. 1010			1 10 EB 10	۶ 		
Name or Dilling CompanyG	AIGHN GIATH IRULA		th alt wolf nor	mit remuire	ments and all applicab	le ·
State rules and regulations.	Ve-leteleticen wen und		tri tri aros po			
	(1) here I	and	5		10-31-	92
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COPIES: W	hite & Green - DEPE Ca	ınary • Driller	Pink - Owner	Goldenrou	- Health Depi.	
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Name of Owne	r:	U. S. Army, Directorate of Public World	\$
Name of Facili	ty:	Fort Monmouth	
Location:	an fail fan sú mei mei an fair an fair an f		
Case Number(	s):		(UST #, ISRA #, Incident #, or EPA #)
LAND SURVEY Well Permit Nu (This number r	<u>(OR'S C</u> Imber: nust be	ERTIFICATION	) 29-28983
Owners Well N	lumber (	(As shown on application or plans):	0750MW02
Geographic Co	pordinat	e NAD 83 (to nearest 1/10 of second):	
Longitude:	West _	<u>74° 02' 56.8"</u>	Latitude: 40° 18' 33.4"
New Jersey St	ate Plan	e Coordinates NAD 83 to nearest 10 fee	t:
	North_	537,890	East 617.870
Elevation of To reference mark	op of Inn (neared	er Casing (cap off) at st 0.01'):	16.82'
Source of eleva datum is used, <u>NAVD 88 – Nor</u> Elevation 38.74	ation da identify rth Ame I' @ the	tum (benchmark, number/description a / here, assume datum of 100', and give rican Vertical Datum – 1988; as derived southwest comer of a culvert headwal	nd elevation/datum. If an on-site approximated actual elevation.) from Bench Mark # CW -201; l at the porthwest corner of
intersection of	Guam L	ane and Corregidor Road (approximate	aly 3.9' above ground).
Significant obs	ervatio	ns and notes:	•••

#### AUTHENTICATION

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

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 Certificate of Authorization No. 24GA28159000

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		Weil P Atlas S	ermit No	29 ates	14	
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VELL LOCATION - If not the same as t	Municipality OCEARER	ART HORO	.' 	Lot No. 1	Block No	3
county		· · · · · · · · · · · · · · · · · · ·		·	11 1 00	· ·
war of well I for not Wall Permit Ca	HOODING MANITORING		Date we	betelqmco Ili	11 1 61110	-
YPE OF WELL (as per work of the Contract of th	sr		Case I.I	), # ,	an E	22/22/
CONSULTING FIRM/FIELD SUPERVIS	SOR (if applicable) U.S.	ALMY-	·		Tele. # 708-9	20 6007
ONSOLTING T WIND SELE	1	Depth to	Depth to	Diameter		
VELL CONSTRUCTION	•	Top (It.)	Bottom (II.)	(inches)	Type and Mate	eri <b>s</b> i "
otal depth drilled		[From lan	d surface			
Vell Finished to II.	Inner Casing					
Sorehole diarpologi, in.	Outer Casing	6	5	4"	PUC. E	<u>J</u>
Bottom 12 in.	Screen	ET	15'	4"	P.U.C. F	5.
Well was finished: above grade	(Note stot size)					
flush mounted		21,11	181	1.74	SHAD	
It finished above grade, casing	Gravel Pac	36	5/1	1211	Que and (	
height (stick up) above land surface ft.	Annular Seal/Grout	6	24	16	VANKet-	
Was steal protective casing installed	Method of Grouting	<u> </u>				(
Yes KINO .	1211	GE	OLOGIC LO	G (Copie G geoph	s at other geologic lo rsical logs should be	gs and/or 🖓
Static water level after drilling	6 th.		All al	<u>goop</u>		
Water level was measured using 10			9-3 -	60		1
Well was developed for	OUMO	·	3-7-	CL		
Manoo or cave opinion any opinion	installed? Yes	No	-1-121	- -		
Pump capacity gpm			1-15-	5m-	•	
Pump type:		1	3-15	CI	action	1 A
Drilling Method	main bit mali	10 10				
Drilling Fluid IV	Britan		UNT	ER AT	76	
Health and Safety Plan submitted?	Yes No		001	•		1997 1997 1997
Level of Protection used on site (circle	one) OTAT D C B	A [哲]	9 11 05	12.31		
N.J. Licenso No. 1078			ANKJ			1
Name of Drilling CompanyG	AUTEN STATE DELL					icebla
I certify that I have drilled the abo	ve-referenced well in a	iccordance v 9台运	nn ail weil p	ettist tednig	Urbuta di matri defe	
State rules and regulations.	17 1	1			H-4-	92
Driller's Sk	nature Chell	4 120	100b		Date //	
	Shine & Cream - NEDE - 1	anary - Driller	Pink · Own	r Coldern	d - Health Dept.	
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Name of Owner: U. S. Army, Directorate of Public Work	CS					
Name of Facility: Fort Monmouth						
Location:						
Case Number(s):	(UST #, ISRA #, Incident #, or EPA #)					
LAND SURVEYOR'S CERTIFICATION Well Permit Number:						
(This number must be permanently affixed to the well casing.	.} 29-28994					
Owners Well Number (As shown on application or plans):	0750WW03					
Geographic Coordinate NAD 83 (to nearest 1/10 of second):						
Longitude: West 74° 02' 56.3"	Latitude: 40° 18' 32.8"					
New Jersey State Plane Coordinates NAD 83 to nearest 10 fee	st:					
North 537,830	East 617,910					
Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'):	21.04'					
Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.) NAVD 86 – North American Vertical Datum – 1988; as derived from Bench Mark # CW -201; Elevation 38.74' @ the southwest comer of a culvert headwall at the northwest corner of						
intersection of Guarn Lane and Corregidor Road (approximate	ely 3.9' above ground).					
Significant observations and notes:						

#### AUTHENTICATION

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

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

July 23, 2009 DATE

 
 Michael C. Nolan
 Lic. # 24 GS 03448800

 PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER (Please print or type)
 Certificate of Authorization No. 24GA28159000

Weil Permit No.       23       200****         Address       7.11. FX71XF FXAr, FXAr, FAAR, FAAR		MONITO	RING WE	ELL RECO	RD		
Adlass Sheet Coordinates       Allas Sheet Coordinates         OWNER IDENTIFICATION - Owner 1): S. AIRTY       List PRITURI 14 KK, FALUE. 76X         City       State       Zip Code         City       State       Zip Code         WELL LOCATION - If not the same as owner please give address.       Owner's Well No. 750MW04         County       Municipality (2:K/M+Yit)       Tax at         Address       Lot No. i       Block is         TYPE OF WELL (as per Well Permit Categories (117) #11N:       Date well completed // / ZA92         Regulatory Program Requiring Well (BSY       Case I.D. #         CONSULTING FIRMFIELD SUPERVISOR (fl applicable)       (J.S. ARF my         Well construction       Tot fit.         Borehole diameter:       Top fit.         Top J22' in.       Outer Casing         Biotom //2' in.       Outer Casing         Well was finished:       above grade.         If linish mounted       Gravel Pack 2' C'' / 15' 12'' SMWP         Mas steel protective casing installed?       Method of Gravel Pack 2' C'' / 15' 12'' SMWP         Mas steel protective casing installed?       Method of Gravitig         Well was divelage equipment installed?       Method of Gravitig         Well was divelage equipment installed?       Method of Gravitig         Welwas de			. We	ell Permit No	29 23 27)	eese and a second s	
GWNER IDENTIFICATION - Owner 'SUIT PATTAR, PADE, PADE       State       Zip Code         Address       List PATTAR PADE, PADE       State       Zip Code         WELL LOCATION - If not the same as owner please give address.       Owner's Well No. <u>750MW04</u> Zip Code         County       Municipality (LIMAN HIT ISHA       Lot No.       Block No.         Address		11-S - ADMIN	Atl	as Sheet Coor	dinates	;;;	
Address       Lixt" HCMXAPAI       State       Zip Code         WELL LOCATION - If not the same as owner please give address.       Owner's Well No. 750MW04         County       Municipality (7.5K/M/ HT (FXA)       Lot No. i       Block M         Address       Municipality (7.5K/M/ HT (FXA)       Lot No. i       Block M         TYPE OF WELL (as per Well Permit Categoria (HTTUHTIN)       Date well completed // / 3.492       Case I.D. #         CONSULTING FIRMFIELD SUPERVISOR (if applicable)       U.S. Aff mly       Tele, # 705 - 7.         WELL CONSTRUCTION       Total depth drilled       // 5 '       4 ''         Total depth drilled       // 5 '       t.       Depth to       Depth to         Well usos finished to       // 5 '       t.       Tele, # 705 - 7.         Well was finished:       above grade       (Note slot size)       5 '       1 5 '       4 ''       M/L F.B         Method of Grouting       Nanular Seal/Grout       6 ''       3 ' C''       1 5 '       1 C''       1 C''       1 C''         Nas developed for 2 exa       Annular Seal/Grout       6 ''       3 ' C''       1 C''       2 Copplex Log       0 '- 3 '       GEOLOGIC Eog       (Copplex of other geologic logs should be atter drilling 7 '''         Well was finished to grouting       GeoLogic Eog	WNER IDENTIFICATION - Owner	LIS KINR PALL					• •
State	jdress	LEET MORE OTH			· · · · · · · · · · · · · · · · · · ·		2
WELL LOCATION - If not the same as owner please give address.       Owner's Well No. 750MW04         County				State		Zip Code	
County       Municipality ( $C_{MANN'NT'}$ ( $T_{NA}$ )       Lot No. 1       Block NA         Address       TYPE OF WELL (as per Well Permit Categories ( $T_{TY}$ ) ( $T_{TY}$ ) ( $T_{TY}$ )       Date well completed $f_{T_T}$ ( $T_T$ ) ( $T_T$ )       Date well completed $f_{T_T}$ ( $T_T$ )       Block NA         Regulatory Program Requiring Well ( $T_T$ )       ( $T_T$ ) ( $T_T$ )       Date well completed $f_{T_T}$ ( $T_T$ ) $T_T$ )       Case LD. #       Case LD. #       Case LD. #       Case LD. #       Tele. # $f_T$ ( $T_T$ ) $T_T$ ) $T_T$	ELL LOCATION - If not the same a	as owner please give addr	ess. Ov	vner's Well No.	750MW	/04	
Address       TYPE OF WELL (as per Well Permit Categories VITT HT NI       Date well completed $f(I_1 > 2A)^2$ Regulatory Program Requiring Well (13)*       Case I.D. #	bunty	Municipality CCRANP	URA DORY		_ Lot No. <u>i</u>	Block North	
TYPE OF WELL (as per Well Permit Categories ITTMINE]       Date well completed $f(I_1 > 2 + 3 + 2)$ Regulatory Program Requiring Well (BT)'       Case 1.D. #         CONSULTING FIRM/FIELD SUPERVISOR (if applicable) $(f_1 > 6 + 6 + 7)$ Tele # $f(2 + 7)$ Well CONSTRUCTION       Total depth drilled $f(1)$ Tele # $f(2 + 7)$ Total depth drilled $f(1)$ $f(1)$ Depth to Depth to Depth to Depth to Top (f(1))       Depth to Depth to Top (f(1))         Borehold dameter:       Inner Casing       Inner Casing       Type and Mate         New I was finished:       above grade       Screen $f(1) + f(1)	loress						
Regulatory Program Reduring Well TASI       Case I.D. #         CONSULTING FIRM/FIELD SUPERVISOR (if applicable) $U \le AfAnt Y$ Tele, # $20 \le -12^{-12}$ WELL CONSTRUCTION       Total depth drilled $15^{-1}$ ft.       Depth to Depth to Depth to Top (ft.) Bottom (ft.) (inches)       Diameter (inches)       Type and Mate         Well constrained:       Inner Casing	PE OF WELL (as per Well Permit	Categorias III ANNS	• • • • • • • • • • • • • • • • • • •	Date v	vell complete	·11.13月92	
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) $(\Delta - A f h f Y)$ Tele, # $20E - f$ WELL CONSTRUCTION       Total depth drilled $f f$ Depth to Depth to Top (ft.) Bottom (ft.)       Diameter (inches)       Type and Mate         Well finished to $f f$ Inner Casing $G' f$ $f f$ Depth to Depth to Top (ft.) Bottom (ft.)       Diameter (inches)       Type and Mate         Bottom $f f$ Inner Casing $G' f$ $f f f$ $f f f f f$ $f f f f f f f f f f f f f f f f f f f $				Case I	.D. #		
WELL CONSTRUCTION       Depth to       Depth to       Depth to       Depth to       Depth to       Depth to       Diameter         Total depth drilled $15'$ ft.       Inner Casing       Inches)       Type and Mate         Borehole diameter:       Top $2''$ in.       Outer Casing $6''$ $5'$ $4''$ $PUC. F.G.         Bortom       12'' in.       Outer Casing       6'' 5' 4'' PUC. F.G.         Well was finished:       above grade       Screen       5' 15' 4'' PUC. F.G.         Well was finished:       above grade       Gravel Pack       3'C'' 15' 12'' SARUP         Annular Seal/Grout       6'' 3'C'' 12'' SARUP         Annular Seal/Grout       6'' 3'C'' 12'' SARUP         Annular Seal/Grout       6'' 3'C'' 12''' SARUP         Vater level was measured using M+Fext TAPC'       Method of Grouting         Yes       No       Method of 2e_{LC} Aevers at S_{C} gephysicat deg should be attra         Vell was developed for 2e_{LC} Aevers at S_{C} geph 0'-3' GCU         Yes       Grout for 2e_{LC} Aevers at S_{C} gephysicat deg should be attra         Ump capacity$	NOULTING FIHM/FIELD SUPER	/ISOR (if applicable) (), C	>. ARM	<u>Y</u>		_ Tele. # 908-1.22	-6
Total depth drilled $15$ ft.       Top (ft.)       Bottom (ft.)       Diameter (inches)       Type and Mate         Well finished to $15'$ ft.       Inner Casing $0'$ $5'$ $4''$ $PVC$ . Finished:         Borbole diameter:       Top $12''$ in.       Screen $5''$ $15''$ $4'''$ $PVC$ . Finished:         Bottom $12''$ in.       Screen $5''$ $15''$ $4'''$ $PVL$ . Finished:         Well was finished:       above grade       Screen $5''$ $15''$ $4'''$ $PVL$ . Finished:         Well was finished:       above grade       Gravel Pack $3'L'''$ $15'''$ $12''''''''''''''''''''''''''''''''''''$	ELL CONSTRUCTION	- <b>y</b> - <b>4</b>	Depth to	Depth to		3 3 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
Well finished to       12       ft.         Borehole diameter:       Top       12         Top       12       in.         Bottom       12       in.         Bottom       12       in.         Bottom       12       in.         Bottom       12       in.         Well was finished:       above grade         If linshed above grade, casing       Gravel Pack         Hinished above grade, casing height (stick up) above land       Gravel Pack         Annular Seal/Grout       6         Yes       No         Ans steel protective casing installed?       Method of Grouting         Was steel protective casing installed?       Method of Grouting         Well was developed for 20       Image: Arrow and and arrow	al depth drilled $\frac{15}{100}$ ft.		Top (ft.)	Bottom (ft.)	(inches)	Type and Material	1
Borehole diameter: Top $12^{"}$ in. Bottom $12^{"}$ in. Bottom $12^{"}$ in. Bottom $12^{"}$ in. Well was finished: above grade If flush mounted If flush mounted If flush mounted If flushed above grade, casing height (stick up) above land surfaceft. Nas stel protective casing installed? Method of Grouting Type of Rig $1261$ And the flue Method of Grouting GEOLOGIC EOG (Copies of other geologic logs a geophysical logs should be attra $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$ $12^{"}$	Il finished toft.			nd surface)			 
Bottom $12^{\circ}$ in. Bottom $12^{\circ}$ in. Well was finished: above grade if finished above grade, casing height (stick up) above land surfaceft. Nas steel protective casing installed? Method of Grouting $12^{\circ}$ $15^{\circ}$ $4^{\circ}$ $12^{\circ}$ $12^{\circ}$ $54^{\circ}$ $12^{\circ}$ $12^{\circ}$ $54^{\circ}$ $12^{\circ}$ $54^{\circ}$ $12^{\circ}$ $12^{\circ}$ $54^{\circ}$ $12^{\circ}$ $12$	Top 12 in	Outer Casing	( )/				<u>*</u>
Well was finished:       above grade       Image: Screen in the slot size in the slot slot size in the slot slot size in the slot slot slot slot slot slot slot slot	ttom 12." in.	(Not Protective Casing)	6"	5	4"	PUL Ed	
Tail Piece	was finished:	Screen (Note slot size)	:51	151	41	PVI C	
If inished above grade, casing height (stick up) above land surfaceft.       Gravel Pack $3'L'' / 5' / 2'' SAivp$ Annular Seal/Grout $6^{\circ}$ $3'L'' / L'' SAivp$ Annular Seal/Grout $6^{\circ}$ $3'L'' / L'' SAivp$ Annular Seal/Grout $6^{\circ}$ $3'L'' / L'' SAivp$ Mas steel protective casing installed?       Method of Grouting         Ass steel protective casing installed?       Method of Grouting         Static water level after drilling $7'L''$ ft.       GEOLOGIC Eog (Copies of other geologic logs a geophysical logs should be attracted and be development	Ilush mounted	Tail Piece					
height (stick up) above land surfaceft.       Annular Seal/Grout       5/2       1/2       SHUP         Was steel protective casing installed?       Method of Grouting         Yes       No         Static water level after drilling       7'2'       ft.         Vater level was measured using <u>but Foot</u> TAPUC         Vell was developed for 20 min       heurs at gpm         Vell was developed for 20 min       heurs at gpm         Vater level was measured using <u>but Foot</u> TAPUC         Vell was developed for 20 min       heurs at gpm         Vell was development <u>GAC DUMA</u> <u>GEOLOGIC Eog</u> (Copies of other geologic logs a geophysical logs should be attraction of development         Vell was developed for 20 min       heurs at gpm <u>GEOLOGIC Eog</u> (Copies of other geologic logs a geophysical logs should be attraction of development         Vas permanent pumping equipment installed?       Yes_DUMA <u>7'-7'       4C</u> Vinp capacity       gpm <u>7'-1''       4C</u> Ump type: <u>Type of Rig f261 mich IIC</u> Ut A T CR. A T 7'6 H         Tilling Fluid        Type of Rig f261 mich IIC       Ut A T CR. A T 7'6 H         anne of Driller	hished above grade, casing	Gravel Pack	21,11	101	(m) //		
Surface      ft.       Annotat Seaucout       6 $3 f_{c}^{-1}$ $1 L^{-1}$ $2 L H S E A C$ Was steel protective casing installed?       Method of Grouting	ht (stick up) above land	Appular Spal/Oreus	<u> </u>	15	12	SAND	
Was steel protective casing installed?       Method of Grouting         Yes       No         Static water level after drilling $7'c'$ ft.         Vater level was measured using $WA + Text$ Vater level was measured using $WA + Text$ Vell was developed for $2e_{Aloc}$ Vell was developed for $2e_{Aloc}$ Vas permanent pumping equipment installed?       Yes         Vas permanent pumping equipment       Yes         Vas perma	acett,	Annual Seal/Grout	6	16	10	BERUSHAC	<u></u>
Static water level after drilling $7'$ $1'$ ft. Static water level after drilling $7'$ $1'$ ft. Water level was measured using $4 + 7 = \pi$ $7 = 10^{-10}$ Well was developed for $20 = 10^{-10}$ hours at $5 = 90^{-10}$ Method of development $6 = 45^{-10} = 20^{-10}$ Mas permanent pumping equipment installed? $1'$ Yes $1'$ No- ump capacity gpm ump capacity gpm ump type: filling Method $A = 466 = \pi$ filling Fluid Type of Rig $1' = 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$	Yes XNo	Method of Grouting					
Vater level was measured using $\frac{k_{L} + T_{ex}}{1 + T_{ex}} \xrightarrow{TA_{e}^{U}G}$ Vell was developed for $\frac{D_{e_{1}}}{2}$ , hours at $\underline{C}$ gpm $\frac{1}{1 + 1} \xrightarrow{1} \frac{1}{1 + 1} 1$	c water level after drilling $7'2'$	ft	GEO		(Copies o	of other geologic logs and	 Vor
Vell was developed for 20 m/m hours atgpm       0'-3'       6'W         Method of developmentGASOUND       2'-7'       4'L         Vas permanent pumping equipment installed?       Yes_LAND       7'-1?       5'M         ump capacitygpm	er level was measured using WA	Tex TAP6			geophysi	icatiogs should be attach	ied.)
Interview	was developed for 20 mm hou	<del>rs</del> at gpm	- 0'	-3( 6	SW -	ر این از منطقه میکند. این از میکند و میکند از این ۲۰	··-
Vas permanent pumping equipment installed? Yes ANO ump capacitygpm ump type: filling Method <u>AUGEA</u> filling Fluid Type of Rig <u>f? 6 1 AIG6 II (w</u> ) ame of Driller balth and Safety Plan submitted? Yes KAO vel of Protection used on site (circle one) Mone D C B A	od of development <u>GAS</u>	20100	7'.		1	بېنىدى يې مىمەردۇرۇرىكىرى ياۋورىيەد بە يېنىدى يەرەپىيەد بە	
ump capacitygpm       gpm         ump type:	permanent pumping equipment in	stalled? Yes_ No-				The second of the second	
Filling Method <u>AUGER</u> rilling Fluid     Type of Rig <u>1261 Arch ILee</u> ame of Driller     WATCH. AT 7'6"       Palth and Safety Plan submitted?     Yes KANO       vel of Protection used on site (circle one)     Mare D C B A	gpm		7'-	13 5	5141		
Type of Rig <u>1261 Alch ILas</u> ame of Driller ealth and Safety Plan submitted? Yes KNo vel of Protection used on site (circle one) Mone D C B A	9 Method AUGER	·	17-	15 -	1	• · · · ·	
ame of Driller UALCR. AT 76 Palth and Safety Plan submitted? Yes KANO vel of Protection used on site (circle one) Mone D C B A	g Fluid Type	of Rig (361 august		سک میں۔ بر معرف میں ب		1 11	
Vel of Protection used on site (circle one) Mone D C B A	of Driller	<u>, , , , , , , , , , , , , , , , , </u>	<u> </u>	WALER	· Aï	7'6	
Ver of Protection used on site (circle one) Mone D C B A	and Safety Plan submitted?	Yes ANo					
	or Protection used on site (circle or	ne) Mone D C B A					
							·
CALIBER STATE BALGENS CARENT	time and the second sec	HER STATE BRIGANS	<del>Culturi</del>				
Tued the above-referenced well in accordance with all well permit requirements and all applicable tions.	tions.	referenced well in accor	dance with a	all well permi	t requireme	nts and all applicable	
NR. A.		Se. 1.	<u>i4</u>			<b>.</b>	
Driller's Signature Miler Bath Date 11- 4-92	/Driller's Signat	ure Milder 12	the .	•	_ Date	11-4-92	

Name of Owner: U. S. Army, Directorate of Public Work	<u>(S</u>
Name of Facility: Fort Monmouth	
Location:	
Case Number(s):	(UST #, ISRA #, Incident #, or EPA #)
LAND SURVEYOR'S CERTIFICATION Well Permit Number:	
(This number must be permanently affixed to the well casing.	.) <u>29-28995</u>
Owners Well Number (As shown on application or plans):	0750MW04
Geographic Coordinate NAD 83 (to nearest 1/10 of second):	
Longitude: West <u>74° 02' 56.0"</u>	Latitude: <u>40° 18' 32.9</u> ″
New Jersey State Plane Coordinates NAD 83 to nearest 10 fee	at:
North 537,840	East 617,920
Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'):	20.79'
Source of elevation datum (benchmark, number/description a datum is used, identify here, assume datum of 100', and give <u>NAVD 88 – North American Vertical Datum – 1988; as derived</u>	nd elevation/datum. If an on-site approximated actual elevation.) I from Bench Mark # CW -201;
Elevation 38.74' @ the southwest corner of a culvert headwal intersection of Guam Lane and Corregidor Road (approximated)	at the northwest corner of eight 3.9' above ground).
Significant observations and notes:	

#### AUTHENTICATION

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

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

July 23, 2009 DATE

 
 Michael C. Nolan
 Lic. # 24 GS 03448800

 PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER (Please print or type)
 Certificate of Authorization No. 24GA28159000

4408	New Jersey Department of I Bureau of Wate	Environmer er Allocatio	ntal Protect		Well Permit P200908	Number		
۰.	ELL RI	ECORD		Atlas Sheet Co	ordinates			
OWNER IDENTIFICATION U.S. ARI				29136	33			
Address 173 RIVERSIDE AVENUE						"APP MORPH of a set in the initiality and interface because any set		
City Fort Monmouth	State New Jers	еу		Zip C	ode 07703			
WELL LOCATION - If not the same as or	wner please give address	Ow	ner's Well N	o. MW-C	び 750MW	/05		
County Monmouth Municipal	ity Eatontown Boro		Lot No.	1 Bloc	k No. 1			
Address WILSON AVENUE MW-05			Local data -					
WELLUSE Monitoring		DATI	WEILCTA	DTFD	ntulno			
Webb obe Montoling		DAT	WELL CO	MPLETET	Volutoo			
		DAII	S WELL CO	IVER EARD & EDR.	10/17/07			
WELL CONSTRUCTION Total Depth Drilled 20 ft.	Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (fl.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)		
Finished Well Depth 20 ft.	Single/Inner Casing	0	5	4	PVC	SCH. 40		
Borehole Diameter:	Middle Casing							
Top 🖉 in.	(for triple cased wells only)	[]		[				
Bottom /O in.	(largest diameter)							
Well was finished: dabove grade	Open Hole of Screen (No. Used . 01)	5	20	4	PVC	SC #. 40		
If finished above grade, casing height (stick up) above land surface $t^{1/2}$ fr	Blank Casings (No. Used )							
	Tail Piece							
Ves No	Gravel Pack	3	20	10	#1+#00	600/bs		
Static Water Level after drilling 9 ft.	Grout	0	3	10	Bentonite	<u>Ibs</u>		
Water Level was Measured Using TAPE		J	routing Metho	d fou	D / P/ACAMENT			
Well was developed for / hours		ט מ	rilling Method	$\frac{B}{B}$	4			
at gpm								
Method of development	.6	Note	GEOLOGIC LOG					
Pump Capacity gpt	n	form	formations					
Pump Type WHALER								
Drilling Fluid NA Type o	FRig DIEDRICH D-120	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	SRAU FANSOND, MRISILI					
Health and Safety Plan Submitted? 🗹 Yes	No		GRN SITTY SAMD					
Level of Protection used on site (circle one)	A <u>18</u>	18' '						
		Colorador of Colorador	BIR SILLY	SAND		2724950566662250005259966325586669966		
		20	ç *					
I certify that I have constructed the above re accordance with all well permit requiremen rules and regulations	ferenced well in ts and applicable State	62015260000			Marten och den state inn anderskala kala state och en den state den skala state och att state och att state och			
Drilling Company TABASCO DRILLING		AS-BUILT WELL LOCATION						
Well Driller (Print) Collector Selling		(NAD 83 HORIZONTAL DATUM)						
Driller's Signature	NJ	NJ STATE PLANE COORDINATE IN US SURVEY FEET						
Registration No. IND1289	NOR	NORTHING: 537858 EASTING: <u>617439</u>						
		LATT	TUDE: 0	, n	LONGITUDE: 0	s eq.		
ORIGINAL: DEP ∨	COPIES: DRILLE	R	OWNER	5	HEALTH DE	PARTMENT		

					I	(			
	U.S.AR FORT	MY MONMOUTH	LC	LOG OF BORING 750MW05					270 1 0 5 1 )
GI	U.S. Am SELFM-PV JOSEPH FA BUILDING ROUNDWATER IN	ny V-EV LLON VESTIGATION	NJDEP Permit # : 20090 NJDEP Case # : - Start Date : 6/23/0 Completion Date : 6/23/0	18988 19 19			Nor Eas Log Drill	(Pa thing ged By ler	age 1 OT 1) : N 538100 : E 618268 : Tabaso Drilling Corp :-
Depth in Feet	Well: MW05 Elevation: -	DES	SCRIPTION	nscs	GRAPHIC	Samples	Blow Count	Weil ( Int	Construction formation
0-		Topsoil		со				Weil Construction	
1 1 2 1 3 1		Green/olive soils, m cobbles and pebble	edium SAND with small s	sw				Hole Diameter Drill Method Sampling Method Well Casing Material Diameter Joints Length Well Screen	:- : Hollow Stem Auger :- : PVC : 4 inch : Threaded : 7 feet
4 5 6 7 8 9 10 11	▼.	Green medium to fi	ne silty SANDS with small	SM				Material Diameter Joints Opening Length Sand Pack Annulus Seal Stick up: - Water level: 8.75	: PVC : 4 inch : Threaded : 0.010 inch : 15 feet : - :-
12 13 14 15 16 17 18 19 20		Fine green/olive SA clay	NDS with traces of sandy	SM					

01-25-2010 L'Unstallation Restoration Program ManagementURP Sites/T07_740_750MW Information/Well Logs (Electronic)/750MW05.BOR

Name of Owner: U. S. Army, Directorate of Public Work	(6
Name of Facility:Fort Monmouth	
Location:	
Case Number(s):	(UST #, ISRA #, Incident #, or EPA #)
LAND SURVEYOR'S CERTIFICATION Well Permit Number: (This number must be permanently affixed to the well casing.	200908988
Owners Well Number (As shown on application or plans):	750 A
Geographic Coordinate NAD 83 (to nearest 1/10 of second):	
Longitude: West <u>74° 02' 59.0"</u> (	Latitudə: <u>40° 18' 34.3"</u>
New Jersey State Plane Coordinates NAD 83 to nearest 10 fee	:t:
North_ <u>537,980</u>	Eas <u>t 617,690</u>
Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′);	20.20'
Source of elevation datum (benchmark, number/description a datum is used, identify here, assume datum of 100', and give a <u>NAVD 88 – North American Vertical Datum – 1988; as derived</u> <u>Elevation 38.74' @ the southwest corner of a culvert headwall</u> <u>intersection of Guam Lane and Corregidor Road (approximate</u>	nd elevation/datum. If an on-site approximated actual elevation.) from Bench Mark # CW -201; at the northwest corner of aly 3.9' above ground).
Significant observations and notes:	

#### **AUTHENTICATION**

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

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

<u>January 19, 2010</u> DATE

 
 Michael C. Nolan
 Lic. # 24 GS 03448800

 PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER (Please print or type)
 Certificate of Authorization No. 24GA28159000

 Ghester, Ploussas, Lisowsky Partnership, LLC

 100 Matawan Road, Matawan, New Jersey 07747

 732-566-0297

 PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

1.102	lew Jersey Department of Environmental Protectiv Well Permit Number Bureau of Water Allocation								
440	MONITORING W	VELL RI	ECORD		P200908	989			
					Atlas Sheet Co	ordinates			
OWNER IDENTIFICATION U.S. AR					291368	33			
Address 173 RIVERSIDE AVENUE				77. (					
City Fort Monmouth	State <u>New Jers</u>	ey			Jode 07703				
WELL LOCATION - If not the same as o	wner please give address	Оч	vner's Well N	0. MW-1	<u>06 750MW0</u>	6			
County Monmouth Municipa	lity Eatontown Boro		Lot No.	1 Blo	ck No. 1				
Address WILSON AVENUE MW-06	Address WILSON AVENUE MW-06								
WELL USE Monitoring		DATI	E WELL STA	ARTED	10/14/09				
		DATI	E WELL CO	MPLETE	D 10/14/09				
						177 /2			
WELL CONSTRUCTION	Note: Measure all depths from land surface	Depth to Top (fl.)	Depth to Bottom (ft.)	(inches)	Material	(lbs/sch no.)			
Finished Well Depth 20 ft.	Single/Inner Casing	0	5	4	PVC.	SCX1.40			
Borehole Diameter:	Middle Casing								
Top /O in	(for triple cased wells only)			L					
Bottom 10 in.	(largest diameter)								
Well was finished: Mabove grade	Open Hole or Screen				]				
flush mounted	(No. Used , CT )	5	50	4	PrC	SCN.40			
If finished above grade, casing height (stick up) above land surface $1/e$ ft	Blank Casings (No. Used)								
	Tail Piece								
Vec No	Gravel Pack	3	20	10	#12#00	600/65			
Static Water Level after drilling 9 ft	Grout	0	3	10	Neat Cement Bentonite	<u>100</u> lbs lbs			
Water Level was Measured Using TAPE	L	IL		ـــــــــــــــــــــــــــــــــــــ					
Well was developed for / hours		G	Grouting Method <u>GRAUTY PURCEMENT</u>						
at / gpm				<u> </u>					
Method of development	26		GEOLOGIC LOG						
Pump Capacity 3 gp	m		Note each depth where water was encountered in consolidated formations						
Pump Type (12)/1/1/1/1/			0						
Drilling Fluid ALA Type	of Rig DIFORICH D-120		BANF-MSAND, TK.SILT						
Health and Safety Plan Submitted? Ves	No		3'						
Level of Protection used on site (circle one)	None (D) C B	A 18	18						
	0	2	BLACK STON SAND						
		~			*****				
I certify that I have constructed the above r	oferenced well in								
accordance with all well permit requirement	ts and applicable State	6				aletiisiimieymienisiomeessiemeesse			
rules and regulations.									
Drilling Company TABASCO DRILLING	CORP		AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)						
Well Driller (Print) WILLIAM SHINN	NJ	NJ STATE PLANE COORDINATE IN US SURVEY FEET							
Driller's Signature		NOF	THING: 5	37981	EASTING: /a	17655			
Registration No. <u>MD1289</u> U	Date 10 83 109			OR	ALLO ALLO 1				
/		LATI	TUDE:0	۰	LONGITUDE:0	E 29			
ORIGINAL: DEP	COPIES: DRILLE		OWNFR	,	HEALTH DF	PARTMENT			
		-	۵۵ کېسېرن ی بر سين						

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		U.S.AR FORT I SELFM	MY MONMOUTH I-PW-EV	LOG OF BORING					750MW06 (Page 1 of 1)
	G	U.S. Am SELFM-PW JOSEPH FA BUILDING ROUNDWATER IN	ny /-EV LLON 750 /ESTIGATION	NJDEP Permit # : 20 NJDEP Case # : - Start Date : 6/ Completion Date : 6/	00908989 23/09 23/09			Nor Eas Log Drill	thing : N 538141 ting ; E 618372 ged By : Tabaso Drilling Corp ler :-
	Depth In Feet	Well: MW06 Elevation: -	DES	SCRIPTION	nscs	GRAPHIC	Samples	Blow Count	Well Construction Information
	0		Topsoil		СО				Well Construction
	1 2 3 3		(Green to olive) Me	dium to fine silty SANDS					Hole Diameter :- Drill Method : Hollow Stem Auger Sampling Method :- Well Casing Material : PVC Diameter : 4 inch Joints : Threaded Length : 7 feet Well Screen
BOR	5				SM				Material: PVCDiameter: 4 inchJoints: ThreadedOpening: 0.010 inchLength: 15 feet
nic)\750MW06.	6   1 7   7								Sand Pack : - Annulus Seal : - Stick up: -
Logs (Electrol	- - - - - - -	•							Water level: 8.75 feet
iformation\Well	9 ¹ 10		Green medium to fir traces of sandy clay	ne SILTS and SANDS wit	h				
40_750\MW In	11 11 1 1								
Sites/707_7	12 - 13 -				SM				
anagement/IRF	14-								
n Program Ma	15 1 16 16		Green medium to fir traces of sandy clay	ne SILTS and SANDS wit s	h				
on Restoratio	17- 17-				014				
10 L:Vnstallati	18 18 10				SM				
01-25-201	20								

Name of Owner: U. S. Army, Dire	ctorate of Public Works
Name of Facility:Fort Monmouth	
Location:	
Case Number(s):	(UST #, ISRA #, Incident #, or EPA #)
LAND SURVEYOR'S CERTIFICATION Well Permit Number: (This number must be permanently affic	ted to the well casing.) $200908989$
Owners Well Number (As shown on app	lication or plans): 750 B
Geographic Coordinate NAD 83 (to near	est 1/10 of second):
Longitude: West <u>74° 02' 59.5"</u>	Latitude: 40° 18' 34.3"
New Jersey State Plane Coordinates NA	D 83 to nearest 10 feet:
North <u>537,980</u>	East617,660
Elevation of Top of Inner Casing (cap of reference mark (nearest 0.01'):	f) at20,46'
<u>NAVD 88 – North American Vertical Datu</u> Elevation 38.74' @ the southwest corner intersection of Guam Lane and Corregid Significant observations and notes:	im – 1988; as derived from Bench Mark # CW -201; of a culvert headwall at the northwest corner of or Road (approximately 3.9' above ground).
AUTHENTICATION I certify under penalty of law that I have p submitted in this document and all attack immediately responsible for obtaining the accurate and complete. I am aware that to information including the possibility of fi	personally examined and am familiar with the information oments and that, based on my inquiry of those individuals e information, I believe the submitted information is true, there are significant penalties for submitting false ne and imprisonment.
PROFESSIONAL LAND SURVEYOR'S SIG	January 19, 2010 NATURE DATE
Michael C. Notan PROFESSIONAL LAND SURVEYOR'S NA (Please print or type) Car	Lic. # 24 GS 03448800 WE AND LICENSE NUMBER tificate of Authorization No. 24GA28159000

1888) 1988)

Certificate of Authorization No. 24GA28159000

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New Jersey Department of Environmental Protect Bureau of Water Allocation MONITOPING WELL PECOPD					Well Permit Number P200908990				
	MONTOKING M	VELLK	ECORD		Atlas Sheet Co	pordinates			
OWNER IDENTIFICATION U.S. AR	MY				29136	83			
City Fort Mormouth	Ototo Niew Yerr			7:					
	State New Jers	ey		Zip C	ode 07703				
County     Monmouth     Municipality     Eatontown Boro     Lot No.     1     Block No.     1       Address     WILSON AVENUE MW-07									
WELL USE Monitoring		ከልጥ	~ FWFIIST/	ARTEN	interface				
	маннон алтанаа алтан талтан талар у	DAT	E WELL CO	MPLETE	010/15/07				
WELL CONSTRUCTION	Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (fl.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)			
Finished Well Depth $\geq_{C}$ ft.	Single/Inner Casing	0	5	4	PVC	504.40			
Borehole Diameter:	Middle Casing	<b>[</b>							
Top 10 in.	Outer Casing								
Bottom <u>io</u> in.	(largest diameter)								
Well was finished: above grade	Open Hole of Screen (No. Used - C/)	5	20	Ý	Pic	501.40			
If finished above grade, casing height (stick up) above land surface ft.	Blank Casings (No. Used )								
Steel protective casing installed?	Tail Piece								
Yes No	Gravel Pack	3	20	10	#12#00	600/65			
Static Water Level after drilling 9 ft.	Grout	0	3	10	Bentonite	lbs			
Water Level was Measured Using TAPE	·	G	Growting Method						
Well was developed for _/ hours		D	Drilling Method $2 \leq A$						
at gpm			GEOLOGICLOG						
Method of development <u>SUBMENSIBL</u>	6	Note	Note each depth where water was encountered in consolidated						
Pump Capacity gp	m	form	formations						
Pump Type <u>UNALER</u>			- C BRAN F.M. SAND TRISUT						
Drilling Fluid Type of	of Rig DIEORICI D-120	- 3	3						
Health and Safety Plan Submitted? 🗹 Yes	No		GRIN SICTY SAND						
Level of Protection used on site (circle one)	None (D) C B	A 18	18						
		6000000000	SCIL SILLY SOME						
		2	<i>c′</i>						
I certify that I have constructed the above re accordance with all well permit requiremen rules and regulations.	eferenced well in ts and applicable State	donumentation Announcementation							
Drilling Company TABASCO DRILLING	CORP		AS-BUILT WELL LOCATION						
Well Driller (Print)		(NAD 83 HORIZONTAL DATUM)							
Driller's Signature		NJ	STATE PLAN	E COORDI	NATE IN US SUR	VEY FEET			
Registration No. <u>mDI264</u>	Date 10 23 109	NOR	NORTHING: <u>537980</u> EASTING: <u>617694</u>						
/		LATT	TUDE: 0	UK "	LONGITUDE: 0	X BA			
ODICINAL DED \$	///		• بينيون سيسي سيسي سيبيون سيسي سيسي 						
UKIGINAL: DEF V	COPIES: DRILLE.	K	OWNER		HEALTH DE	PARTMENT			

			(					Ċ			
		U.S.AR FORT M SELFM	MY MONMOUTH -PW-EV	LOG OF BORIN				IG I	750MW07 (Pi	age 1 of 1)	
	G	U.S. Arm Selfm-PW Joseph Fai Building Roundwater Inv	IY I-EV LON 750 /ESTIGATION	NJDEP Permit # NJDEP Case # Start Date Completion Date	: 2009089 : - : 6/23/09 : 6/23/09	990			Nor Eas Log Drill	thing ting ged By er	: N 538185 : E 618457 : Tabaso Drilling Corp : -
	Depth in Feet	Well: MW07 Elevation: -	DES	SCRIPTION		NSCS	GRAPHIC	Samples	Blow Count	Well ( Int	Construction formation
	-0		Topsoil			со				Well Construction	
	1 1 2		Medium to fine SAN	ID with some pebbles	i					Hole Diameter Drill Method Sampling Method Well Casing	: - : Hollow Stem Auger : -
	3111					SW				Material Diameter Joints Length Well Screen	: PVC : 4 inch : Threaded : 7 feet
			Wet green CLAY			CL				Material Diameter Joints	: PVC : 4 inch : Threaded
MWU/.BUK	5 6 1		Wet sandy green C water, but water en	LAY, no free flowing countered at 7.5 feet						Opening Length Sand Pack Annulus Seal	: 0.010 inch : 15 feet : - : -
cleatronic)// au	7					CL				Stick up: - Water level: 7.5 fe	pet
nivveli Logs (1	8 9 1										
ntorman	10		Wet sandy CLAY, g	reen very plastic			$\square$				
1 AAMAnc	- 11-			• •	r		$\square$				
- (40-)	12 						$\square$				
V SIIGS/	13 13						$\square$				
ementuk	    14										
n Manag	15 15					CL					
n Prograu	1 16-1										
(estoratio	1 1 17 17										
callation F	18-1										
10 L:VINSI											
01-22-20	20-1 20-1										

Name of Owner: U. S. Army, Directorate of Public Wor	'ks
Name of Facility: Fort Monmouth	
Location:	
Case Number(s):	(UST # ISRA # Incident # or EBA #)
LAND SURVEYOR'S CERTIFICATION Well Permit Number:	$( - \alpha \beta \alpha \alpha \alpha \alpha \beta \alpha \alpha \alpha \beta \alpha \alpha \beta \alpha \alpha \beta \alpha $
(this number must be permanently affixed to the well casing	1) 20090878990
Owners Well Number (As shown on application or plans):	750 C
Geographic Coordinate NAD 83 (to nearest 1/10 of second):	
Longitude: West <u>74° 03' 02.3"</u>	Latitude: 40° 18′ 33,1"
New Jersey State Plane Coordinates NAD 83 to nearest 10 fee	et:
North 537,860	East 617,440
Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01');	20.99'
Source of elevation datum (benchmark, number/description a datum is used, identify here, assume datum of 100', and give <u>NAVD 88 – North American Vertical Datum – 1988; as derived</u> <u>Elevation 38.74' @ the southwest corner of a cuivert headwall</u> intersection of Guam Lane and Corregidor Road (approximate	nd elevation/datum. If an on-site approximated actual elevation.) from Bench Mark # CW -201; at the northwest corner of by 3.9' above ground).
Significant observations and notes:	
AUTHENTICATION	

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

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

January 19, 2010 DATE

 
 Michael C. Nolan
 Lic. # 24 GS 03448800

 PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER (Please print or type)
 Certificate of Authorization No. 24GA28159000

4408	Ne rsey Department of Bureau of Wat	Environme er Allocatio	ntal Protectic	m .	Well Permit P200903	Number 8991			
, L *	MONITORING V	VELL RI	ECORD		Atlas Sheet C	oordinates			
WNER IDENTIFICATION U.S. AR	MY				29136	83			
ddress 173 RIVERSIDE AVENUE									
ity Fort Monmouth	State New Jers	еу		Zip C	Code 07703				
WELL LOCATION - If not the same as o	wner please give address	Ow	ner's Well f	NO. MUU-	08 750MW	08			
County Monmouth Municipa	lity Eatontown Boro		Lot No.	1 Blo	ck No. 1				
ddress WILSON AVENUE MW-08									
VELL USE Monitoring		Th 4 arri			the loca				
Monoring		DAT	E WELL ST.	MPLETE	0 10/16/09				
WELL CONSTRUCTION	Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.			
Einished Well Denth 20. ft	Single/Inner Casing	0	5	4	PVC.	Salua			
Borehole Diameter:	Middle Casing (for triple cased wells only)								
Top <u>10</u> in. Bottom <u>16</u> in.	Outer Casing (largest diameter)								
Well was finished: 🗹 above grade	Open Hole of Screen (No. Used -C/)	5	20	4	PVC.	Scil.40			
If finished above grade, casing height (stick up) above land surface $l'/_{\Sigma}$ ft.	Blank Casings (No. Used)								
Steel protective casing installed?	Tail Piece								
$\overline{\mathbf{V}}$ Yes $\square$ No	Gravel Pack	3	20	10	# 18 #00	600/65			
Static Water Level after drilling 9 ft.	Grout	0	3	10	Bentonite	<u></u>			
Water Level was Measured Using TAPE		G	routing Meth	od 604	TY PLACAMAN				
Well was developed for _/ hours		D	rilling Metho	d 4/57	A .	<u></u>			
et gpm				GEOLO	GIC LOG	an air ann an Annaich ann an Annaichean ann an Annaichean ann an Annaichean ann an Annaichean ann an Annaichean An an Annaichean Annaichean an Annaichean an Annaichean an Annaichean ann an Annaichean ann an Annaichean an Ann			
Method of development <u>Susmonsuel</u>	5	Note	each depth whe	re water was e	ncountered in consolid	lated			
Pump Capacity gp	m	form	ations						
Pump Type			Pautmo	A. 0 TO	SUT				
Drilling FluidType of	of Rig DIEDRICH D-120		200 (- M) S 2	5100 , 102.		ekromona do bez Local munos fra Neikit Sizi pilon:			
Health and Safety Plan Submitted? Ves	No		GRN SITT / SAWD						
Level of Protection used on site (circle one)	None D C B	A <u>18</u>	18'						
		áltornas narodal	BUC SILLY	1 SANO					
		S							
certify that I have constructed the above re accordance with all well permit requiremen rules and regulations.	eferenced well in ts and applicable State	Örvebsädoslande Socialystekkeese		NING 2017 NO. 100 NO.					
Drilling Company TABASCO DRILLING	CORP		AS-B	UILT WEL	L LOCATION				
Well Driller (Print)	/		(NAD 83 HORIZONTAL DATUM)						
Driller's Signature	-	NJ	STATE PLAN	NE COORD	INATE IN US SUR	VEY FEET			
Registration No. <u>MD1289</u>	Date 10 123 109	NOR	THING: 5	<u>3804/</u> OR	EASTING:	1562			
		LATI	FUDE:0	9 91 	LONGITUDE:0	₹ ‡			

		(				).			
	U.S.AR FORT I SELFM	MY MONMOUTH I-PW-EV	LOG OF BORING 750MW08						750MW08 (Page 1 of 1)
(	U.S. Am SELFM-PW JOSEPH FA BUILDING GROUNDWATER IN	NY V-EV LLON 750 VESTIGATION	NJDEP Permit # : NJDEP Case # : Start Date : Completion Date :	2009089 - 6/23/09 6/23/09	91			Nort Eas Log Drill	thing : N 538252 ting : E 618188 ged By : Tabaso Drilling Corp ler :-
Depth in Feet	Well: MW08 Elevation: -	DES	SCRIPTION		nscs	GRAPHIC	Samples	Blow Count	Well Construction Information
0-	•	Topsoil		•	со				Well Construction
1- 2- 3- 4-		Fine SAND and silt	light brown		SW				Hole Diameter : - Drill Method : Hollow Stem Auger Sampling Method : - Well Casing Material : PVC Diameter : 4 inch Joints : Threaded Length : 7 feet Well Screen Material : PVC Diameter : 4 inch Joints : Threaded
5 - 0 - 2 - 2 - 2		Fine SAND and silt,	light brown		sw				Opening : 0.010 inch Length : 15 feet Sand Pack :- Annulus Seal :- Stick up: - Water level: -
attion\Well Logs (E		Light tan medium/fii	ne sandy CLAY, wet		CL				
es/707_740_750/MW Inform		Light tan medium/fir	ne sandy CLAY, wet		CL				
sestoration Program ManagementURP Sit		Wet glauconitic mat SANDS with clay	erial, green to olive fine	3	SW				
01-25-2010 L:\Installation R - 61 19 61 61 61 61		CLAY, very tight ad- wet coming up the a Free flowing water in	vancement of auger slo auger flight at 18 feet n GLAUCONITE	w,	CL CL		2 - - 		

Name of Owner: U. S. Army, Directorate of Public Wo	rks
Name of Facility: Fort Monmouth	
Location:	
Case Number(s):	(UST #, ISRA #, Incident #, or EPA #)
LAND SURVEYOR'S CERTIFICATION Well Permit Number: (This number must be permanently affixed to the well casing	g.) 20090899]
Owners Well Number (As shown on application or plans):	750 D
Geographic Coordinate NAD 83 (to nearest 1/10 of second):	
Longitude: West <u>74° 03' 00,7"</u>	Latitude: 40° 18' 34.9"
New Jersey State Plane Coordinates NAD 83 to nearest 10 fe	eet:
North_ <u>538,040</u>	East <u>617,560</u>
Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'):	17.36'
Source of elevation datum (benchmark, number/description datum is used, Identify here, assume datum of 100', and give <u>NAVD 88 – North American Vertical Datum – 1988; as derive</u> <u>Elevation 38.74' @ the southwest corner of a culvert headwa</u> <u>Intersection of Guam Lane and Corregidor Road (approxima</u> )	and elevation/datum. If an on-site approximated actual elevation.) <u>d from Bench Mark # CW -201;</u> Ill at the northwest corner of tely 3.9' above ground).
Significant observations and notes:	
AUTHENTICATION	

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

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

January 19, 2010 DATE

 
 Michael C. Nolan
 Lic. # 24 GS 03448800

 PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER (Please print or type)
 Certificate of Authorization No. 24GA28159000