MULTI-PHASE EXTRACTION SYSTEM

AAFES RETAIL FUEL FACTILITY
BUILDING 200
US ARMY GARRISON FORT HAMILTON
BROOKLYN, NEW YORK

REMEDIATION SYSTEM 30-DAY START-UP REPORT

FINAL
March 2010

PREPARED FOR

U.S. ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT
Contract Number: W912DR-04-D-0013
Delivery Order 0006

Prepared by

Plexus Scientific Corporation
9104 Guilford Road, Suite 1010
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30 March 2010

Ms. Phyllis Della-Camera
US Army Corp of Engineers – Baltimore District
10 South Howard Street
Baltimore, MD 21201

Reference: **FINAL Multi-Phase Extraction System Start-up Report**
Contract Number W912DR-04-D-0013 D.O. 0006
AAFES Fuel Facility – Building 200
Ft. Hamilton US Army Garrison
Brooklyn, New York, New York

Dear Ms. Della-Camera:

Plexus Scientific Corporation (Plexus) is presenting this 30-Day Remediation System Start-Up Report related to the above contract number for Task 3.3 Remediation System Startup and Operations and Maintenance (O&M) at the Army and Air Force Exchange Service (AAFES) retail fuel facility occupying Building 200 of the Ft. Hamilton US Army Garrison located in Brooklyn, New York City, New York.

Scope of Work and System Installation:

The scope of work associated with this task is to conduct the system start-up activities and weekly O&M until the completion of one month of full system operation. Initially, the principal mode of vapor-phase treatment was through a catalytic oxidizer, which was determined to be insufficient to address the light non-aqueous phase liquid (LNAPL) present at the site following the initial system start-up. Following the replacement of the catalytic oxidizer with a thermal oxidizer, Plexus began the system start-up process.

Following the first month of O&M and system optimization, it was determined by Plexus Scientifc Corporation and US Army Corps of Engineers (USACE) personnel that the catalytic oxidizer should be replaced with a natural gas-fired thermal oxidizer to more adequately address the LNAPL impact at the site and allow the remediation system to be operated in optimal dual-phase mode. The thermal oxidizer was installed in the system in December 2008. Natural gas service was provided to the remediation system in May 2009 after completion of the permitting process for the thermal oxidizer.

Site Overview and Treatment Process:

The Ft. Hamilton AAFES retail fuel facility is located at 200 General Lee Avenue on the Ft. Hamilton U.S. Army Garrison in Brooklyn, New York. A Site Location Map is presented as **Figure 1.** The main building and convenience store covers the southwest corner of the site and faces northeast. The remediation compound is located immediately behind the main building. The gasoline pumps are located in front of the main building in the center of the property. The underground storage tanks (UST's) are located to the southeast of the building. A site map is provided as **Figure 2.**

To address the site remedial goals, a multi-phase extraction system was installed at the site. Seven MPE wells were installed into the vadose zone in order to address dissolved-phase and LNAPL impact of the groundwater and vadose zone soils. Monitoring well, MW-5, was converted to a multi-phase extraction well due to the historical presence of LNAPL. The fuel dispensers and the UST pit are surrounded by the MPE system. Groundwater treatment is accomplished via air-stripping followed by polishing with granular activated carbon. Vapor-phase hydrocarbons are remediated via thermal oxidation following separation in the moisture separator.

Vacuum for the system is generated by a positive displacement blower capable of generating a maximum vacuum of approximately 12.5-inches of mercury ("Hg). The influent soil vapor and entrained condensate are separated in the moisture separator. Impacted water then flows to an equalization tank for free phase hydrocarbon separation. The water/hydrocarbon mixture then flows into the oil/water separator (OWS). Free-phase hydrocarbons flow from the OWS into a free-product storage drum inside the remediation compound. Extracted groundwater is pumped via centrifugal pump into the air-stripper. Hydrocarbons are volatilized from the water and vented to the atmosphere. The air stripper is designed to be 99.99% efficient in hydrocarbon extraction. Following treatment by the air stripper water is pumped through two parallel particulate filters and polished by two in-line liquid-granular activated carbon (LGAC) units prior to discharge to the New York City Publicly Owned Treatment Works (NYC POTW) sewer system. Off-gas from the air stripper is vented to the atmosphere through a 15-foot vent stack exiting the top of the remediation compound.

Soil vapor extracted by the system flows from the positive displacement blower to the thermal oxidizer. The oxidizer is designed to achieve minimally a 95% reduction in hydrocarbons. The vapor treatment system is also equipped with two 1,000-pound granular activated carbon units to be used if the extracted vapor concentrations drop below 100 parts-per-million for an extended period of time. A process flow diagram is provided as **Figure 4.**

Remediation System Start-Up and O&M

On 18 May 2009, Plexus Scientific personnel mobilized to the site to start the system and begin the 1-month O&M period required under Task 3.3 of the contract. The previous system start-up performed in July 2008 included evaluation of all system components. During this start-up, all equipment was run and tested and found to be operating within the approved design parameters. All system alarms were tested and found to be functional. Additionally, each of the control valves was tested and found to be fully functional. The 2009 system start-up event included a re-evaluation of all control valves and system mechanical components. Each of the components was run and found to be functional according to the approved system design. Balancing of the system was conducted by Plexus technical personnel during system start-up. All gauges were checked and flow rates adjusted using the control valves installed at various points in the system piping to optimize process flow through the system. The system was observed following adjustments to ensure that all flow rates were appropriate and within design parameters. Plexus technical personnel also observed the system to ensure that alarms would not be tripped by abnormally high flow rates through the system as a result of improper balancing. During the start-up, Plexus technical personnel noted that the system, despite being operated at the design vacuum, was experiencing high vacuum loss uniformly across the system piping and recovery wells. As a result of the vacuum loss, the system did not recover groundwater or LNAPL. Plexus personnel shut the system down in order to determine the cause of the loss and bring the system to full operation. During each O&M visit, all of the monitoring wells located at the site were gauged for groundwater level and LNAPL presence. The groundwater data is presented in **Table 1**.

On 30 June 2009, Plexus personnel and Aztech Technologies mobilized to the site to investigate the cause of the high vacuum loss across the system piping. A pipe camera was rented from Envirosight LTD and transported to the site. During the investigation, the pipe camera was inserted into the main system header piping from the junction with the inlet piping at the system enclosure. Though water and sediment were visible in the pipe on the camera display, no cracks or breaks were observed in the piping. The piping inspection was halted when the pipe camera could not complete the 90-degree turn in the system piping following the junction between multi-phase-extraction well, MPE-4, and the system header piping. The extent of the pipe camera investigation is shown graphically on **Figure 3**.

On 6 July 2009, Plexus scientific personnel mobilized to the site to start the system and run the system for a 24-hour period before investigating the system piping again with the pipe camera. Plexus personnel started the system at 15:00 hrs and departed the site. Upon arrival at the site on 7 July 2009, the system was down due to a "Vapor Extraction Blower High Temperature Alarm." It was determined that the system shut down soon after start-up. The system had not extracted any groundwater and had operated for a total of 0.75 hrs. Plexus technical personnel again investigated the system header piping from the system enclosure to the junction with multi-phase extraction well MPE-4. The results of the piping investigation were inconclusive. During

the same visit, Plexus personnel completed a negative pressure test of the system piping. By closing all well valves and starting the system, the test was intended to demonstrate the system piping as "tight" or compromised, based on the result of the test. A "tight" conclusion would be reached if the system piping was able to hold a vacuum following the application of vacuum from the system blower and isolation of the system piping at the shut-off valve located in the system enclosure. The piping would be considered compromised if a vacuum was not maintained after isolation of the system piping. The results of the vacuum tests were inconclusive. The system did not hold a sustained vacuum, though it was determined by onsite personnel that the piping connections at the well heads and the flexible rubber fittings were not designed or capable of sustaining such a test.

On 20 July Plexus personnel mobilized to the site to test the effectiveness of the onsite blower and determine if a larger blower was needed at the site to achieve the remedial objectives. During the test, a Nash-Elmo water-sealed liquid ring pump was connected to the system. All fittings at all of the well heads were reconnected and resealed. Aspiration holes with a diameter of 3/8-inch were installed at 1-foot intervals in the bottom 4 feet of each drop tube. Following the installation of the aspiration holes, each of the multi-phase extraction wells was observed recovering fluids and vapor at a vacuum of between 75-inches of water-column (" w.c.) and 135" w.c. The system was shut down prior to departure from the site. During this event, Plexus personnel again observed the system to ensure that the system was operating within the design parameters and remedial objectives.

On 5 August, Plexus personnel mobilized to the site for system start-up and O&M. The system was started and balanced before the collection of O&M data. Vapor samples were collected from the influent and effluent portions of the system for laboratory analysis. The samples were shipped under proper chain of custody documentation to Air Toxics Laboratory in Fulsom, California. The laboratory report is included in this report as **Appendix D**. Plexus personnel observed the system to ensure proper balancing between vapor and liquid extraction. The flow rates between the OWS, air stripper, sediment bag filters, and LGAC units were adjusted to ensure proper flow through the system components.

On 13 August, Plexus personnel mobilized to the site to continue the month of system O&M. The system was down on arrival due to a flame rod failure within the thermal oxidizer. Plexus personnel replaced the flame rod and started the system. System operations and groundwater readings were collected during the visit. Following the system start-up, Plexus personnel mobilized to the site on a weekly schedule for system O&M. During the start-up phase, hydrocarbon recovery from monitoring well MW-5, which is connected to the system as a dual-phase extraction well, was apparent by the reduction in measureable LNAPL from 1.58 feet recorded 13 August to the non-measurable LNAPL recorded during the 02 September O&M visit. Additionally, traces of LNAPL less than 0.01 foot were observed in the oil/water separator, indicating a high level of LNAPL destruction within the thermal oxidizer. No LNAPL was present in the LNAPL containment drum. On 2 September, Plexus and Shaw Environmental personnel arrived on site and noted that the system had shut down on a "Carbon Unit High

Pressure Alarm." It was also noted that pin-hole leaks had developed in the LGAC units. Plexus notified the USACE project manager and scheduled delivery of the new LGAC units.

On 23 September, two replacement LGAC units were installed in the system and the system restarted. Plexus personnel completed the installation of the LGAC units and restarted the system without incident. On 23 September, at 19:00 hrs, the system shut down due to a power fault. Plexus returned to the site on 28 September following notification of the system shutdown. The alarms indicating the shutdown were cleared from the system and the system was restarted. Plexus personnel remained at Fort Hamilton and checked the system for operation at 20:00 hrs and 23:30 hrs. Additional operational readings were collected on 29 September prior to departure from Fort Hamilton. During subsequent phone calls with the USACE project manager, it was determined that one additional week of operation and a final O&M visit would satisfy the Plexus's contractual obligations and permit a transition of the system to the incoming contractor. Plexus personnel mobilized for the final O&M visit with a representative from Shaw Environmental on 5 October. Personnel from the USACE Baltimore District were onsite as well to oversee the transition.

System groundwater samples were collected from the system on 5 October 2009 and submitted to CT Laboratories of Baraboo, Wisconsin under proper chain of custody documentation for hydrocarbon analysis. The laboratory report is included with this report as **Appendix C**. The final Plexus O&M visit was completed and the system was transitioned to the incoming contractor.

System Operation:

Following the installation of the thermal oxidizer and the completion of the efficiency tests performed on the system, the remediation system was started in full dual-phase mode. The system operated in full dual-phase mode for the entirety of the start-up period. Due to multiple issues arising during the start-up period, continuous system operation was not possible. Multiple system shutdowns were encountered due to oxidizer issues and one brown-out that resulted in the start-up period running from August 2009 to 5 October 2009. System operation data was collected during each of the weekly visits and is summarized in **Table 2**. Operation observations were also logged by the technical personnel during each visit. Field notes and data sheets for the period are included as **Appendix A.** Groundwater contours for select O&M visits are presented as **Figures 5-8**.

Initially, the system was incapable of extracting groundwater and LNAPL. Following the installation of aspiration holes, the system began extracting groundwater and LNAPL from the MPE wells. The system was operated at an average vacuum of 9" Hg. All vacuum measurements at the system blower were taken as "Hg. Vacuum readings at the MPE well heads were collected as "w.c. for lower vacuum results.

Vapor analytical samples were collected on 5 August 2009. The analytical reports are presented in Appendix A. The vapor samples collected were analyzed for Total Petroleum Hyrdocarbons – Gasoline Range Organics (TPH-GRO) and full suite TO-15 analysis, which includes BTEX (benzene, toluene, ethyl-benzene, and xylenes). The analytical data is summarized in **Table 3**. The regulatory limit for benzene has been included in the top row of the benzene column. Treatment efficiency of the vapors varies by compound, though average efficiency between TPH-GRO and BTEX compounds is 98.04% destruction efficiency. During each sampling event effluent vapor-phase benzene concentrations were below the regulatory limit of 5,272 micrograms per cubic meter (ug/m^3). As shown by the photo-ionization detector (PID) data collected from the system in **Table 2,** influent hydrocarbon concentrations have fluctuated while effluent concentrations have remained below the instrumentation detection limits during most events. Based on operational calculations using system air flow and data collected during each O&M event via PID, the system has recovered approximately 579.4 pounds (lbs) of hydrocarbons from the subsurface during the start-up period. The system discharged approximately 5.9 lbs of hydrocarbons during the same period from the thermal oxidizer.

The system recovered and treated approximately 245,440 gallons of groundwater during the month of O&M. Additionally, Plexus technical personnel noted visible LNAPL recovery within the monitoring well MW-5 drop tube. Small amounts of LNAPL (less than 0.1 foot) were noted within the oil/water separator (OWS) during the events. The considerable reduction in LNAPL thickness in monitoring wells MW-1 and MW-5 from 1.74 and 2.95 feet, respectively on 23 September to 0.71-feet and non-measurable, respectively on 5 October, and the small amounts of LNAPL within the OWS indicate significant LNAPL recovery by the system and LNAPL destruction by the thermal oxidizer.

Groundwater analytical samples were collected from the system during the 5 October 2009 transition event. Influent and effluent water samples were collected from the system. It should be noted that samples were collected while the system was cycling and not collected using stagnant water that may have been in the system piping for unknown periods of time. Each of the samples was analyzed for semi-volatile organics (SVOCs) and volatile organics (VOCs), BTEX (benzene, toluene, ethyl-benzene, and xylenes), and methyl-*tert.*-butyl ether (MTBE). Groundwater analytical results are shown in **Table 4**, with the regulatory limits presented with each analyte heading. As shown by the analytical data table, all compounds of concern were removed by the MPE system and the sample results show that the treated discharge is within the acceptable regulatory parameters for dissolved-phase VOCs.

Subsurface Influence and LNAPL Removal

As shown by the groundwater contour maps, the system efficiently effects the subsurface at a relatively low vacuum. The system has demonstrated considerable recovery of groundwater. Additionally, as of the 5 October system transition, the LNAPL has been removed from monitoring well MW-5. While the levels of LNAPL will continue to fluctuate during system

operations, removal of the LNAPL plume by the MPE system is anticipated. Monitoring well MW-1, which is located within 10 feet of multi-phase extraction well MPE-2, has also shown a marked decrease in LNAPL levels. LNAPL levels within monitoring well MW-1 have fluctuated following the system start-up and extended period of system operation, indicating that LNAPL is being extracted by the system and being drawn to the well by the system influence on the subsurface. Monitoring well MW-5 contained an average of 1.84 gallons of LNAPL during each of the groundwater gauging events since 11 April 2000. Following the system start-up and during the period of extended MPE system operation, LNAPL quantities in monitoring well MW-5 have averaged 0.73 gallons, with LNAPL undetected during three of the groundwater gauging events during the period.

As shown by the groundwater contour maps, artificial mounding is present at monitoring well MW-5, which is connected to the MPE system as a multi-phase extraction well. While casing elevation data for the other multi-phase extraction wells is not available, Plexus anticipates that similar influence would be observed. The artificial mounding is present in three of the four weeks shown in the figures. **Figure 5**, which does not show artificial mounding, shows depression of groundwater, likely due to initial groundwater extraction by the system.

The pilot test data collected by EA in 2005 indicates that approximately 90 inches of water vacuum at each well head is required to remove vapor from the site and generate the desired influences. With the exception of the 5 October O&M and system transition event, all of the multi-phase extraction wells demonstrated at least 90 inches of water vacuum at the well head. During the 5 October event, the system wells demonstrated a minimum of 81 inches of water vacuum. Despite the lower vacuum, the system complied with the remedial objective and continued to recover LNAPL, groundwater, and hydrocarbon vapors. During this event, monitoring well MW-5 did not contain LNAPL, indicating continued subsurface influence by the system and efficient LNAPL recovery at lower vacuums.

Conclusion

The system operated as designed following the installation of the aspiration holes in the drop tubes of the MPE wells. Recovery and destruction of LNAPL present at the site was achieved following the installation of the aspiration holes as well. The installation of the thermal oxidizer increased the efficiency of the remediation system and allowed the system to be operated at design capacity and within remedial objectives.

The approved Remedial Action Work Plan (RAWP) lists the remedial target for the system as removal of LNAPL, limited groundwater recovery, and soil vapor extraction from the associated smear zone. The Operations and Maintenance Manual states the primary objective of the multi phase extraction system to be removal of hydrocarbons form the smear zone and LNAPL through entrainment in the vapor stream. The RAWP and O&M Manual are enclosed with this report in PDF format on CDs as **Appendix E** and **Appendix** F, respectively. During each of the

O&M events, LNAPL levels were gauged and shown to be reduced by continuous operation of the system.

Following the addition of the aspiration holes and adjustment of all well head fittings, the system has achieved design vacuum as outlined in the RAWP. Additionally, though vacuum levels were below targeted levels during the 5 October 2009 O&M event, the system continued to recovery high vapor concentrations and LNAPL was not recorded in monitoring well MW-5, indicating continued LNAPL entrainment and extraction in the vapor stream.

A representative of the incoming contractor was onsite with Plexus personnel during the system start-up period. System walkthroughs and onsite operations training were given to the incoming contractor's representative. Additionally, during each visit, Plexus technical personnel provided guidance on optimal system set points. Due to the issues with the thermal oxidizer, additional training and guidance was provided regarding the operation of the unit. Following the transition of the system on 5 October 2009, Plexus personnel have remained available to the incoming contractor and USACE to provide technical guidance for system operation. As of the 5 October 2009 O&M event, the system was operating in accordance with approved design objectives and is ready for O&M by the incoming contractor.

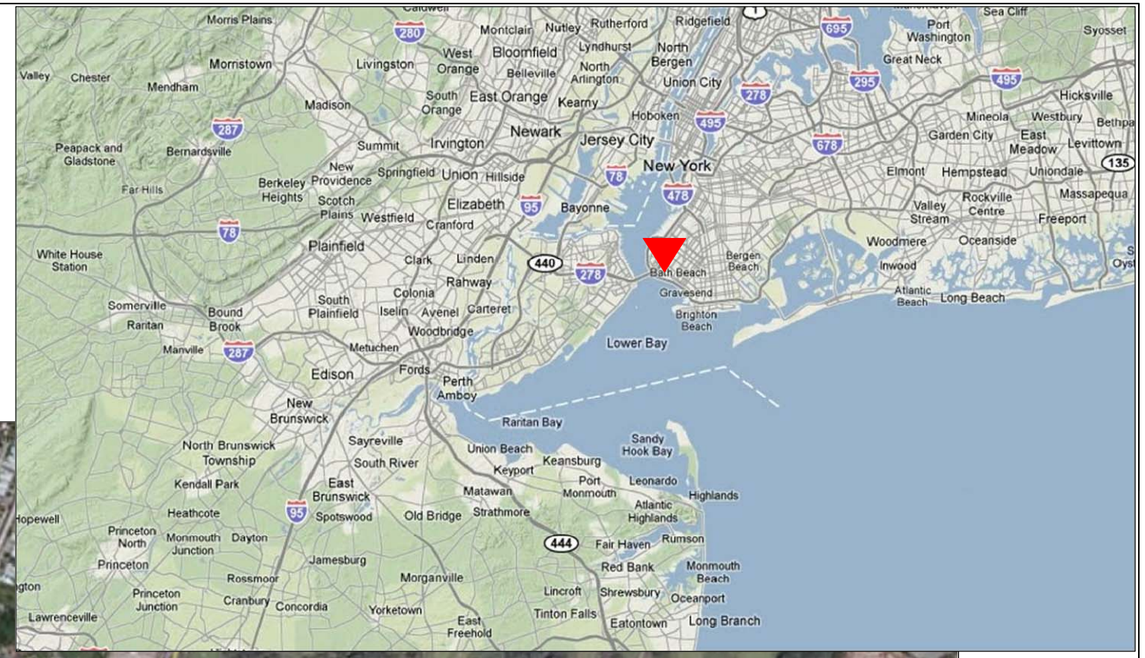
Should you have any questions regarding the status of the site or Plexus activities, please feel free to contact Mr. Adam Gregory or Mr. Matthew Fedowitz at 410-715-3865, extensions 109 and 122, respectively.

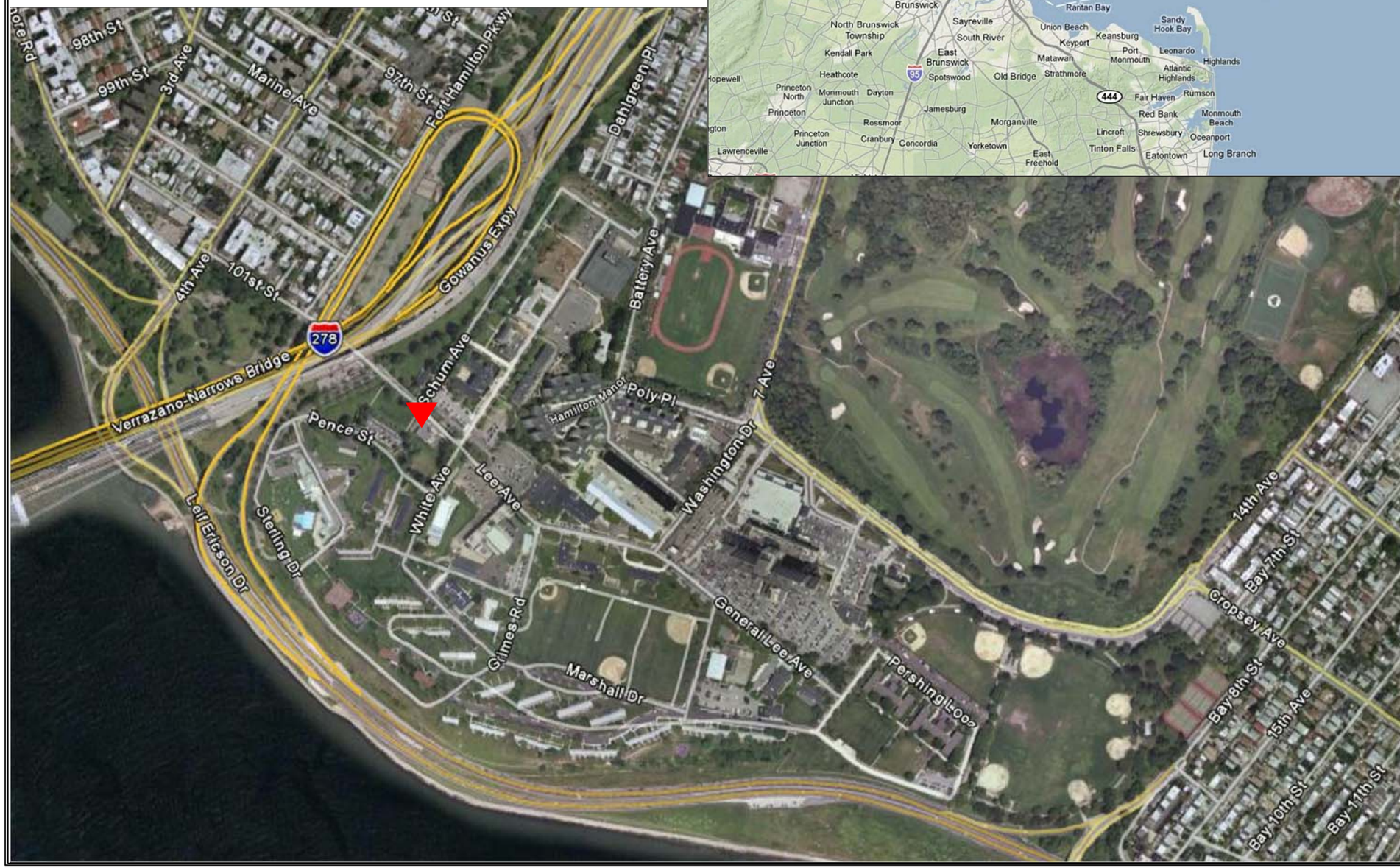
Respectfully submitted,

Adam Gregory
Operations Manager
Plexus Scientific Corporation

Matthew Fedowitz
Project Manager
Plexus Scientific Corporation

Figures





Legend

Site Location

N

FIGURE 1

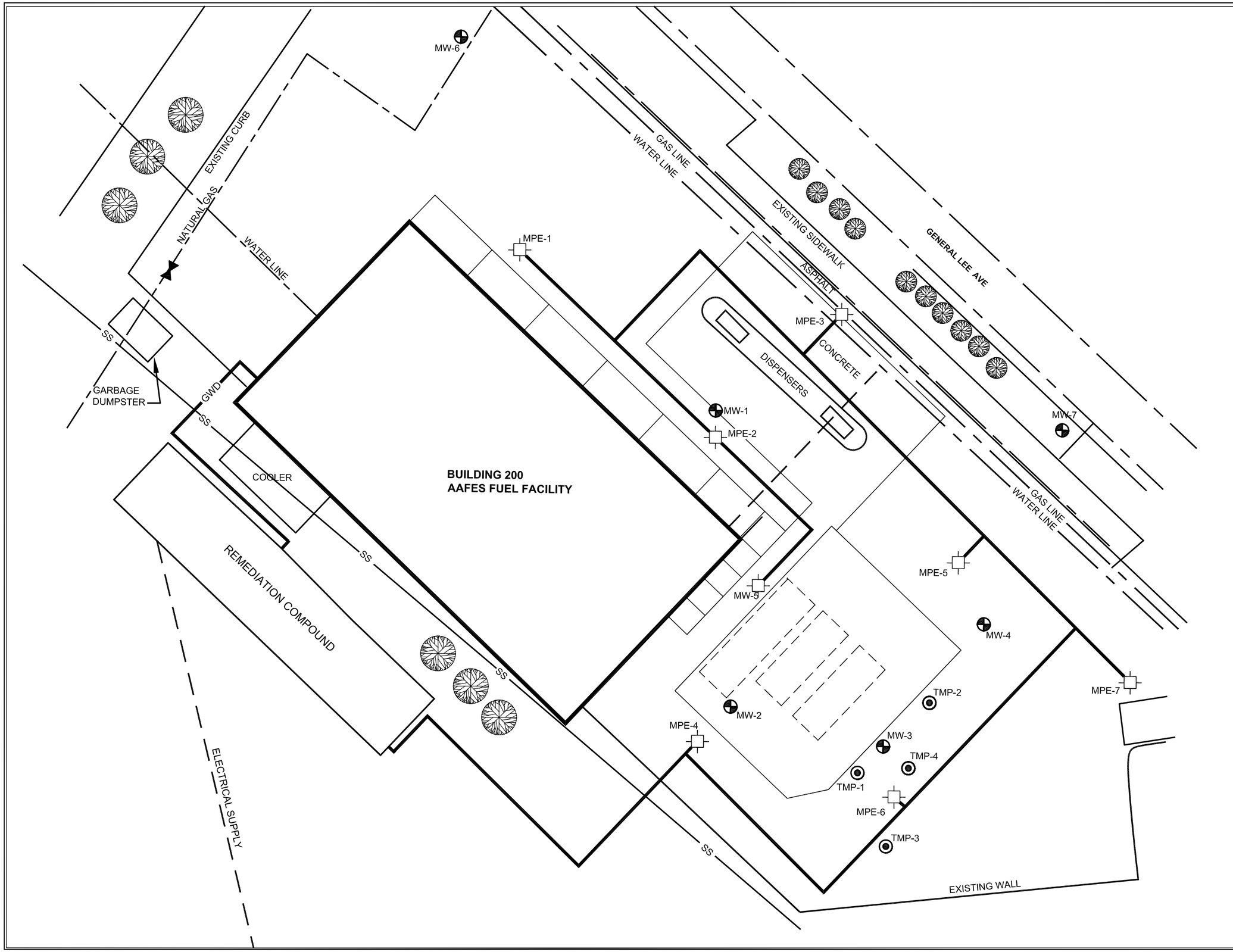
Site Location Map

AAFES Station, Fort Hamilton-New York

US ARMY CORPS OF ENGINEERS

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

PROJECT NO.	FILE NO.
8095-06F	FIGURE 1



Legend

- Existing Monitoring Well Location
- Temporary Monitoring Point
- MPE Extraction Well
- SS — Sanitary Sewer Line
- GWD — Treated Groundwater Discharge
- MPE Header Pipe
- Buried Valve
- Underground Storage Tanks

Note:
Monitoring well MW-5 was converted to a multi-phase extraction well.

N

Scale

0' 12.5' 25'

FIGURE 2

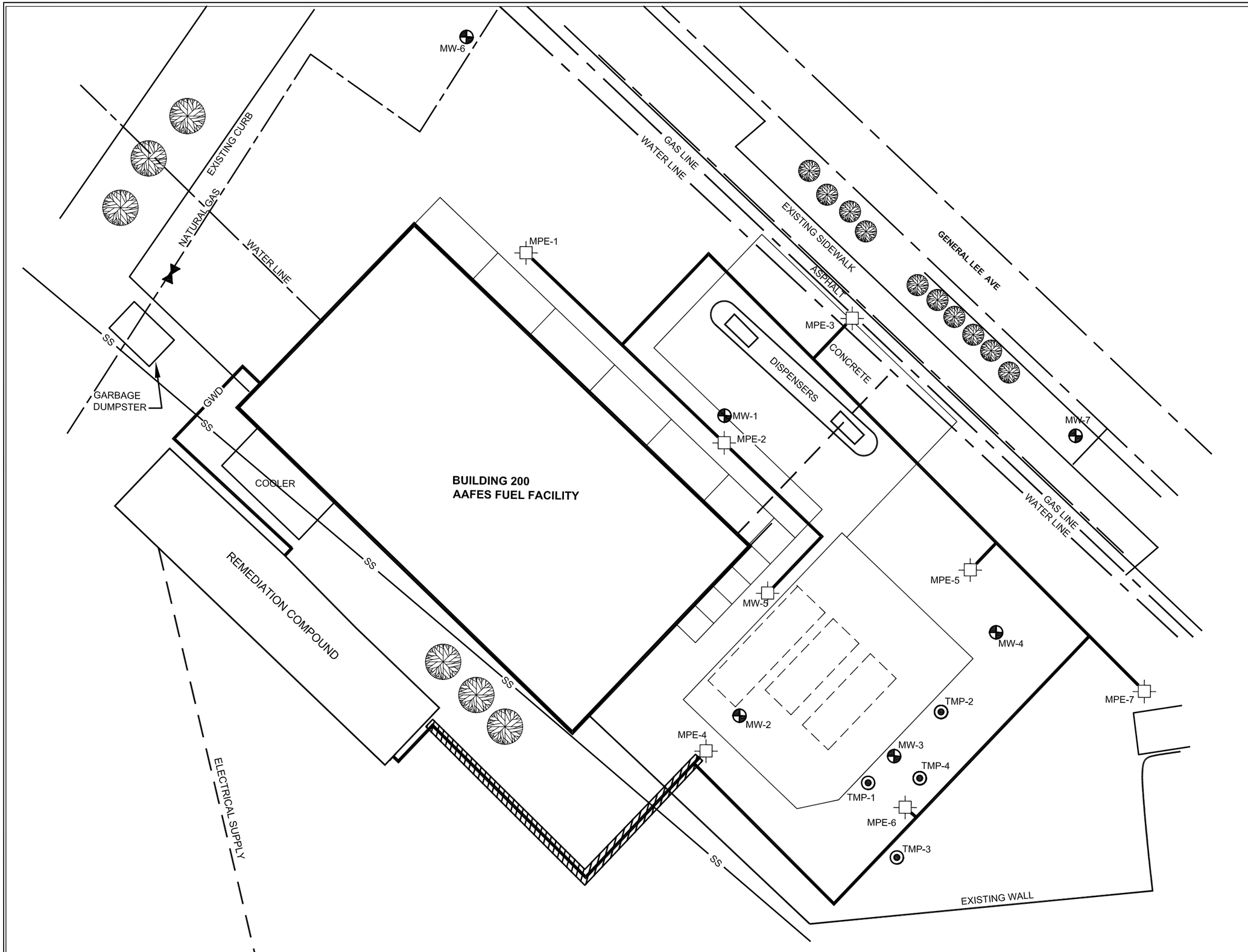
Site Map

AAFES Station, Fort Hamilton-New York

US ARMY CORPS OF ENGINEERS

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

PROJECT NO.	FILE NO.
8095-06F	FIGURE 2



Legend

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- SS — Sanitary Sewer Line
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- Buried Valve
- Underground Storage Tanks
- Extent of Piping Investigation with Pipe Camera

Note:
Monitoring well MW-5 was converted to a multi-phase extraction well.

N

Scale
0' 12.5' 25'

FIGURE 3

Extent of Piping Investigation

AAFES Station, Fort Hamilton-New York

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FLEXUS ENVIRONMENTAL

PROJECT NO.	FILE NO.
8095–06F	FIGURE 3

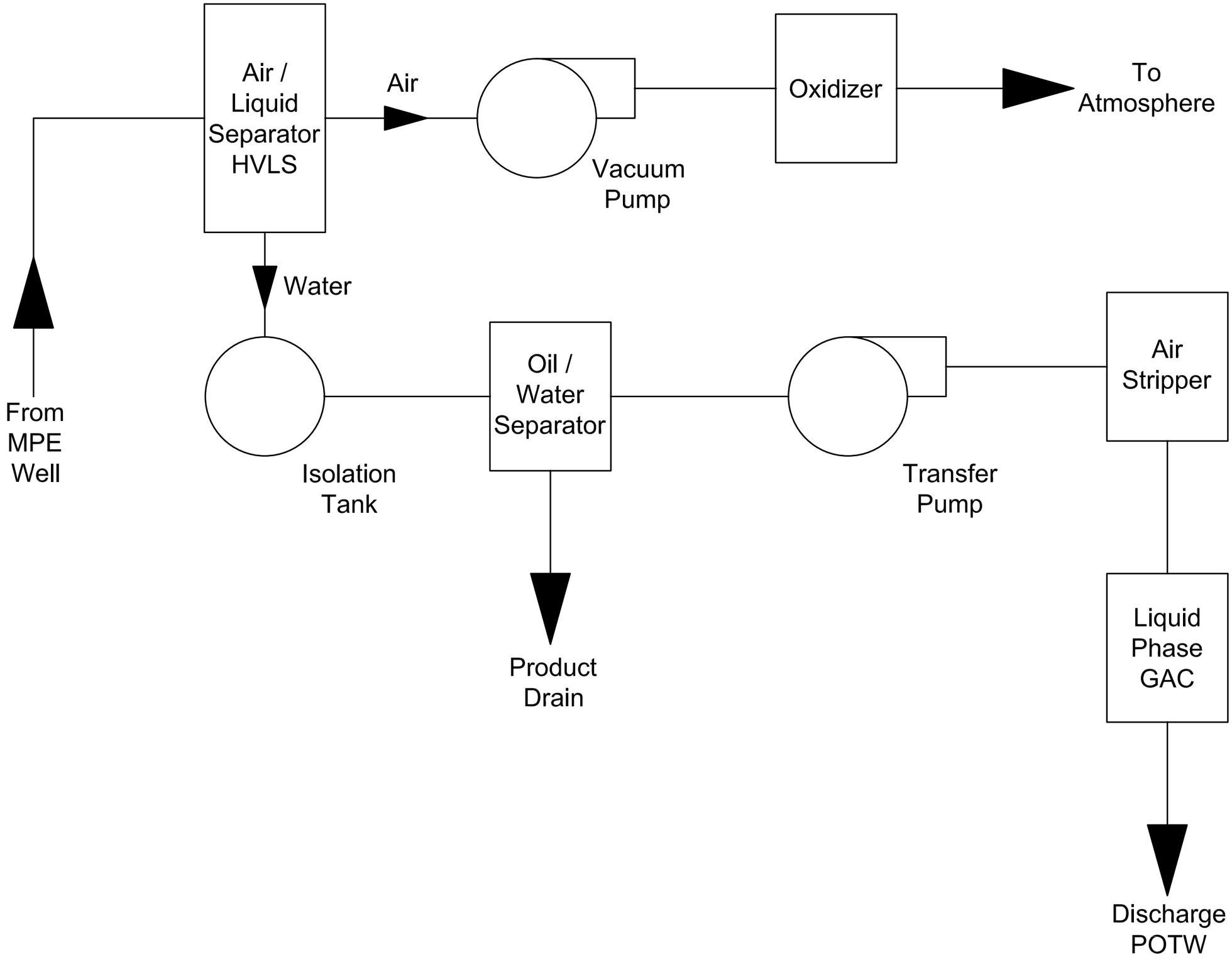


FIGURE 4

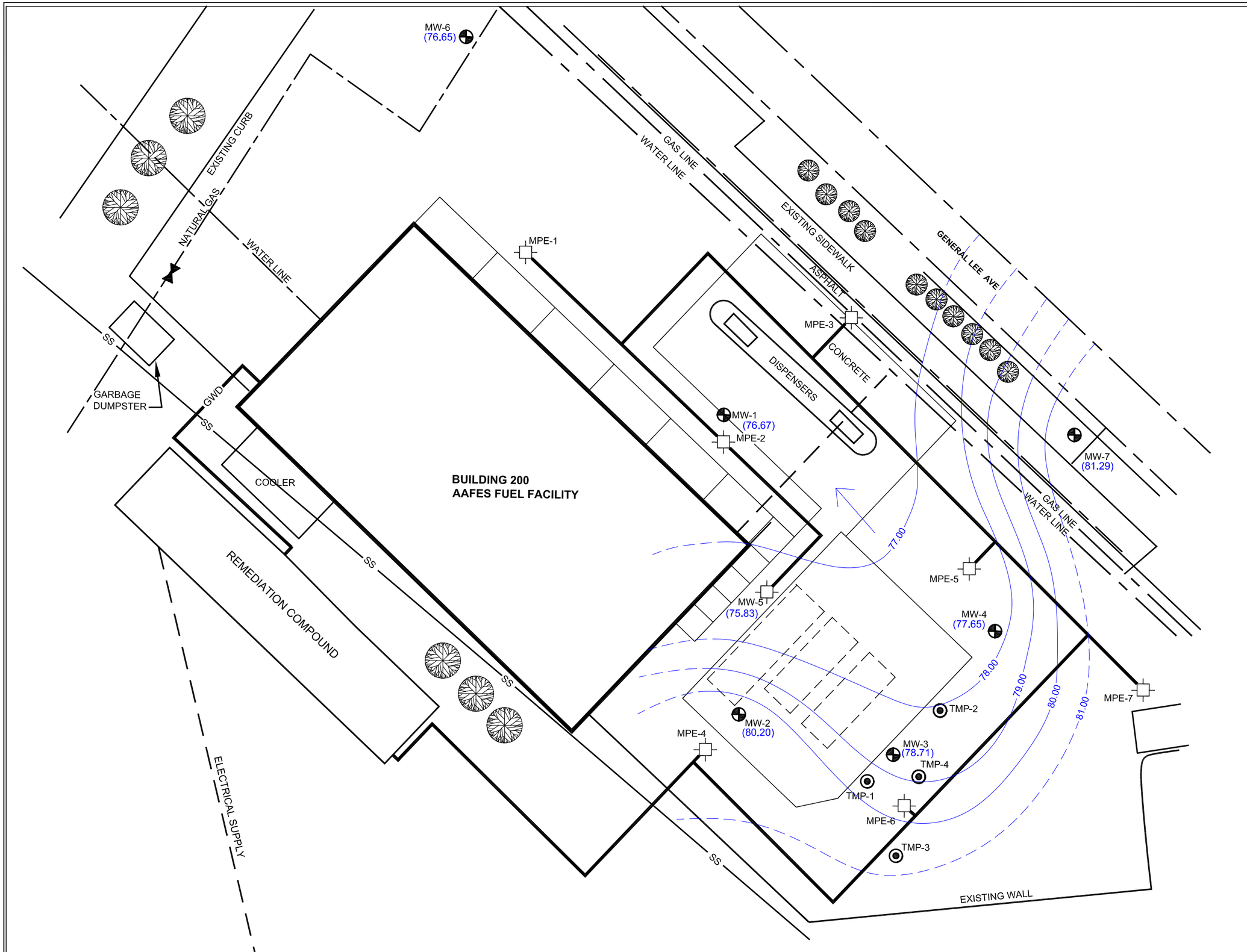
Multi-Phase Extraction System Process Diagram

AAFES Station, Fort Hamilton-New York

US ARMY CORPS OF ENGINEERS

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

PROJECT NO.	FILE NO.
8095–06F	FIGURE 4



Legend

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- Buried Valve
- Underground Storage Tanks
- Inferred Groundwater Contours
- Groundwater Contours
- (76.67) Groundwater Elevation
- Groundwater Flow Direction

Note:
MW-5 Data was not consistent with other well data due to applied vacuum. This data was not included in the groundwater contour.

Monitoring well MW-5 was converted to a multi-phase extraction well.

N

Scale

0' 12.5' 25'

FIGURE 5

Groundwater Contour Map
18 August 2009

AAFES Station, Fort Hamilton-New York

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BALTIMORE DISTRICT

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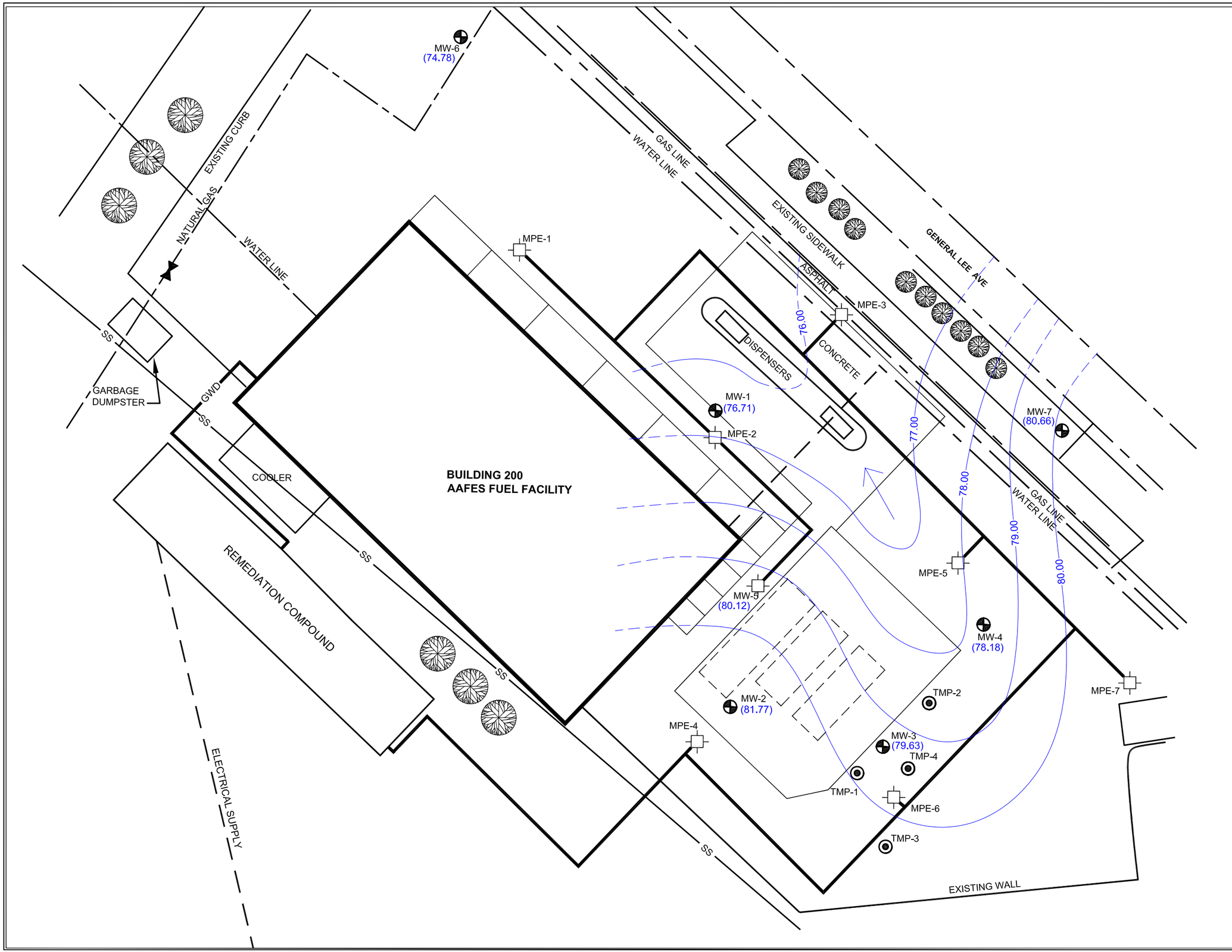
PROJECT NO.	FILE NO.
8095-06F	FIGURE 5



Legend

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- Inferred Groundwater Contours
- Groundwater Contours
- (76.67) Groundwater Elevation
- Groundwater Flow Direction

Note:
MW-5 Data was not consistent with other well data due to applied vacuum. This data was not included in the ground water contour.

Monitoring well MW-5 was converted to a multi-phase extraction well.

N

Scale

0' 12.5' 25'

FIGURE 6

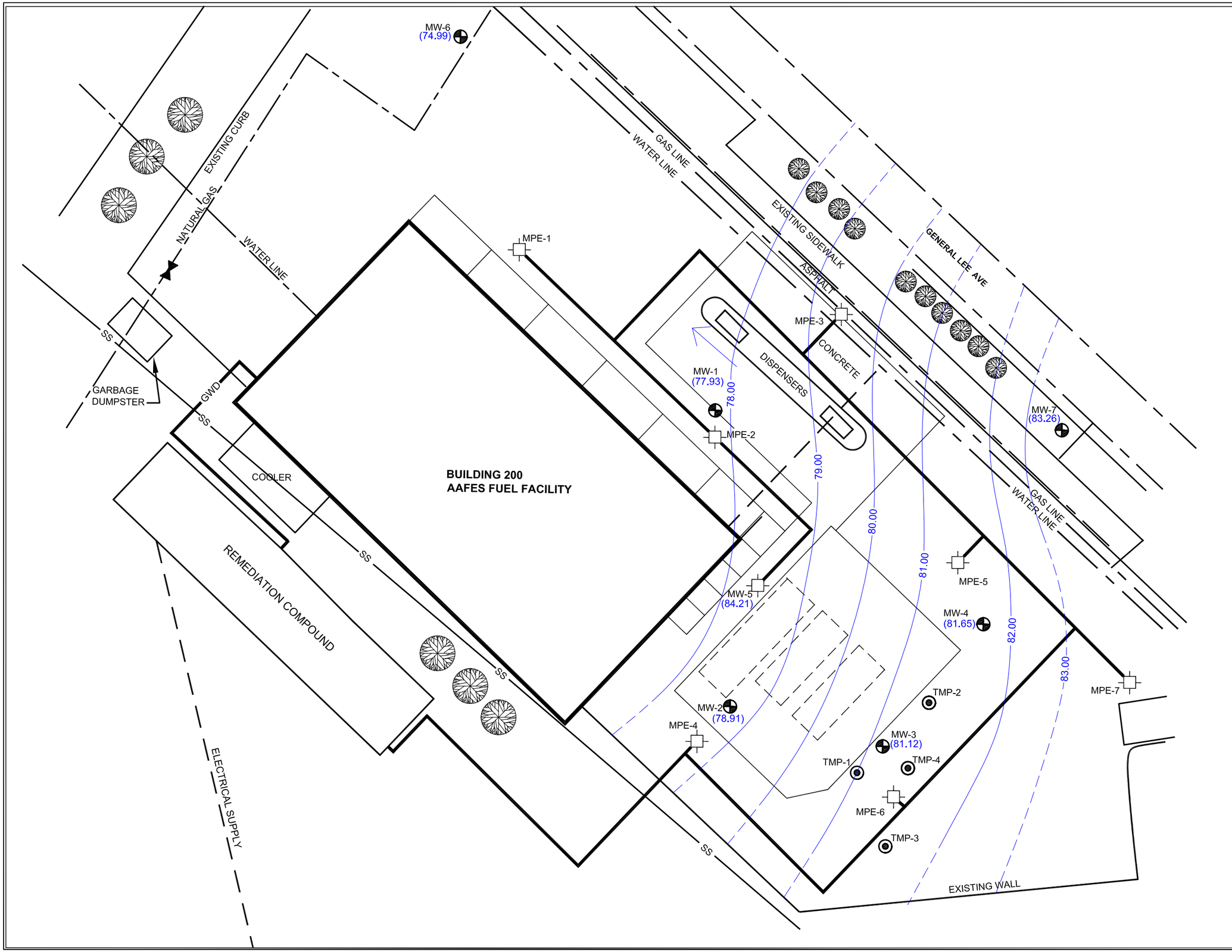
Groundwater Contour Map
26 August 2009

AAFES Station, Fort Hamilton-New York

US ARMY CORPS OF ENGINEERS

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

PROJECT NO.	FILE NO.
8095-06F	FIGURE 6



Legend

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- MPE Header Pipe
- Buried Valve
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- Inferred Groundwater Contours
- Groundwater Contours
- (76.67) Groundwater Elevation
- Groundwater Flow Direction

Note:
MW-5 Data was not consistent with other well data due to applied vacuum. This data was not included in the ground water contour.

Monitoring well MW-5 was converted to a multi-phase extraction well.

N

Scale

0' 12.5' 25'

FIGURE 7

Groundwater Contour Map
02 September 2009

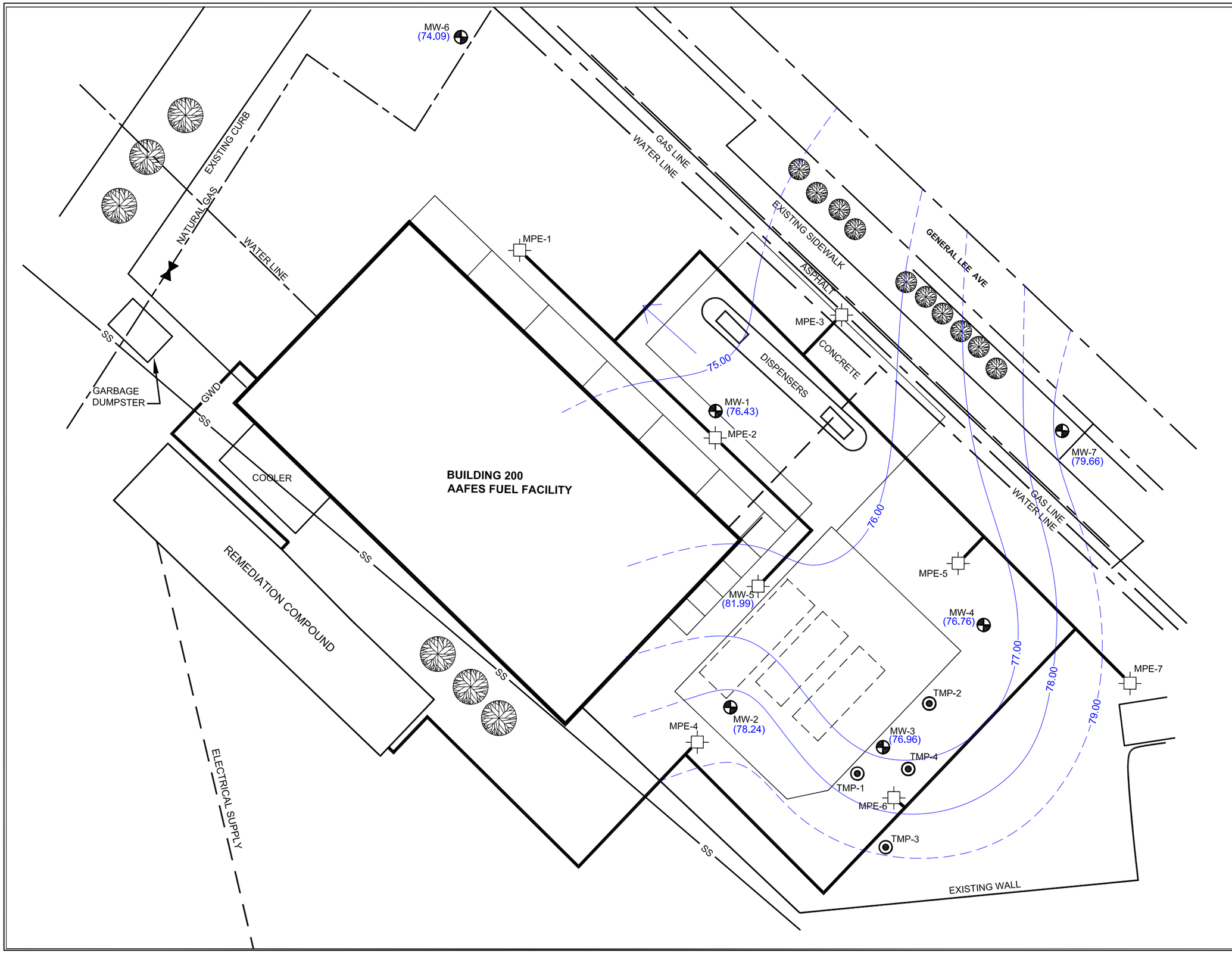
AAFES Station, Fort Hamilton-New York

US ARMY CORPS OF ENGINEERS

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

FLEXUS ENGINEERING

PROJECT NO.	FILE NO.
8095-06F	FIGURE 7



Legend

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- Inferred Groundwater Contours
- Groundwater Contours
- (76.67) Groundwater Elevation
- Groundwater Flow Direction

Note:
MW-5 Data was not consistent with other well data due to applied vacuum. This data was not included in the ground water contour.

Monitoring well MW-5 was converted to a multi-phase extraction well.

N

Scale

0' 12.5' 25'

FIGURE 8

Groundwater Contour Map
5 October 2009

AAFES Station, Fort Hamilton-New York

US ARMY CORPS OF ENGINEERS

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

PLEXUS

PROJECT NO.	FILE NO.
8095-06F	FIGURE 8

Tables

TABLE 1: GROUNDWATER ELEVATION TABLE

Facility Name: **Ft. Hamilton AAFES**
200 General Lee Ave
Brooklyn, NY, NY

All Measurements = Feet
No Data = Blank

WELL NO.	MW-1								MW-2							
DIAMETER	4"								4"							
TOC ELEVATION (ft.)	98.93								99.44							
DATE	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC
04/11/00	76.36	76.37	22.57	22.55	0.02	-	-	-	77.05	-	22.39	-	-	-	-	-
05/05/00	77.15	77.30	21.78	21.57	0.21	-	-	-	78.10	-	21.34	-	-	-	-	-
07/09/02	72.29	73.68	26.64	24.73	1.91	-	-	-	72.85	74.29	26.59	24.61	1.98	-	-	-
01/21/03	78.58	78.62	20.35	20.30	0.05	-	-	-	81.59	-	17.85	-	-	-	-	-
08/06/07	77.02	78.37	21.91	20.06	1.85	-	-	-	80.30	-	19.14	-	-	-	-	-
01/01/08	-	-	-	-	-	-	-	-	77.58	-	21.86	-	-	-	-	-
07/16/08	76.48	77.25	22.45	21.39	1.06	-	-	-	78.25	-	21.19	-	-	-	-	-
10/01/08	76.15	76.67	22.78	22.06	0.72	-	-	-	77.92	-	21.52	-	-	-	-	-
10/10/08	78.90	-	20.03	-	-	-	-	-	79.44	-	20.00	-	-	-	-	-
10/16/08	76.78	-	22.15	-	-	-	-	-	-	-	-	-	-	-	-	-
10/24/08	76.48	-	22.45	-	-	-	-	-	-	-	-	-	-	-	-	-
10/31/08	77.39	-	21.54	-	-	-	-	-	77.09	-	22.35	-	-	-	-	-
07/22/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/28/09	78.27	79.41	20.66	22.23	1.57	215	5%	-	78.04	-	21.40	-	-	257	4%	-
08/05/09	78.29	79.42	20.64	22.19	1.55	173	6%	-	78.10	-	21.34	-	-	251	4%	-
08/05/09	78.15	79.04	20.78	22.00	1.22	53	2%	-	78.25	-	21.19	-	-	70	2%	-
08/13/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/18/09	76.67	77.88	22.26	20.60	1.66	50	-	-	80.20	-	19.24	-	-	0	-	-
08/26/09	76.71	77.63	22.22	20.96	1.26	-	-	-	81.77	-	17.67	-	-	-	-	-
09/02/09	77.61	77.93	21.32	21.76	0.44	1	1%	-	78.91	-	20.53	-	-	178	3%	-
09/23/09	76.88	78.15	22.05	20.31	1.74	-	-	-	-	-	-	-	-	-	-	-
10/05/09	75.91	76.43	23.02	22.31	0.71	-	-	-	78.24	-	21.20	-	-	-	-	-

WELL NO.	MW-3								MW-4							
DIAMETER	4"								4"							
TOC ELEVATION (ft.)	99.00								98.10							
DATE	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC
04/11/00	77.93	-	21.07	-	-	-	-	-	77.19	77.39	20.91	20.63	0.28	-	-	-
05/05/00	79.06	-	19.94	-	-	-	-	-	78.05	78.51	20.05	19.42	0.63	-	-	-
07/09/02	73.78	73.80	25.22	25.19	0.03	-	-	-	73.86	-	24.24	-	-	-	-	-
01/21/03	81.60	-	17.40	-	-	-	-	-	80.33	-	17.77	-	-	-	-	-
08/06/07	81.52	-	17.48	-	-	-	-	-	80.69	80.85	17.41	17.19	0.22	-	-	-
01/01/08	78.16	-	20.84	-	-	-	-	-	-	-	-	-	-	-	-	-
07/16/08	78.35	78.36	20.65	20.64	0.01	-	-	-	79.03	79.30	19.07	18.70	0.37	-	-	-
10/01/08	79.69	-	19.31	-	-	-	-	-	78.07	78.55	20.03	19.37	0.66	-	-	-
10/10/08	79.19	-	19.81	-	-	-	-	-	78.20	78.42	19.90	19.60	0.30	-	-	-
10/16/08	78.97	-	20.03	-	-	-	-	-	78.40	-	19.70	-	-	-	-	-
10/24/08	77.75	-	21.25	-	-	-	-	-	77.60	-	20.50	-	-	-	-	-
10/31/08	80.59	-	18.41	-	-	-	-	-	78.81	78.84	19.29	19.25	0.04	-	-	-
07/22/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/28/09	83.70	-	15.30	-	-	183	5%	-	82.99	-	15.11	-	-	0	2%	-
08/05/09	83.70	-	15.30	-	-	175	5%	-	83.00	-	15.10	-	-	0	3%	-
08/05/09	83.70	-	15.30	-	-	67	4%	-	82.99	-	15.11	-	-	0	2%	-
08/13/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/18/09	78.71	-	20.29	-	-	0	-	-	77.65	-	20.45	-	-	-	-	-
08/26/09	79.63	-	19.37	-	-	-	-	-	78.18		19.92	-	-	-	-	-
09/02/09	81.12	-	17.88	-	-	4	2%	-	81.65	-	16.45	-	-	0	6%	-
09/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/05/09	76.96	-	22.04	-	-	-	-	-	76.76	-	21.34	-	-	-	-	-

WELL NO.	MW-5								MW-6							
DIAMETER	4"								4"							
TOC ELEVATION (ft.)	98.74								99.10							
DATE	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC
04/11/00	75.40	77.27	23.34	20.78	2.56	-	-	-	-	-	-	-	-	-	-	-
05/05/00	74.87	78.26	23.87	19.22	4.65	-	-	-	-	-	-	-	-	-	-	-
07/09/02	74.04	75.79	24.70	22.30	2.40	-	-	-	-	-	-	-	-	-	-	-
01/21/03	75.06	79.60	23.68	17.45	6.23	-	-	-	80.15	-	18.95	-	-	-	-	-
08/06/07	75.83	79.31	22.91	18.13	4.78	-	-	-	75.09	-	24.01	-	-	-	-	-
01/01/08	-	-	-	-	-	-	-	-	73.39	-	25.71	-	-	-	-	-
07/16/08	78.23	78.52	20.51	20.11	0.40	-	-	-	74.02	-	25.08	-	-	-	-	-
10/01/08	75.83	76.81	22.91	21.56	1.35	-	-	-	73.10	-	26.00	-	-	-	-	-
10/10/08	78.84	79.54	19.90	18.94	0.96	-	-	-	74.51	-	24.59	-	-	-	-	-
10/16/08	80.79	82.14	17.95	16.10	1.85	-	-	-	-	-	-	-	-	-	-	-
10/24/08	80.69	81.93	18.05	16.35	1.70	-	-	-	-	-	-	-	-	-	-	-
10/31/08	77.54	78.26	21.20	20.21	0.99	-	-	-	72.88	-	26.22	-	-	-	-	-
07/22/09	76.31	80.79	22.43	16.29	6.14	-	-	-	-	-	-	-	-	-	-	-
07/23/09	-	-	-	-	-	-	-	-85	-	-	-	-	-	-	-	-
07/28/09	76.44	-	22.30	-	-	478	8%	-	75.71	-	23.39	-	-	0	0%	-
08/05/09	76.46	76.78	22.28	21.84	0.44	439	7%	-	75.71	-	23.39	-	-	0	0%	-
08/05/09	76.44	76.73	22.30	21.90	0.40	129	6%	-	75.72	-	23.38	-	-	0	0%	-
08/13/09	79.42	80.57	19.32	17.74	1.58	-	-	-75	-	-	-	-	-	-	-	-
08/18/09	-	-	-	-	-	-	-	-100	76.65	-	22.45	-	-	-	-	-
08/26/09	79.96	80.12	18.78	18.56	0.22	-	-	-125	74.78	-	24.32	-	-	-	-	-
09/02/09	84.21	-	14.53	-	-	35	2%	-	74.99	-	24.11	-	-	0	0%	-
09/23/09	76.98	79.13	21.76	18.81	2.95	-	-	-	-	-	-	-	-	-	-	-
10/05/09	81.99	-	16.75	-	-	-	-	-81	74.09	-	25.01	-	-	-	-	-

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WELL NO.	MW-7								MPE-1							
DIAMETER	4"								4"							
TOC ELEVATION (ft.)	99.47								-							
DATE	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC
04/11/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/05/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/09/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/21/03	75.72	-	23.75	-	-	-	-	-	-	-	-	-	-	-	-	-
08/06/07	80.21	-	19.26	-	-	-	-	-	-	-	-	-	-	-	-	-
01/01/08	77.95	-	21.52	-	-	-	-	-	-	-	25.60	-	-	-	-	-
07/16/08	80.59	-	18.88	-	-	-	-	-	-	-	24.81	-	-	-	-	-
10/01/08	79.30	-	20.17	-	-	-	-	-	-	-	25.68	-	-	-	-	-
10/10/08	-	-	-	-	-	-	-	-	-	-	19.21	-	-	-	-	-
10/16/08	-	-	-	-	-	-	-	-	-	-	18.75	-	-	-	-	-
10/24/08	-	-	-	-	-	-	-	-	-	-	19.21	-	-	-	-	-
10/31/08	80.13	-	19.34	-	-	-	-	-	-	-	25.42	-	-	-	-	-
07/22/09	-	-	-	-	-	-	-	-	-	-	22.98	-	-	-	-	-
07/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-150
07/28/09	83.56	-	15.91	-	-	0	1%	-	-	-	23.03	-	-	176	3%	-
08/05/09	83.57	-	15.90	-	-	0	1%	-	-	-	23.01	-	-	120	3%	-
08/05/09	83.56	-	15.91	-	-	0	1%	-	-	-	23.03	-	-	35	2%	-
08/13/09	-	-	-	-	-		-	-	-	-	23.42	-	-	-	-	-115
08/18/09	81.29	-	18.18	-	-	0.65	-	-	-	-	-	-	-	-	-	-100
08/26/09	80.66	-	18.81	-	-	-	-	-	-	-	23.85	-	-	-	-	-115
09/02/09	83.26	-	16.21	-	-	0	0%	-	-	-	23.42	-	-	0	0%	-
09/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/05/09	79.66	-	19.81	-	-	-	-	-	-	-	23.08	-	-	-	-	-81

WELL NO.	MPE-2								MPE-3							
DIAMETER	4"								4"							
TOC ELEVATION (ft.)	-								-							
DATE	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC
04/11/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/05/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/09/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/21/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/06/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/01/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/16/08	-	-	20.81	-	-	-	-	-	-	-	19.78	TRACE	TRACE	-	-	-
10/01/08	-	-	21.18	-	-	-	-	-	-	-	20.45	-	-	-	-	-
10/10/08	-	-	20.05	-	-	-	-	-	-	-	12.65	-	-	-	-	-
10/16/08	-	-	15.90	-	-	-	-	-	-	-	12.65	-	-	-	-	-
10/24/08	-	-	16.60	-	-	-	-	-	-	-	-	-	-	-	-	-
10/31/08	-	-	21.52	-	-	-	-	-	-	-	14.61	-	-	-	-	-
07/22/09	-	-	17.23	-	-	-	-	-	-	-	16.10	-	-	-	-	-
07/23/09	-	-	-	-	-	-	-	-145	-	-	-	-	-	-	-	-145
07/28/09	-	-	17.43	-	-	452	4%	-	-	-	16.31	-	-	18	0%	-
08/05/09	-	-	17.40	-	-	376	4%	-	-	-	16.28	-	-	20	0%	-
08/05/09	-	-	17.41	-	-	106	2%	-	-	-	16.31	-	-	15	0%	-
08/13/09	-	-	17.84	-	-	-	-	-110	-	-	16.88	-	-	-	-	-120
08/18/09	-	-	-	-	-	-	-	-95	-	-	-	-	-	-	-	-95
08/26/09	-	-	21.61	-	-	-	-	-100	-	-	17.63	-	-	-	-	-125
09/02/09	-	-	19.64	-	-	29	1%	-	-	-	18.20	-	-	0	0%	-
09/23/09	-	-	19.24	-	-	-	-	-	-	-	-	-	-	-	-	-
10/05/09	-	-	21.91	-	-	-	-	-88	-	-	18.02	-	-	-	-	-95

WELL NO.	MPE-4								MPE-5							
DIAMETER	4"								4"							
TOC ELEVATION (ft.)	-								-							
DATE	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC
04/11/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/05/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/09/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/21/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/06/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/01/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/16/08	-	-	21.02	-	-	-	-	-	-	-	18.75	18.70	0.05	-	-	-
10/01/08	-	-	21.36	-	-	-	-	-	-	-	-	-	-	-	-	-
10/10/08	-	-	19.60	-	-	-	-	-	-	-	-	-	-	-	-	-
10/16/08	-	-	13.50	-	-	-	-	-	-	-	-	-	-	-	-	-
10/24/08	-	-	16.30	14.20	-	-	-	-	-	-	13.90	-	-	-	-	-
10/31/08	-	-	22.01	-	-	-	-	-	-	-	15.10	-	-	-	-	-
07/22/09	-	-	17.05	-	-	-	-	-	-	-	14.82	-	-	-	-	-
07/23/09	-	-	-	-	-	-	-	-145	-	-	-	-	-	-	-	-150
07/28/09	-	-	17.20	-	-	51	0%	-	-	-	15.15	-	-	143	3%	-
08/05/09	-	-	17.15	-	-	62	0%	-	-	-	15.13	-	-	173	2%	-
08/05/09	-	-	17.20	-	-	15	0%	-	-	-	15.15	-	-	52	0%	-
08/13/09	-	-	17.51	-	-	-	-	-125	-	-	15.56	-	-	-	-	-115
08/18/09	-	-	-	-	-	-	-	-100	-	-	-	-	-	-	-	-100
08/26/09	-	-	18.02	-	-	-	-	-105	-	-	18.63	-	-	-	-	-110
09/02/09	-	-	18.41	-	-	0	0%	-	-	-	17.97	-	-	0	0%	-
09/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/05/09	-	-	18.88	-	-	-	-	-95	-	-	18.38	-	-	-	-	-101

WELL NO.	MPE-6								MPE-7							
DIAMETER	4"								4"							
TOC ELEVATION (ft.)	-								-							
DATE	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC	ELEV	ELEV*	DTW	FP	LNAPL	PID	LEL	VAC
04/11/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
05/05/00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07/09/02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/21/03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/06/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
01/01/08	-	-	-	-	-	-	-	-	-	-	18.54	-	-	-	-	-
07/16/08	-	-	19.58	-	-	-	-	-	-	-	18.88	-	-	-	-	-
10/01/08	-	-	19.75	-	-	-	-	-	-	-	18.77	-	-	-	-	-
10/10/08	-	-	12.93	-	-	-	-	-	-	-	12.47	-	-	-	-	-
10/16/08	-	-	13.70	-	-	-	-	-	-	-	-	-	-	-	-	-
10/24/08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/31/08	-	-	18.31	-	-	-	-	-	-	-	16.01	-	-	-	-	-
07/22/09	-	-	15.02	-	-	-	-	-	-	-	13.45	-	-	-	-	-
07/23/09	-	-	-	-	-	-	-	-145	-	-	-	-	-	-	-	-150
07/28/09	-	-	15.20	-	-	43	0%	-	-	-	13.31	-	-	0	0%	-
08/05/09	-	-	15.20	-	-	15	0%	-	-	-	13.36	-	-	0	0%	-
08/05/09	-	-	15.20	-	-	0	0%	-	-	-	13.31	-	-	0	0%	-
08/13/09	-	-	15.62	-	-	-	-	-125	-	-	14.01	-	-	-	-	-115
08/18/09	-	-	-	-	-	-	-	-100	-	-	-	-	-	-	-	-90
08/26/09	-	-	18.71	-	-	-	-	-105	-	-	17.30	-	-	-	-	-105
09/02/09	-	-	18.19	-	-	0	0%	-	-	-	16.36	-	-	0	0%	-
09/23/09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10/05/09	-	-	18.11	-	-	-	-	-95	-	-	18.04	-	-	-	-	-81

Notes: *** = hydraulic head corrected to take into account the density of automotive gasoline (0.729 g/ml)**
"-" = Data not available/LNAPL Not Detected

Notes: *** = hydraulic head corrected to take into account the density of automotive gasoline (0.729 g/ml)**
"-" = Data not available/LNAPL Not Detected

TABLE 2: MPE SYSTEM PERFORMANCE SUMMARY

Facility Name: **Ft. Hamilton AAFES**

System Status		
Code	**Arrive**	**Depart**
1	on	on
2	off	on
3	off	off
4	on	off

Site Visit Date	Days Between Site Visits	Days Since Startup	Hours In Period	Hours of Operation (period)	Total Hours of Operation (cumulative)	Percent Run Time (period)	Percent Run Time (cumulative)	MPE System Status
10/01/08	0	0	0	0	0			2
10/10/08	10	10	240	240	240	100%	100%	1
10/16/08	6	16	144	144	384	100%	100%	1
10/24/08	8	24	192	192	576	100%	100%	1
10/31/08	7	31	168	168	744	100%	100%	1
07/28/09	0	0	0	0	NA	NA	NA	3
08/05/09	7	0	168	0	NA	NA	NA	2
08/13/09	8	8	192	NA	1,137	NA	NA	2
08/19/09	6	14	144	144	1,279	100%	100%	1
08/26/09	7	21	168	168	1,446	100%	100%	1
09/02/09	7	28	168	168	1,614	100%	100%	1
09/09/09	7	35	168	43	1,657	100%	100%	3
09/23/09	14	49	336	0	1,657	15%	53%	2
09/28/09	5	54	120	2	1,659	4%	51%	2
09/29/09	1	55	24	24	1,679	100%	52%	1
10/05/09	6	61	144	144	1,823	100%	57%	1

Site Visit	Days Between	Cumulative	System performance										
Date	Visits	Days	System Vac ("Hg)	Blower Flow (scfm)	Blower Temp (F)	Oxidizer Inlet Temp (F)	Oxidizer Outlet Temp (F)	Blower Discharge Concentration (ppm)	Oxidizer Discharge Concentration (ppm)	Mass Recovery (lbs)	Mass Discharged (lbs)	Totalizer (gal)	Gallons Discharged During Period
10/01/08	0	0	0	338	0	0	0	0	0	NA	NA	NA	
10/10/08	10	10	-6	338	138	602	649	196	0	95.4	0.0	NA	
10/16/08	6	16	-6	338	138	598	658	170	0	49.6	0.0	NA	
10/24/08	8	24	-6	338	136	598	633	145	0	56.5	0.0	NA	
10/31/08	7	31	-6	338	137	592	658	190	0	64.7	0.0	NA	
07/28/09	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
08/05/09	7	0	-8	457	167	1,455	1,427	1,935	15.00	NA	NA	330.9	330.9
08/13/09	8	8	-9	475	168	1,400	1,251	162	0.00	NA	NA	568.5	237.6
08/19/09	6	14	-9	474	162	1,399	1,240	338	0.00	137.0	0.0	-	-
08/26/09	7	21	-10	469	175	1,422	1,243	425	0.00	202.6	0.0	-	-
09/02/09	7	28	-9	473	165	1,415	1,321	456	12.00	219.8	5.7	-	-
09/09/09	7	35	-9	478	152	1,422	1,300	521	16.00	7.6	0.2	-	-
09/23/09	14	49	-9	478	150	1,427	1,240	91	0.00	0.0	0.0	24134.1	23565.6
09/28/09	5	54	-9.5	469	175	1,406	1,245	120	0.00	0.7	0.0	24278.1	144
09/29/09	1	55	-9.5	468	180	1,420	1,238	137	0.00	0.8	0.0	25112.5	834.4
10/05/09	6	61	-9.5	470	172	1,416	1,238	162	0.00	10.9	0.0	29446.4	4333.9

TABLE 3: MPE SYSTEM ANALYTICAL SUMMARY

Vapor Phase

Facility Name: **Fort Hamilton AAFES**

Sample Location	Date	Pressure ("H20)	OVA Pre-Carbon (ppm)	Average Flow (scfm)	Benzene (5272 ug/m3)	Toluene	Ethyl Benzene	Total Xylenes	Total VOA	TPH GRO
Air Stripper	3/15/2006	-	-	-	<0.27	<0.19	<0.19	<0.5	<1.15	<1.85
Vac Pump (Mid)		-	-	-	<0.27	<0.19	<0.19	<0.5	<1.15	<1.85
Blower Influent	8/5/2009	-	-	471	10,000	140,000	35,000	214,000	399,000	5,900
Oxidizer Effluent		-	-	471	860.00	520.00	24.00	91.00	1,495.00	15.00

Analytical Results = ppb

<#= Non-Detect

Not Sampled = NS

TABLE 4: MPE SYSTEM ANALYTICAL SUMMARY

Facility Name: **Fort Hamilton AAFES**

Sample Location	Date	Pressure ("H20)	OVA Pre-Carbon (ppm)	Benzene (1 ug/L)	Toluene (5 ug/L)	Ethyl Benzene (5 ug/L)	Total Xylenes (20 ug/L)	Total VOA	MTBE (10 ug/L)
System Influent	3/15/2006	-	-	<0.27	<0.19	<0.19	<0.5	<1.15	<1.85
System Effluent		-	-	<0.27	<0.19	<0.19	<0.5	<1.15	<1.85
System Influent	10/5/2009	-	-	0.96J	2.9	0.57J	140	144.43	4
System Effluent		-	-	<0.16	<0.20	<0.28	<0.5	<0.14	<0.23

<#= Non-Detect

Not Sampled = NS

Analytical Results = ppb

J=Estimated Value

Appendix A
Field Notes and Data Sheets

FORT HAMILTON AAFES 6 July 2009

ONSITE @ 1500

DEPART @

- BEGIN RANGING SYSTEM UP TO SET POINT @ 15:15
  - SET POINT IS 1400°F on THERMOX
  - CATALYTIC COMBUSTION - 715-568-2882

- CALL CATALYTIC COMBUSTION @ 1530
  ↳ WILL SEND NEW PART TOMMW -2

- SYSTEM OPERATIONAL @ 1540
  ↳ 1 WELL OPEN - PIPE-4
  WILL RUN OVERNIGHT TO CLEAN PIPING

Fort Hamilton AAFES 7 July 2009

System Evaluation JVES

ONSITE @ 0800

DEPART @ 1232

System Down on Arrival

= Alarm: VE Blower High Temp @ 1545 6-JUL

= System ran for 15 mins w/ only 1 well open & zero dilution air

= Scope well MPE-4 first

- PVC shavings in well

= Scoped Piping to MPE-4 after running the system

= During system operation w/ drop tube set @ 15.40' BG. (water @ 15.43'), small amounts of water recovered

- During scoping:

= Encountered silty water first

= Encountered clean water in 6" section of piping

= Small rocks observed in 4" section of piping after 1st 45° elbow

= Talked to Myles

= Recommended doing negative pressure test on all line w/ wells closed & piping isolated

= Negative Pressure Test:

= Isolate line & close all wells

= Maximum vacuum reached: ~15" Hg

Result: After isolating line & shutting down the blower, piping would not hold any vacuum → Results were duplicated during second test

= CSI Recommendation: Pressure test lines, possibly including digging & isolating sections of main MPE header

Call Matt:

= Call Oliver - Find out about notifact & power reading

= Disregard e-mail from Marty

= Call Mark Basel - Canal Creek office

FORT HAMILTON AAFES 20 JUL

SYSTEM TEST

INSITE @ 1400 TRAVEL DAY

DEPART @ 1700 INTO OFFICE @ 0630

DEPART @ 1000

= REPAIRED THERMOX GAS CONTROL VALVE ACTUATOR ARM @ 1430

~~= OPEN AIR-4 ENSURE OPEN~~ No

~~= START START UP SEQUENCE @~~ No

= MOB TO HOME DEPOT FOR SUPPLIES

= CLOSE UP SYSTEM & LOCK/SECURE

= PURCHASE SUPPLIES, RENT COMPRESSOR

= MOB TO SYSTEM, UNLOAD

= DEMOB

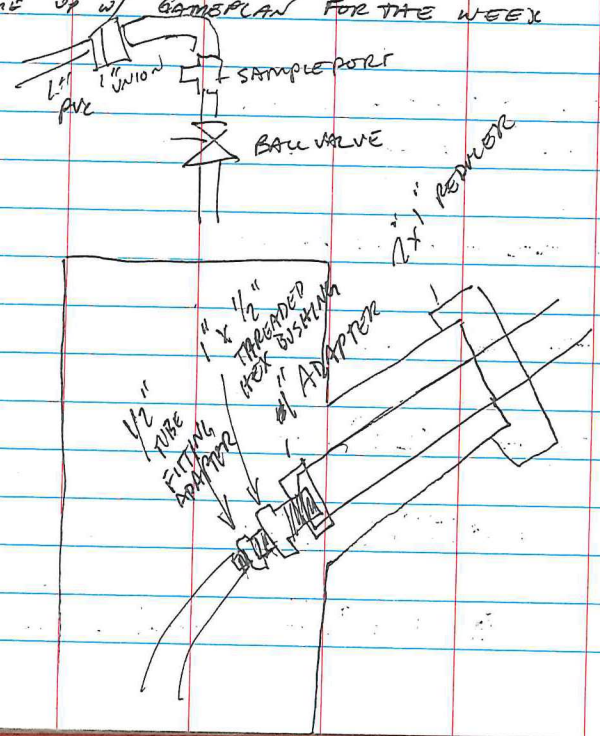
FORT HAMILTON AAFES 21 JUL

TUBS: SYSTEM TEST/MOD'S

ON SITE @ 0900 WEATHER: HEAVY RAIN, 70°F

DEPART @ 1630

- CHECK IN W/ STATION
- GWT & T ONSITE - FORKLIFT WILL BE HERE @ 10:00
- ELECTRICAL WILL BE HERE @ 1200
- GWT & T NEEDED PARTS FOR CONNECTION
  - ↳ DEPART FOR HOME DEPOT @ 0825 AFTER ASSESSING THE BLOWER CONNECTIONS & INLET PIPING
- COME UP W/ GAMEPLAN FOR THE WEEK



FORT HAMILTON AAFES 21 JUL

TUBS

- TO BE DONE AT HAMILTON:
- PRESSURIZE LINES - CHECK FOR LEAKS - PRESS & VISIBLE
- DRILL ASPIRATION HOLES IN DROP TUBES
  - TEST SYSTEM AFTER MOVING SAMPLE PORTS
- ADD SMALLER DROP TUBES & HARDPIPE WELL HEADS
  - TEST SYSTEM
- TEST SYSTEM @ HIGHER VACUUM
- DISASSEMBLE BLOWER

- 0920-0950 - REMOVE ALL SAMPLE PORTS.
  - ↳ NEED PLUGS (1/2") FROM HD
  - START GWT & T W/ PIPING OF NEW BLOWER
- RE-DO ALL CONNECTIONS - TIGHTEN & REDO THE TEFLON TAPE ON ALL CONNECTIONS
- SEVERAL TRIPS TO HOME DEPOT
- ELECTRICIANS ONSITE @ 1200
- PIPING FOR LIQUID RING PUMP COMPLETE @ 1300
- ELECTRICIANS FINISH @ 1530
- COMPLETE ~~[illegible]~~ BUILDING OF PRESSURE TEST ~~[illegible]~~ @ 1615

FORT HAMILTON AAFES 22 JUL 99

SYSTEM TESTS & MODIFICATIONS WED 5

ONSITE @ 0800

DEPART @ 1730

= ARRIVE ONSITE & HOLD H&S MTG.

= BEGIN SETTING UP FOR PRESSURE TEST OF HEADER @ 0810

= VERIFY THAT ALL BALL VALVES ARE CLOSED

= START TEST @ 0825

= WHILE WAITING FOR LINE TO PRESSURIZE, COLLECTED GW READINGS & DRILLED ASPIRATION HOLES @ 1' INTERVALS IN ALL DROP TUBES - SET ALL DROP TUBES 1" INTO GW

= COMPLETE ASPIRATION HOLES & DTW @ 0950

WELL	DTW	DTP	DT CEN.
MPE-1	22.98	-	23.10
MPE-2	17.25	-	17.35
MPE-3	16.10	-	16.10
MPE-4	17.05	-	17.15
MPE-5	14.82		15.00
MPE-6	15.02	-	15.15
MPE-7	13.45	-	15.60
MW-5	22.43	16.29	16.20

FORT HAMILTON AAFES 22 JUL

SYSTEM TESTS & MODS WED 5

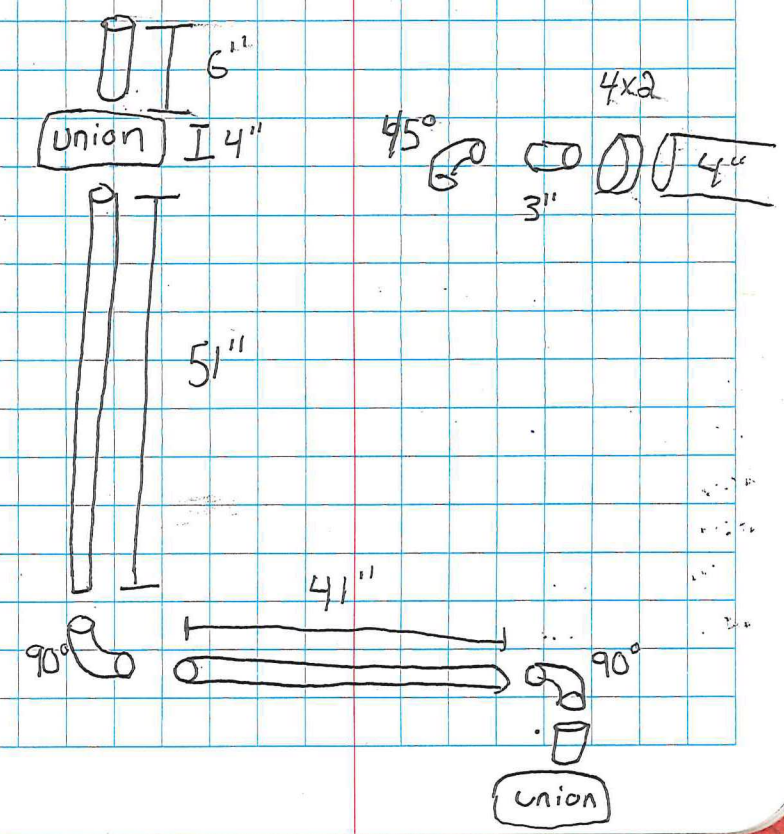
= COMPRESSOR MAY BE TOO SMALL FOR PRESSURE TEST. CANNOT BUILD ANY PRESSURE ON THE LINES

= CHECK AVAILABILITY W/ SUNBELT RENTALS - BROOKLYN OF 20 CFM GAS COMP.

718-387-4872

- WILL DELIVER 200 CFM COMP. TO SITE

Hard pipe



FORT HAMILTON AAFES 22 JUL

SYSTEM TESTS WED

- SIGNIFICANT DIFFICULTY PRESSURIZING LINE W/ SMALL COMPRESSOR
- ORDER 200 CFM COMPRESSOR FROM SUNBELT
- COMPRESSOR DELIVERED TO SITE @ 1330
- PRESSURE TEST
  - PRESSURIZE LINES
  - TOTAL PRESSURE REACHED ON ATTEMPT 1 - WAS 2.5 PSI - WELL MANIFOLD HELD PRESSURE FOR LESS THAN ONE MINUTE
  - ATTEMPT 2 - CONDUCTED BY A. SOLOMON WHILE A. GREGORY WETTED PAVEMENT W/ GARDEN HOSE & DISH SOAP - LINE @ 2.5 PSI - DID NOT HOLD
    - ↳ BUBBLING - MINOR - OBSERVED FROM EDGES OF CONCRETE PAD COVERING LINE FROM MPE-3 TOWARDS MPE-1 & 2 & MW-5
  - ATTEMPT 3 - PRESSURIZED LINE TO 2.5 PSI
    - ↳ PRESSURE NOT HELD
- CALL SUNBELT - CANCEL RENTAL - PICKUP ON 23 JUL
- COMPLETED HARDPIPE OF SYSTEM HEADER TO BLOWER CONNECTION
  - COMPLETED @ 1730

FORT HAMILTON AAFES 23 JUL

SYSTEM TESTS THURS

ONSITE @ 0750 DEPART NYC @ 1930

DEPART @ 1730 DEPART OFFICE @ 00:15 24 JUL

- ARRIVE ONSITE.
- A. SOLOMON - BEGIN BUILDING HARDPIPE DROP TUBE CONFIGURATIONS WHILE A. GREGORY BEGIN VACUUM TESTS ON WELLS W/ EXISTING DROP TUBES W/ ASPIRATION HOLES
- TO HOME DEPOT TO PURCHASE FITTINGS FOR FINAL CONNECTIONS
- A. SOLOMON WORK ON HARD PIPE CONNS.
- A. GREGORY BEGIN VAC TEST
  - MFEDOWITZ CALLED @ 1017
    - INFORMED OF DECISION BY A. GREGORY TO SKIP VAC TEST OF 1/2" DT'S W/OUT ASPIRATION HOLES SINCE IT WOULD BE A WASTE OF TIME
    - SAID OK & CONFIRM W/ M. WILKINSON
- CALL MYLES @ 1030 - WILL CALL BACK
- PREP FOR 1" VAC TEST @ 1030
  - SET MPE4 @ 100%, MW-5 @ 50% OPEN
  - ALL OTHER WELLS CLOSED
  - DILUTION AIR 100%
  - START BLOWER @ 1040

Fort Hamilton AAFES

Well Data Sheet

22 JUL 2009

Well ID	Date	Time	Vacuum ("H_2O)	PID Reading (ppm)	LEL (%)	DTW (ft)	DTP (ft)	Drop Tube Depth (ft)
MW-1	-	-	-	-	-	-	-	
MW-2	-	-	-	-	-	-	-	
MW-3	-	-	-	-	-	-	-	
MW-4	-	-	-	-	-	-	-	
MW-5	22 JUL 09	-	-	-	-	22.43	16.29	16.20
MW-6	-	-	-	-	-	-	-	
MW-7	-	-	-	-	-	-	-	
MPE-1	22 JUL 09	-	-	-	-	22.98	-	23.10
MPE-2	22 JUL 09	-	-	-	-	17.23	-	17.35
MPE-3	22 JUL 09	-	-	-	-	16.10	-	16.10
MPE-4	22 JUL 09	-	-	-	-	17.05	-	17.15
MPE-5	22 JUL 09	-	-	-	-	14.82	-	15.00
MPE-6	22 JUL 09	-	-	-	-	15.02	-	15.15
MPE-7	22 JUL 09	-	-	-	-	13.45	-	15.60

1) Arrive on site **Conduct H&S tailgate meeting and complete Daily H&S Checklist**

FORT HAMILTON AAFES 23 JUL

SYSTEM TESTS & MODS THURS

VAC @ START OF TEST W/ 100% DIL: 0

INCREASE TOTAL VAC 50 - 8" Hg BY CLOSING DIL

= PULL LARGE SLUGS OF MUDDY WATER

= AFTER INITIAL RECOVERY - NO WATER

= INCREASE VACUUM TO -18" Hg

= BALL VALVE FOR MW-5 IS CRACKED - FLUIDS MOVING

= BLOWER LOST SEAL WATER - SHUT DOWN @ 1113

= REPLENISH SEAL WATER

= RESTART SYSTEM @ 1129

= SET BLOWER VAC @ -10" Hg

= LRP IS LOSING SEAL WATER

WELLHEAD VAC

MPE-4 -140" W.C. NO FLUID RECOVERY

↳ FLUID RECOVERY W/OUT SAMPLE PORT

MPE-6 -135" W.C. FLUID RECOVERY

* MPE-5 -105" W.C. FLUID RECOVERY

* MPE-3 -100" W.C. SLIGHT FLUID RECOVERY

* MPE-1 -100" W.C. FLUID RECOVERY

* CANNOT GET BLOWER ABOVE -7.5" Hg

MPE-2 -90" W.C. FLUID RECOVERY (@ -7" Hg BLOWER)

MW-5 -85" W.C. NO RECOVERY, CRACKED PVC

MPE-7 -75" W.C. FLUID RECOVERY (@ -7" Hg BLOWER)

= BLOWER RAPIDLY LOSING SEAL WATER & WILL NOT GO ABOVE -5" Hg

FORT HAMILTON AAFES 23 JUL

SYSTEM TESTS & MODS THURS

= CALL M. WILKINSON W/ DATA - SAID TO DISCONNECT OTHER BLOWER, DO NOT MOVE FORWARD W/ OTHER TESTS. TEST EXISTING BLOWER W/ -1" DROP TUBES

= CALL M. FEDOWITZ - CONCURR W/ MYLES

= CALL POWER ONE - ELECTRICIAN CAN BE ONSITE @ 1345

= S. BILLY (POWERONE) ONSITE @ 1350 TO DISCONNECT PILOT TEST BLOWER

= CALL GWT&T - NOTIFY OF PROBLEMS W/ BLOWER

= TOLD THEM THAT BLOWER COULD NOT MEET STATED OBJECTIVES & THAT WE WANT A REDUCED RATE FOR PROJECT - WILL PAY T&M BUT NOT RENTAL COSTS OF MACHINE → BLOWER WILL BE PICKED UP FRIDAY AM.

= CLEAN UP SITE

= MOB TO HOME DEPOT TO REPAIR MW-5 BALL VALVE & DT. CONNECTION - WILL START SYSTEM & TEST FOLLOWING REPAIRS TO MW-5

= MW-5 REPAIRED

= A. GREGORY - FAMILY EMERGENCY

= M FEDOWITZ & M WILKINSON NOTIFIED

= WILL DEPART AFTER TEST OF EXISTING BLOWER

= M. WILKINSON CANCEL TRIP

FORT HAMILTON AAFES 23 JUL

SYSTEM TESTS & MODS. THURS

= START SYSTEM @ 1628 - 100% DIL
= BRING UP TO -13" Hg SLOWLY
= ALL WELLS OPEN 100%
= RECOVERING FLUIDS @ -9" Hg
= @ -13" Hg @ 1635
= COLLECT WELL DATA

WELL	VAC	NOTES
MPE-4	-145" WC	FLUID RECOVERY
MPE-6	-145" WC	" "
MPE-5	150" WC	" "
MPE-7	-150" WC	FLUID RECOVERY
MPE-3	-145" WC	" "
MPE-1	-150" WC	" "
MPE-2	-145" WC	" "
MW-5	-150" WC	FLUID RECOVERY

= ALL WELLS RECOVERING FLUIDS
SYS. DATA
= VAC: -12.5
= DIF PRESS - 0.5" WC
= BLOWER PRESS. 0
= EFF TEMP 200°F
= EFF PITOT DIFF PRESS. 0.75

FORT HAMILTON AAFES 23 JUL

SYSTEM TESTS & MODS THURS

OWS EFF PUMP: 35
A/S PRESSURE: 10 psi
A/S EFF PUMP: 30 psi
BAG 1: 10 psi
BAG 2: 10 psi
CARBON: 10-25 psi
TOTALIZER: 2474
= SHUT DOWN SYSTEM @ 1728
TAKE PICS OF HARDPIPE OF BLOWER INLET & BUBBLE SPOTS ON CONCRETE PAD IN VICINITY OF MPE-3

Site	Hamilton	PM: Gregory	Tech(s): A.G/A.S.	Date: 23JUL09
			Station Number:	Pages: of
Site/Address:	Fort Hamilton, NY		Weather Conditions:	

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: 20 JUL
Restart Attempts: SEVERAL
Restart Date: 23 JUL
Alarm:

MPE System Data

Number of MPE wells Operating	ALL		Particle Filter Differential Pressure	0.5	"w.c.
Vac Before Dilution	-12.5	"Hg	Blower Pitot Tube Diff. Press.	0.75	"w.c.
Vac After Dilution	-	"Hg	OWS Discharge Pump Pressure	35	psi
Blower Discharge Pressure	0	"w.c.	Air Stripper Pressure	10	"w.c.
Blower Discharge Temperature	200	F	Air Stripper Discharge Pressure	30	psi
Oxidizer Inlet Temperature	/	F	Bag Filter 1 Pressure 1	10	psi
Oxidizer Oulet Temperature	/	F	Bag Filter 1 Pressure 2	~~10~~ AG	psi
Blower Discharge Concentration	/	ppm	Bag Filter 2 Pressure 1	10	psi
Oxidizer Discharge Concentration	/	ppm	Bag Filter 2 Pressure 2	~~10~~ AG	psi
Carbon Unit Pressure	10.75	psi	Holding tank Product Level	0	ft
Totalizer Flow reading	247.4	gallons			

GENERAL COMMENTS

SHUT DOWN SYSTEM PRIOR TO DEPARTURE

CONTACTS Adam Gregory 443-864-3740

Fort Hamilton 7/28

System Status	Off
Shutdown Date	7/28/2009
Restart Attempts	6
Restart Date	Not Restarted
Alarm	Loss of Flame, likely due to flame rod or gas solenoid valve.

Number of MPE Wells Operating	*see note*	Particle Filter Diff. Pressure	*see note*
Vac Before Dilution	*see note*	Blower Polot Tube Diff. Press.	*see note*
Vac After Dilution	*see note*	OWS Discharge Pump Pressure	*see note*
Blowe Discharge Pressure	*see note*	Air Stripper Pressure	*see note*
Blower Discharge Termperature	*see note*	Air Stripper Discharge Pressure	*see note*
Oxidizer Inlet Temperature	*see note*	Bag Filter 1 Pressure 1	*see note*
Oxidizer Outlet Temperature	*see note*	Bag Filter 1 Pressure 2	*see note*
Blower Discharge Concentration	*see note*	Bag Filter 2 Pressure 1	*see note*
Oxidizer Discharge Concentration	*see note*	Bag Filter 2 Pressure 2	*see note*
Carbon Unit Pressure	*see note*	Holding Tank product level	*see note*
Totalizer Flow Reading	*see note*		

Note: Not able to get Flame Oxidizer up to temperature in order to start system. No data recorded for this event.

Time	Date	Note
10:45	7/28/2009	John Oliver and Terry McHugh onsite to perform system operations and maintenance. System non operational Attempt to restart system, but the system will not stay operational. There is a problem with the Thermal Oxidizer.
11:45	7/28/2009	Attempt to call Catalytic Combustion to work through the problem. System will not stay operational Catalytic combustion believes that the problem resides in the gas solenoid valve. Call Adam to inform him of our situation. Call H2K in an attempt to work out warranty and maintenance insurance. H2K is refusing to send anyone out to perform the required work. States that we must find someone to
12:55	7/28/2009	do it and they will contact that person.
13:45	7/28/2009	Not able to get intouch with H2K personnel. Go and perform routine maintenance. Order Gas solenoid valve to be delivered to the AAFES station. Ensure that station personnel are aware of the
16:20	7/28/2009	delivery. Adam requested that I leave site and go home.
16:40	7/28/2009	John Off site.

Fort Hamilton AAFES

Well Data Sheet

Well ID	Date	Time	Vacuum ("H_2O)	PID Reading (ppm)	LEL (%)	DTW (ft)	DTP (ft)	Drop Tube Depth (ft)
MW-1	8/10/5	9:00		173	6	20.64	22.19	
MW-2				251	4	21.34		
MW-3				175	5	15.30		
MW-4				0	3	15.10		
MW-5				439	7	22.28	21.64	6" Below H_2O
MW-6				0	6	23.39		
MW-7				0	1	15.91		
MPE-1				120	3	23.03		"
MPE-2				375	4	17.43		"
MPE-3				20	6	16.31		"
MPE-4				62	0	17.20		"
MPE-5				173	2	15.15		"
MPE-6				15	0	15.20		"
MPE-7				0	0	13.36		"

1) Arrive on site **Conduct H&S tailgate meeting and complete Daily H&S Checklist**

Fort Hamilton 8/5

System Status	On
Shutdown Date	8/5/2009
Restart Attempts	1
Restart Date	8/5/2009
Alarm	Flame Rod Alarm

Number of MPE Wells Operating	7		Particle Filter Diff. Pressure	0	
Vac Before Dilution	-6		Blower Polot Tube Diff. Press.	1.5	
Vac After Dilution	-8		OWS Discharge Pump Pressure	0 (empty)	20 (operatng)
Blowe Discharge Pressure	0		Air Stripper Pressure	10.1	
Blower Discharge Termperature	167		Air Stripper Discharge Pressure	0	
Oxidizer Inlet Temperature	1455		Bag Filter 1 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Outlet Temperature	1427		Bag Filter 1 Pressure 2	0 (empty)	10 (pressure)
Blower Discharge Concentration	1935		Bag Filter 2 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Discharge Concentration	15		Bag Filter 2 Pressure 2	0 (empty)	10 (pressure)
Carbon Unit Pressure	1.5 (empty)	10 (operatng)	Holding Tank product level	4.9'	135 gallons
Totalizer Flow Reading	330.9				

Fort Hamilton 8/

System Status	On
Shutdown Date	8/5/2009
Restart Attempts	1
Restart Date	8/5/2009
Alarm	Flame Rod Alarm

Number of MPE Wells Operating	7		Particle Filter Diff. Pressure	0	
Vac Before Dilution	-6		Blower Polot Tube Diff. Press.	1.5	
Vac After Dilution	-8		OWS Discharge Pump Pressure	0 (empty)	20 (operatng)
Blowe Discharge Pressure	0		Air Stripper Pressure	10.1	
Blower Discharge Termperature	167		Air Stripper Discharge Pressure	0	
Oxidizer Inlet Temperature	1455		Bag Filter 1 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Outlet Temperature	1427		Bag Filter 1 Pressure 2	0 (empty)	10 (pressure)
Blower Discharge Concentration	1935		Bag Filter 2 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Discharge Concentration	15		Bag Filter 2 Pressure 2	0 (empty)	10 (pressure)
Carbon Unit Pressure	1.5 (empty)	10 (operatng)	Holding Tank product level	Sheen	
Totalizer Flow Reading	330.9				

Fort Hamilton 8/5

System Status	On
Shutdown Date	8/5/2009
Restart Attempts	1
Restart Date	8/5/2009
Alarm	High pressure alarm for Carbon Vessel

Number of MPE Wells Operating	7		Particle Filter Diff. Pressure	0	
Vac Before Dilution	-7		Blower Polot Tube Diff. Press.	1.5	
Vac After Dilution	-9		OWS Discharge Pump Pressure	0 (empty)	20 (operatng)
Blowe Discharge Pressure	0		Air Stripper Pressure	10.1	
Blower Discharge Termperature	172		Air Stripper Discharge Pressure	0	
Oxidizer Inlet Temperature	1461		Bag Filter 1 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Outlet Temperature	1421		Bag Filter 1 Pressure 2	0 (empty)	10 (pressure)
Blower Discharge Concentration	1842		Bag Filter 2 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Discharge Concentration	14		Bag Filter 2 Pressure 2	0 (empty)	10 (pressure)
Carbon Unit Pressure	1.5 (empty)	10 (operatng)	Holding Tank product level	Sheen	
Totalizer Flow Reading	425.9				

Time	Date	Note
8:20	8/4/2009	Met Matt Kuss of Catalytic Combustion Services on site
13:20	8/4/2009	Able to finish the installation of the gas solenoid valve with Matt Kuss of Catalytic Combustion Services.
13:30	8/4/2009	Run through system checks with Matt Kuss, check gas solenoid valve for proper operation.
14:20	8/4/2009	Turned system on, noticed that the values (voltage reading) for the flame control are jumping around causing the system to shut down (believe that the reading from the flame is too low for too long. Adjusted the dilution air valve and the ambient air valve in an attempt to get the readings to calm down. Possible that there is a problem with the Flame rod after all.
15:00	8/5/2009	Work on bringing system up to operational status paying specific attention to the blower discharge LEL. Start at wells with least amoung of product and bring them online first with stingers 0.3 feet in the water column and blower on full dilution air. Once all wells online, close the dilution air valve slowly paying close attention to the LEL.
15:40	8/5/2009	All wells online. Begin closing the dilution air valve. Procedure will be to close the dilution air valve 0.25 - 0.5" Hg then wait for LEL meter to stabilize.
16:30	8/5/2009	Having trouble getting the lel meter below 15%. All wells are online at 6" Hg and pulling water. LEL meter is staying elevated and occassionally is shutting down system on a high alarm. Have to reset the LEL meter, and bring system back up.
17:30	8/5/2009	Got system stable at 6" Hg. Leaving system overnight to clear out the LEL and the excess vapor.
7:30	8/6/2009	System shut down overnight on a high pressure alarm in the carbon vessel. Restart system and get system back to 5" Hg.
8:30	8/6/2009	LEL meter has cleared and is hovering around 9 and 10%. Able to set vacuum to 7" Hg. Pulling water in all wells.
9:30	8/6/2009	Reduced AS pump valve to prevent water from slamming into the carbon units, appears to be functioning to keep the pressure below 10" where the alarm will cut off the system.
10:30	8/6/2009	System appears to be running smoothly withno operational hurdles. Begin taking final readings. Still notice that the flame controller is still jumping around a bit.
12:30	8/6/2009	Clean up site.
13:00	8/6/2009	John Off Site

AAFES FORT HAMILTON 13 AUG 2009

PM: FEDOWITZ O&M/TROUBLESHOOT THRS

DEPART @ 0500 DEPART @ 1330

ONSITE @ 0815 ARRIVE @

=ONSITE FOR O&M & TROUBLESHOOTING

=CHECK IN W/ STATION PERSONNEL

=SYSTEM DOWN DUE TO "FLAME FAILURE" ON THERM-OX

=NEED TO REPLACE FLAME ROD

=FLAME ROD REPLACED @ 0830

=CALL FEDOWITZ W/ SITREP @ 0833

=GAUGE WELLS PRIOR TO SYSTEM START

WELL	DTW	DTP	DT LEN
MPE-1	23.42	-	UNCH
MPE-2	17.84	-	SAA
MPE-3	16.88	-	SAA
MPE-4	17.51	-	SAA
MPE-5	15.56	-	SAA
MPE-6	15.62	-	SAA
MPE-7	14.01	-	SAA
MW-5	19.32	17.74	SAA

=WELL GAUGING COMPLETE @ 0905

=BEGIN BRINGING SYSTEM TO SET POINT @ 0908

=CALL SENSAPHONE @ 0913

=BOB @ XT 236

=CALL BACK W/ UNIT PHONE # & DOWNLOAD SOFTWARE

AAFES FORT HAMILTON 13 AUG 2009

PM: FEDOWITZ O&M/TROUBLESHOOT THRS

=PETER KOUTROUBIS STOPPED BY @ 0920

=DISCUSSED SYSTEM OPERATION & OPTIMIZATION

=WOULD LIKE TO START MONTH 1 TODAY

↳ VERIFY W/ PHYLLIS & FEDOWITZ

=SYSTEM STARTED W/ FULL DILUTION @ —

=THERM-OX DOWN @ 0930 - FLAME FAILURE

=RESTART - CALL MATT @ CATALYTIC COMBUSTION

↳ WATCH FLAME STRENGTH & ADJUST THE DILUTION AIR ACCORDINGLY

=FLAME FAILURE AGAIN @ 0955

=RESET & BRING UP TO SET POINT

=FLAME SAFETY CONTROLLER MAY BE BAD

=FLAME FAILURE @ 1200°F

=CHECK CONNECTION TO FLAME ROD & RESTART OXIDIZER

=SYSTEM UP TO TEMP & RUNNING @ 1047

=~~OPEN~~ CLOSE DILUTION

=VAC @ -8" Hg

=SYSTEM SHUTDOWN ON FLAME FAILURE @ 1052

=RESTART & CALL CATALYTIC - LEFT MESSAGE

=SYSTEM UP @ 1115

=BALANCE VAPOR SIDE - ISSUES W/ LEL - REACHING 20%

=SYSTEM RECOVERING WATER

=OXIDIZER FLAME STRENGTH STABLE

AAFES FORT HAMILTON 03 AUG 2009

PM: FEDOWITZ O&M/TROUBLESHOOTING THURS

COLLECT SYSTEM OPS DATA @ 1158

WELL	VAC	FLUID/NOTES
MPE-1	115	YES
MPE-2	110	YES
MPE-3	-120	YES
MPE-4	-125	YES
MPE-5	-115	YES
MPE-6	-125	YES
MPE-7	-115	YES
MW-5	-75	YES - SLIGHT - DT RAISED TO 17.70

↳ KEEPS LEL IN PROCESS FROM TRIPPING

SYSTEM HOUR METERS @ 1243

VE BLOWER: 113707

AS BLOWER 86004

VAC: -9

DIF PRESS -2

BLOWER PRESS 0

EFF TEMP 168

EFF PITOT DIFF PRESS PEGGED +2" WC

OWS XFER: 35

A/S PRESS: ~~15~~ 10 A/S EFF 15 psi

BG1[1] 10psi

BG1[2] 10psi.

BG2[1] 10psi

BG2[2] 10psi

AAFES FORT HAMILTON 13 AUG 2009

PM: FEDOWITZ O&M/TROUBLESHOOTING THURS

CARBON PRESS: 9.5 psi

TOTALIZER: 005685

INF PID: 162.0

EFF PID (@ THERM OX): 0

PROCESS LEL: 1%

OXIDIZER DATA:

INLET TEMP: 1400

OUTLET: 1251

FLAME SIGNAL 3.8 V

DIFF PRESSURE 0.55

= SYSTEM OPERATING NORMALLY W/IN ACCEPTABLE RANGES & PULLING WATER

= CALL FEDOWITZ FOR SITREP @ 1300 - LEFT MESSAGE

= WILL CALL USACE & SHAW FOLLOWING CALL W/ FEDOWITZ

= TALK TO FED

= CHUCK LECHNERS: TERRY INGRAO - 1 ↳ NUMBER OF SENSAPHONE NOTIFICATIONS

= JERRY MARESCA: 973-770-5305

↳ SHAW PM:

= CALL J. MARESCA = SHAW:

Fort Hamilton AAFES

Well Data Sheet

13 AUG 2009

Well ID	Date	Time	Vacuum ("H_2O)	PID Reading (ppm)	LEL (%)	DTW (ft)	DTP (ft)	Drop Tube Depth (ft)
MW-1	-	-	-	-	-	-	-	
MW-2	-	-	-	-	-	-	-	
MW-3	-	-	-	-	-	-	-	
MW-4	-	-	-	-	-	-	-	
MW-5	13 AUG 2009	-	-75	-	-	19.32	17.74	UNCHANGED
MW-6	-	-	-	-	-	-	-	
MW-7	-	-	-	-	-	-	-	
MPE-1	13 AUG 2009	-	-115	-	-	23.42	-	SAA
MPE-2	13 AUG 2009	-	-110	-	-	17.84	-	SAA
MPE-3	13 AUG 2009	-	-120	-	-	16.88	-	SAA
MPE-4	13 AUG 2009	-	-125	-	-	17.51	-	SAA
MPE-5	13 AUG 2009	-	-115	-	-	15.56	-	SAA
MPE-6	13 AUG 2009	-	-125	-	-	15.62	-	SAA
MPE-7	13 AUG 2009	-	-115	-	-	14.01	-	SAA

1) Arrive on site **Conduct H&S tailgate meeting and complete Daily H&S Checklist**

Site	Hamilton	PM: Gregory	Tech(s): AG	Date: 13 AUG 09
			Station Number:	Pages: of
Site/Address:	Fort Hamilton, NY		Weather Conditions:	

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: UNKNOWN
Restart Attempts: 3
Restart Date: 13 AUG 09
Alarm: FLAME FAILURE

MPE System Data

Number of MPE wells Operating	ALL		Particle Filter Differential Pressure	0	"w.c.
Vac Before Dilution	-9	"Hg	Blower Pitot Tube Diff. Press.	2	"w.c.
Vac After Dilution	/	"Hg	OWS Discharge Pump Pressure	35	psi
Blower Discharge Pressure	0	"w.c.	Air Stripper Pressure	10	"w.c.
Blower Discharge Temperature	168	F	Air Stripper Discharge Pressure	15	psi
Oxidizer Inlet Temperature	1400	F	Bag Filter 1 Pressure 1	12	psi
Oxidizer Oulet Temperature	1251	F	Bag Filter 1 Pressure 2	12	psi
Blower Discharge Concentration	162.0	ppm	Bag Filter 2 Pressure 1	12	psi
Oxidizer Discharge Concentration	0	ppm	Bag Filter 2 Pressure 2	12	psi
Carbon Unit Pressure	9.5	psi	Holding tank Product Level	0	ft
Totalizer Flow reading	00568.5	gallons			

GENERAL COMMENTS REPLACE OXIDIZER FLAME ROD

CONTACTS Adam Gregory 443-864-3740

FORT HAMILTON AAFES 18 AUG 2001

PM: FEDOWITZ O&M / TRANSITION MTG. WED

DEPART @ 1500 DEPART SITE @ 1945

ONSITE @ 1930

= MOB TO FORT HAMILTON FROM COL. OFFICE

= SYSTEM RUNNING ON ARRIVAL

= OXIDIZER RUNNING FINE

- FLAME STRENGTH STABLE @ 4.1 V
- INLET TEMP STABLE @ 1393°F

= DEPART SITE FOLLOWING SYSTEM CHECK TO CHECK INTO HOTEL FOR THE NIGHT.

FORT HAMILTON AAFES 19 AUG

PM FEDOWITZ O&M / TRANSITION MTG WED

ONSITE @ 0745 ARRIVE COL @

DEPART @ 1130

= SYSTEM RUNNING @ ARRIVAL

= BRIEFLY DEPART SITE @ 0750 FOR VEHICLE DAY PASS FROM VISITORS CENTER

= CALL PHYLLIS DELLA-CAMERA @ 0805 - LEFT MESSAGE

= CALL JERRY MAKESKA

201-400-2798 - TERRY MCANAGH

- CALL TERRY @ 0805

= ONSITE @ 0810

= REVIEW SYSTEM

= COLLECT WELL DATA

WELL	VAL	FLUIDS
MPE-1	-100"	YES
MPE-2	-95	YES
MPE-3	-95	YES
MPE-4	-100"	YES
MPE-5	-900"	NO, ADJUSTED DT 2' DOWN - THEN YES
MPE-6	-100"	YES
MPE-7	-90"	YES
MW-5	-100"	OPENED TO 100% OPEN, NO

Fort Hamilton AAFES

Well Data Sheet

19 AUG 2009

Well ID	Date	Time	Vacuum ("H_2O)	PID Reading (ppm)	LEL (%)	DTW (ft)	DTP (ft)	Drop Tube Depth (ft)
MW-1	19 AUG-09	-	-	50.1	-	22.26	20.60	
MW-2		-	-	0	-	19.24	-	
MW-3		-	-	0	-	20.29	-	
MW-4		-	-	0	-	20.45	-	
MW-5		-	100	-	-	-	-	UNCHANGED
MW-6		-	-	0	-	22.45	-	
MW-7		-	-	0-0.45	-	18.18	-	
MPE-1		-	100	-	-	-	-	SAA
MPE-2		-	95	-	-	-	-	SAA
MPE-3		-	95	-	-	-	-	SAA
MPE-4		-	100	-	-	-	-	SAA
MPE-5		-	180	-	-	-	-	LOWERED ≈ 2"
MPE-6		-	100	-	-	-	-	UNCHANGED
MPE-7	19 AUG 09	-	90	-	-	-	-	SAA

1) Arrive on site **Conduct H&S tailgate meeting and complete Daily H&S Checklist**

FORT HAMILTON AAFES 19 AUG

PM: FEDOWITZ O&M/TRANSITION MTG WED

WATER LEVELS COLLECTED BY SHAW ON 18 AUG 2009

WELL	DTW	DTP	PID
MW-6	22.45	-	.
MW-7	18.18	-	0-0.65
MW-4	20.45	-	-
MW-3	20.29	-	-
MW-2	19.24	-	-
MW-1	22.20	20.60	50.1

BEGIN COLLECTING OPS READINGS @ 1040

INF PID: 338.0 ppmv

EFF PID: 0 ppmv

HOUR METERS @ 1048

VE BLOWER: 127917

AS BLOWER: 106214

VAC: -9

DIFF PRESS: 2" WC

BLOW PRESS: ~~0~~ WC 0

EFF TEMP: 162

EFF PITOT TUBE DIFF PRESS: PEGGED @ ~

OWS XFER: ~

AS PRESS: 10 psi

AS XFER: -

BAG1[1]: -

BAG1[2]: -

FORT HAMILTON AAFES 19 AUG 09

PM: FEDOWITZ O&M/TRANSITION MTG WED

BAG2[1]: -

BAG2[2]: -

CARBON PRESS: -

PROCESS LEL: 0

OXIDIZER DATA:

INLET TEMP: 1399

OUTLET TEMP: 1240

FLAME SIG: 4.0

DIFF PRESS: 0.55

Site	Hamilton	PM: Gregory	Tech(s): AG	Date: 08/19/09
			Station Number:	Pages: of
Site/Address:	Fort Hamilton, NY		Weather Conditions:	

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: Na
Restart Attempts: NA
Restart Date: NA
Alarm: NA

MPE System Data

Number of MPE wells Operating	All	Particle Filter Differential Pressure	0 "w.c.
Vac Before Dilution	-9 "Hg	Blower Pitot Tube Diff. Press.	2 "w.c.
Vac After Dilution	/ "Hg	OWS Discharge Pump Pressure	— psi
Blower Discharge Pressure	290 "w.c.	Air Stripper Pressure	10 "w.c.
Blower Discharge Temperature	162 F	Air Stripper Discharge Pressure	— psi
Oxidizer Inlet Temperature	1399 F	Bag Filter 1 Pressure 1	— psi
Oxidizer Oulet Temperature	1240 F	Bag Filter 1 Pressure 2	— psi
Blower Discharge Concentration	338 ppm	Bag Filter 2 Pressure 1	— psi
Oxidizer Discharge Concentration	0 ppm	Bag Filter 2 Pressure 2	— psi
Carbon Unit Pressure	— psi	Holding tank Product Level	— ft
Totalizer Flow reading	— gallons		

GENERAL COMMENTS

CONTACTS Adam Gregory 443-864-3740

AAFES FORT HAMILTON 25 AUG 2009

PM: FEDOWITZ MOB TO SITE TUES

DEPART @ 1600

INTO NY @ 1930

= CHECK INTO HOTEL

= SEND NOTIFICATION E-MAILS

AAFES FORT HAMILTON 26 AUG 2009

PM: FEDOWITZ O&M / TRANSITION WED

ONSITE @ 0745 FINISH @ ~~[illegible]~~

DEPART 1200 DEPART OFFICE @

= SHAW ONSITE @ 0800

= SHUT SYSTEM DOWN @ 0810

= CALL DETCON @ 0815

RE: LEL SENSOR CALIBRATION

= COLLECT GW LEVELS

MW	DTW	DTP	NOTES
MW-1	22.22	20.96	–
MW-2	19.67	–	–
MW-3	19.37	–	–
MW-4	19.92	–	–
MW-5	18.78	18.56	–
MW-6	24.32	–	–
MW-7	18.81	–	–
MPE-1	23.85	–	–
MPE-2	21.61	–	–
MPE-3	17.63	–	–
MPE-4	19.02	–	–
MPE-5	18.68	–	✓
MPE-6	18.71	–	✓
MPE-7	17.30	–	✓

AAFES FORT HAMILTON 26 AUG 2009

PM: FEDOWITZ OPM/TRANSITION WED

- COMPLETE WELL GAUGING
- BEGIN SYSTEM RESTART PROCESS

- LEL (PROCESS) WAS ZEROED W/ MAGNET
- START OXIDIZER @ 0930
- OXIDIZER FULLY OPERATIONAL @ 0949
- START SYSTEM
- SET VACUUM @ -9.5 "Hg
- BEGIN COLLECTING MPE WELL VACUUM LEVELS

WELL	VAC	NOTES
MPE-1	115" WC	
MPE-2	100" WC	ADJUSTED DT DOWN 4"
MPE-3	125" WC	ADJUSTED DT UP 3"
MPE-4	105" WC	
MPE-5	110" WC	
MPE-6	105" WC	
MPE-7	105" WC	
MW-5	125" WC	

BEGIN COLLECTING OPS DATA @

INF PID: UNABLE TO READ

EFF PID: 0

HOUR METERS @ 1109

VE BLOWER: 144585

AS BLOWER: 116915

TOTAL VAC: 10" Hg

DIFF PRESS: 1.5

BLWR PRESS: 0

EFF TEMP: 175 °F

EFF PITOT TUBE DIFF PRESS: PEGGED @ 2

OWS XFER

OWS OBSERVATION: PRODUCT THICKNESS <1"

PRODUCT DRUM LEVEL:

AS PRESS: 10

AS XFER: 30 psi

BAG1¹ 9 psi

BAG1² 10 psi

BAG2¹ 9 psi

BAG2² 10 psi

CARBON PRESS. 30 psi

PROCESS LEL 3%

ENCLOSURE LEL 0%

TOTALIZER: 0.50

OXIDIZER DATA:

INLET TEMP: 1422 °F

OUTLET TEMP: 1243 °F

FLAME SIG: 8.9

DIFF PRESS:

- CALL PHYLLIS

Fort Hamilton AAFES

Well Data Sheet

26 AUG 2009

Well ID	Date	Time	Vacuum ("H_2O)	PID Reading (ppm)	LEL (%)	DTW (ft)	DTP (ft)	Drop Tube Depth (ft)
MW-1	26 AUG 2009	-	-	-	-	22.22	20.96	
MW-2		-	-	-	-	19.67	-	
MW-3		-	-	-	-	19.37	-	
MW-4		-	-	-	-	19.92	-	
MW-5		-	125	-	-	18.78	18.56	UNCHANGED
MW-6		-	-	-	-	24.32	-	
MW-7		-	-	-	-	18.81	-	
MPE-1		-	115	-	-	23.85	-	SAA
MPE-2		-	100	-	-	21.61	-	AG ~~SAA~~ ADJUSTED DOWN 2"
MPE-3		-	125	-	-	17.63	-	AG ~~SAA~~ ADJUSTED UP 3"
MPE-4		-	105	-	-	18.02	-	SAA
MPE-5		-	110	-	-	18.63	-	SAA
MPE-6		-	105	-	-	18.71	-	SAA
MPE-7	26 AUG 2009	-	105	-	-	17.30	-	SAA

1) Arrive on site **Conduct H&S tailgate meeting and complete Daily H&S Checklist**

Site	Hamilton	PM: Gregory	Tech(s): AG	Date: 26 AUG 09
		Station Number:		Pages: of
Site/Address:	Fort Hamilton, NY	Weather Conditions:		

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: ~~NA~~ 26 AUG 09
Restart Attempts: ~~NA~~ 1
Restart Date: ~~NA~~ 26 AUG 09
Alarm: NA - SEE NOTES

MPE System Data

Number of MPE wells Operating	ALL		Particle Filter Differential Pressure	1.5	"w.c.
Vac Before Dilution	10	"Hg	Blower Pitot Tube Diff. Press.	~~1.5~~ 2	"w.c.
Vac After Dilution	—	"Hg	OWS Discharge Pump Pressure	—	psi
Blower Discharge Pressure	0	"w.c.	Air Stripper Pressure	10	"w.c.
Blower Discharge Temperature	175	F	Air Stripper Discharge Pressure	30	psi
Oxidizer Inlet Temperature	1422	F	Bag Filter 1 Pressure 1	9	psi
Oxidizer Oulet Temperature	1243	F	Bag Filter 1 Pressure 2	10	psi
Blower Discharge Concentration	UNABLE TO READ	ppm	Bag Filter 2 Pressure 1	9	psi
Oxidizer Discharge Concentration	0	ppm	Bag Filter 2 Pressure 2	10	psi
Carbon Unit Pressure	30	psi	Holding tank Product Level	0	ft
Totalizer Flow reading	—	gallons			

→ INCORRECT DATA COLLECTED

GENERAL COMMENTS SHUT DOWN SYSTEM @ 0815 TO ZERO PROCESS LEL - SYSTEM RESTARTED @ ~~0800~~ 0949

CONTACTS Adam Gregory 443-864-3740

Fort Hamilton 9/02

System Status	On	
Shutdown Date	system optl	
Restart Attempts		0
Restart Date		
Alarm		

Number of MPE Wells Operating	7		Particle Filter Diff. Pressure	0	
Vac Before Dilution	-9		Blower Polot Tube Diff. Press.	1.5	
Vac After Dilution	-8		OWS Discharge Pump Pressure	0 (empty)	20 (operatng)
Blowe Discharge Pressure	0		Air Stripper Pressure	10.1	
Blower Discharge Termperature	165		Air Stripper Discharge Pressure	0	
Oxidizer Inlet Temperature	1321		Bag Filter 1 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Outlet Temperature	1415		Bag Filter 1 Pressure 2	0 (empty)	10 (pressure)
Blower Discharge Concentration	456		Bag Filter 2 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Discharge Concentration	12		Bag Filter 2 Pressure 2	0 (empty)	10 (pressure)
Carbon Unit Pressure	1.5 (empty)	10 (operatng)	Holding Tank product level	Sheen	
Totalizer Flow Reading					

Time	Date	Note
8:15	9/2/2009	John on site with Terry McHugh. System appears to be running smoothly.
8:30	9/2/2009	Performed basic operations and maintenance procedures and collected monitoring data.
10:30	9/2/2009	Cleaned up system shed and surrounding compound.
11:30	9/2/2009	John Off Site

Fort Hamilton AAFES

Well Data Sheet

Well ID	Date	Time	Vacuum ("H_2O)	PID Reading (ppm)	LEL (%)	DTW (ft)	DTP (ft)	Drop Tube Depth (ft)
MW-1	9/02			1	1	21.32	21.78	
MW-2				178	3	20.53		
MW-3				4	2	17.88		
MW-4				0	6	16.45		
MW-5				35	2	14.53		6" Below H_2O
MW-6				0	0	29.11		
MW-7				0	0	16.21		
MPE-1				0	0	23.42		
MPE-2				29	1	19.64		
MPE-3				0	0	18.20		
MPE-4				0	0	18.41		
MPE-5				0	0	17.97		
MPE-6				0	0	18.19		
MPE-7				0	0	16.36		

1) Arrive on site **Conduct H&S tailgate meeting and complete Daily H&S Checklist**

Fort Hamilton 9/09

System Status	Off
Shutdown Date	9/6/2009
Restart Attempts	1
Restart Date	Not Restarted
Alarm	Carbon Vessel Pressure Alarm

Number of MPE Wells Operating	7		Particle Filter Diff. Pressure	0	
Vac Before Dilution	-8.5		Blower Polot Tube Diff. Press.	1.5	
Vac After Dilution	-7		OWS Discharge Pump Pressure	0 (empty)	20 (operatng)
Blowe Discharge Pressure	0		Air Stripper Pressure	10.1	
Blower Discharge Termperature	152		Air Stripper Discharge Pressure	0	
Oxidizer Inlet Temperature	1300		Bag Filter 1 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Outlet Temperature	1422		Bag Filter 1 Pressure 2	0 (empty)	10 (pressure)
Blower Discharge Concentration	521		Bag Filter 2 Pressure 1	0 (empty)	10 (pressure)
Oxidizer Discharge Concentration	16		Bag Filter 2 Pressure 2	0 (empty)	10 (pressure)
Carbon Unit Pressure	1.5 (empty)	10 (operatng)	Holding Tank product level	Sheen	
Totalizer Flow Reading					

Note: Values for when system is running.

Time	Date	Note
8:15	9/9/2009	John on site with Terry McHugh. System appears to have shut down.
8:30	9/9/2009	Check alarms, it appears that there was a carbon pressure alarm, that lead to a high/high alarm on the Air Stripper and a High/High alarm on the OWS. Turn on Air Stripper pump periodically to clear its high high alarm, then turn on OWS pump to clear that alarm. Once all alarms are cleared attempt to restart system.
9:35	9/9/2009	Noticed that the integrity of the Carbon units has been compromised. The carbon units appear to have bowed and buckled under high pressure. Call adam.
9:55	9/9/2009	Take samples of the carbon units carbon in preparation for disposal. Prepare area for the replacement of the carbon drums.
10:50	9/9/2009	Take readings at the wells.
13:30	9/9/2009	John Off Site. Left system Off.

FORT HAMILTON AAFES 23 SEP 2009

PM: FEDOWITZ REPAIR & RESTART WED

DEPART @ 0500 DEPART @

ONSITE @ 0830 FINISH DEMOB

=ONSITE @ 0830

=DISCONNECT DRUMS

=DRUMS ONSITE @ 1130

=NEED TO MAKE TRIP TO HD FOR SUPPLIES

=DRAIN/PUMP OUT SYSTEM TO CLEAR ALARMS AFTER PLUMBING CARBON UNITS INTO SYSTEM

=SYSTEM CLEARED @ 1335

=GAUGE WELLS

WELL	DTP	DTW
MW-1	20.31	22.05
MPE-2	-	19.24
~~MPE~~ MW-5	18.81	21.76

BEGIN STARTUP PROCEDURE @ 1352

SYSTEM RUNNING @ 1420

VE HOUR 165707

AS HOUR 137997

COLLECT SYSTEM READINGS

=SYS VAC: -9" Hg

BLOWER PRESS. 0

FILTER DIFF: 0

BLOWER VAC -9.5

EFF TEMP 150

PITOT DIFF 2

PROCESS LEL: 5%

BAG 1' 3 psi

BAG 1" 3 psi

BAG 2' 3 psi

BAG 2" 3 psi

OWS PUMP 30

AS XFER 30

AS PRESSURE 10

TOTALIZER 0024341

OXIDIZER FLAME STRENGTH: 3.8

INLET: 1327

OUTLET 1240

PID INF: 91 ppm

PID EFF: 0 ppm

Site	Hamilton	PM: Gregory	Tech(s): AG	Date: 23 SEP 09
			Station Number:	Pages: of
Site/Address:	Fort Hamilton, NY		Weather Conditions:	

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: 09 SEP 09
Restart Attempts: NA
Restart Date: 23 SEP 09
Alarm: HIGH CARBON PRESSURE - SYSTEM SHUT DOWN DUE TO LEAKS IN LGACS ON 09 SEP

MPE System Data

Number of MPE wells Operating	ALL	Particle Filter Differential Pressure	0 "w.c.
Vac Before Dilution	-9.5 "Hg	Blower Pitot Tube Diff. Press.	2 "w.c.
Vac After Dilution	AG -9 "Hg	OWS Discharge Pump Pressure	30 psi
Blower Discharge Pressure	- "w.c.	Air Stripper Pressure	10 "w.c.
Blower Discharge Temperature	150 F	Air Stripper Discharge Pressure	30 psi
Oxidizer Inlet Temperature	1427 F	Bag Filter 1 Pressure 1	3 psi
Oxidizer Oulet Temperature	1240 F	Bag Filter 1 Pressure 2	3 psi
Blower Discharge Concentration	91 ppm	Bag Filter 2 Pressure 1	3 psi
Oxidizer Discharge Concentration	0 ppm	Bag Filter 2 Pressure 2	3 psi
Carbon Unit Pressure	— psi	Holding tank Product Level	0 ft
Totalizer Flow reading	24134.1 gallons		

GENERAL COMMENTS REPLACED LGAC'S & RESTARTED SYSTEM

CONTACTS Adam Gregory 443-864-3740

FORT HAMILTON AAFES 28 SEP 2009

PM: FEDOWITZ O&M/RESTART MON

INTO OFFICE @ 05:10 ONSITE @ 1000

DEPART @ 05:50 DEPART @ 15:00

= MOB TO HOME DEPOT: PIPING SUPPLIES

= ARRIVE ONSITE

= CHECK ALARMS

→ SYSTEM DOWN DUE TO POWER FAULT

= OTHER ALARMS: MS HI HI & OWS HI HI

= RESET BREAKERS

= RE-PIPE SECTIONS OF PIPE THAT MAY LEAK

= PETER KAUFRAHBIS ONSITE @ 1030

= COMPLETE RE-PIPING

= LUNCH @ 1230

= CLEAR ALARMS & BEGIN SYSTEM RESTART

= SYSTEM OPERATIONAL @ 1330

= SLOWLY BRING UP TO VACUUM

= SYSTEM @ FULL VACUUM @ 1356

= ALL WELLS RECOVERING FLUIDS

LET SYSTEM RUN UNTIL 1455

COLLECT SYSTEM READINGS @ 1500

SYSTEM HOUR METERS @ 1510

VE BLWR 165962

AS BLWR 138354

FORT HAMILTON AAFES 28 SEP 09

PM: FEDOWITZ O&M/RESTART MON

VACUUM: -28.5

DIF PRESS: 2

BLWR PRSS: 0

EFF TEMP: 175

EFF PITOT TUBE DIFF PRESS: PEGGED

OWS XFER: 35

AS PRESS: 19

AS XFER: 15

BAG1¹ 10

BAG1² 10

BAG2¹ 10

BAG2² 10

TOTALIZER: 242781

INF PID: 120

EFF PID: 0

PROCESS LEL: 4%

ENC. LEL: 0%

OXIDIZER DATA:

INLET TEMP: 1406

OUTLET TEMP: 1245

FLAME SIGNAL: 3.8

DIFF PRESS: 0.55

= CHECK SYSTEM @ 20:00 HRS - RUNNING OK

= CHECK SYSTEM @ 23:30 HRS - RUNNING OK

Site	Hamilton	PM: Gregory	Tech(s): AG	Date: 28 SEP 2009
			Station Number:	Pages: of
Site/Address:	Fort Hamilton, NY		Weather Conditions:	

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: 23 SEP 09
Restart Attempts: 1
Restart Date: 28 SEP 09 @ 1356 HRS
Alarm: POWER FAULT

MPE System Data

Number of MPE wells Operating	ALL		Particle Filter Differential Pressure	2	"w.c.
Vac Before Dilution	-9.5	"Hg	Blower Pitot Tube Diff. Press.	2	"w.c.
Vac After Dilution	—	"Hg	OWS Discharge Pump Pressure	35	psi
Blower Discharge Pressure	0	"w.c.	Air Stripper Pressure	15	"w.c.
Blower Discharge Temperature	175	F	Air Stripper Discharge Pressure	19	psi
Oxidizer Inlet Temperature	1406	F	Bag Filter 1 Pressure 1	10	psi
Oxidizer Oulet Temperature	1245	F	Bag Filter 1 Pressure 2	10	psi
Blower Discharge Concentration	120	ppm	Bag Filter 2 Pressure 1	10	psi
Oxidizer Discharge Concentration	0	ppm	Bag Filter 2 Pressure 2	10	psi
Carbon Unit Pressure	—	psi	Holding tank Product Level	0	ft
Totalizer Flow reading	242781	gallons			

GENERAL COMMENTS HEAVY TRACE LPH ON OIL/WATER SEPARATOR
CHECK SYSTEM @ 20:00 HRS - OK
CHECK SYSTEM @ 23:30 HRS - OK

CONTACTS Adam Gregory 443-864-3740

FORT HAMILTON AAFES 29 SEP 2009

PM: FEDOWITZ O&M / RESTART TUES

ONSITE @ 0800 FINISH DEMOB @

DEPART @

= CHECK SYSTEM @ 0800 - SYSTEM RUNNING OPTIMALLY

= OBSERVE SYSTEM FROM 0800 - 0945

= CHECK OUT OF HOTEL & RETURN TO SITE

= CALL PHYLLIS @ 10:10 -

↳ NOTIFY OF OPTIMAL SYSTEM OPERATION

= OBSERVE SYSTEM OPERATION FROM 1015 -

= OXIDIZER FLAME STRENGTH STEADY @ 3.8 V

= ALL WELLS RECOVERING FLUIDS, INCLUDING MW-5

COLLECT SYSTEM DATA @

SYSTEM HOUR METERS @ 1113

VB BLWR 167984

AS BLWR 140376

WAC -4.5

DIF PRES 1.5

BLWR PRES 0

EFF TEMP 180

EFF PITOT TUBE DIFF PRESS 2

GWS XFER 55

AS PRESS 19

AS XFER 15

BAG 1 PRESS 10

BAG 1² PRESS 10

BAG 2 PRESS 10

BAG 2² PRESS 10

TOTALIZER: 251125

PROC LEL 0 %

ENCL. LEL 0 %

PID READINGS: INF: 137

EFF: 0

OXIDIZER DATA:

INLET TEMP: 1420

OUTLET TEMP: 1238

FLAM SIG: 4.0

DIFF PRESS: 0.35" H_2O

Site	Hamilton	PM: Gregory	Tech(s): AG	Date: 29 SEP 09
			Station Number:	Pages: of
Site/Address:	Fort Hamilton, NY		Weather Conditions:	

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: NA
Restart Attempts: NA
Restart Date: NA
Alarm: NA

MPE System Data

Number of MPE wells Operating	ALL		Particle Filter Differential Pressure	1.5	"w.c.
Vac Before Dilution	9.5	"Hg	Blower Pitot Tube Diff. Press.	2	"w.c.
Vac After Dilution	/	"Hg	OWS Discharge Pump Pressure	35	psi
Blower Discharge Pressure	0	"w.c.	Air Stripper Pressure	19	"w.c.
Blower Discharge Temperature	180	F	Air Stripper Discharge Pressure	AG 0.15	psi
Oxidizer Inlet Temperature	1420	F	Bag Filter 1 Pressure 1	10	psi
Oxidizer Oulet Temperature	1238	F	Bag Filter 1 Pressure 2	10	psi
Blower Discharge Concentration	137	ppm	Bag Filter 2 Pressure 1	10	psi
Oxidizer Discharge Concentration	0	ppm	Bag Filter 2 Pressure 2	10	psi
Carbon Unit Pressure	/	psi	Holding tank Product Level	0	ft
Totalizer Flow reading	25112.5	gallons			

GENERAL COMMENTS

CONTACTS Adam Gregory 443-864-3740

FORT HAMILTON AAFES 4 OCT 2009

PM: FEDOWITZ TRAVEL SUN

- MOB TO OFFICE - INTO OFFICE @ 1700
- LOAD UP FOR SYSTEM TRANSITION TO SHAW
- DEPART OFFICE @ 1815
- ON-POST @ 2130
- CHECK IN @ 2145

- SYSTEM RUNNING OK

FORT HAMILTON AAFES 5 OCT 2009

PM: FEDOWITZ O&M/SYS. TRANSITION MON

- ONSITE @ 0730 FINISH DEMOB @ 1530
- DEPART SITE @ 1200

- CHECK OUT OF HOTEL & MOB TO SITE
- SYSTEM RUNNING ON ARRIVAL

- ~~COLLECT SYSTEM~~
- BUTTON UP SYSTEM & REMOVE ALL PLEXUS SUPPLIES, MATERIALS, AND EQUIPMENT
- COLLECT SYSTEM DATA @
- SYSTEM HOUR METERS @ 1046

VE BLOWER:	182339	TOTALIZER:	29776.4
AS BLOWER:	1547.31	INF PID:	162 ppm
VAC:	-9.5	EFF PID:	0 ppm
DIF PRESS:	1.5	PROC. LEL:	0
BLWR PRESS:	0	ENCL. LEL:	0
EFF TEMP:	172	OXIDIZER DATA	
EFF PITOT:	2	INLET TEMP:	1446
OWS XFER:	35	OUTLET TEMP:	1238
AS PRESS:	19	FLAME SIGNAL:	3.9
AS XFER:	15	DIFF PRESS:	0.55
BAG 1¹:	10		
BAG 1²:	10		
BAG 2¹:	10		
BAG 2²:	10		

Fort Hamilton AAFES

Well Data Sheet

5 OCTOBER 2009

Well ID	Date	Time	Vacuum ("Hg) ~~("H_2O)~~	PID Reading (ppm)	LEL (%)	DTW (ft)	DTP (ft)	Drop Tube Depth (ft)
MW-1	5 OCT 09	-	-	-	-	23.07	22.31	
MW-2		-	-	-	-	21.20	-	
MW-3		-	-	-	-	22.04	-	
MW-4		-	-	-	-	21.34	-	
MW-5		-	6	-	-	16.75	-	UNCHANGED
MW-6		-	-	-	-	25.01	-	
MW-7		-	-	-	-	19.83	-	
MPE-1		-	6	-	-	23.08	-	-
MPE-2		-	6.5	-	-	21.91	-	-
MPE-3		-	7	-	-	18.02	-	-
MPE-4		-	7	-	-	18.88	-	-
MPE-5		-	7.5	-	-	18.38	-	-
MPE-6		-	6	-	-	18.11	-	-
MPE-7	5 OCT 09	-	7	-	-	18.04	-	-

1) Arrive on site **Conduct H&S tailgate meeting and complete Daily H&S Checklist**

Site	Hamilton	PM: Gregory	Tech(s): AG	Date: 5 OCT 09
			Station Number:	Pages: of
Site/Address:	Fort Hamilton, NY		Weather Conditions:	

O&M DATA SHEET

MPE System

ARRIVE
DEPART

MPE System Status

System status (ON) (OFF)
Shutdown Date: NA
Restart Attempts: NA
Restart Date: NA
Alarm: NA

MPE System Data

Number of MPE wells Operating	ALL		Particle Filter Differential Pressure	15	"w.c.
Vac Before Dilution	9.5	"Hg	Blower Pitot Tube Diff. Press.	2	"w.c.
Vac After Dilution	/	"Hg	OWS Discharge Pump Pressure	35	psi
Blower Discharge Pressure	0	"w.c.	Air Stripper Pressure	19	"w.c.
Blower Discharge Temperature	172	F	Air Stripper Discharge Pressure	15	psi
Oxidizer Inlet Temperature	1416	F	Bag Filter 1 Pressure 1	10	psi
Oxidizer Oulet Temperature	1238	F	Bag Filter 1 Pressure 2	10	psi
Blower Discharge Concentration	162	ppm	Bag Filter 2 Pressure 1	10	psi
Oxidizer Discharge Concentration	0	ppm	Bag Filter 2 Pressure 2	10	psi
Carbon Unit Pressure	/	psi	Holding tank Product Level	0	ft
Totalizer Flow reading	29776.4	gallons			

GENERAL COMMENTS HEAVY SHEEN IN OWS

CONTACTS Adam Gregory 443-864-3740

Appendix B
Discharge Permit

The City of New York

DEPARTMENT OF ENVIRONMENTAL PROTECTION

59-17 Junction Boulevard
Flushing, New York 11373

Emily Lloyd
Commissioner

Douglas S. Greeley, P.E.
Deputy Commissioner

Bureau of Wastewater Treatment

Tel. (718) 595-6389
Fax (718) 595-6950
dgreeley@dep.nyc.gov

October 21, 2008

US Army Garrison Fort Hamilton
Directorate of Public Works
129 Wainwright Drive
Brooklyn, NY 11252
Attn: Peter Koutroubis

Re: Groundwater Discharge
Fort Hamilton
File Case # C-4473

Dear Mr. Koutroubis:

This is in response to the October 2nd, 2007 and August 7th, September 4th, September 26th, and October 15th, 2008 submissions, requesting for the permission to discharge up to **9,000 gallons per day** (gpd) of groundwater generated from the remediation activities at 200 General Lee Avenue, Brooklyn, NY 11252. The groundwater discharge will be treated through a system consisting of a 25 gpm oil/water separator, a low profile air stripper, two bag filters, and two 200 lb carbon units, per provided schematic and information, before discharging to an existing manhole. The manhole leads to the existing 30" combined sewer located at Fort Hamilton Parkway between 100th and 101st Streets in Brooklyn, NY 11252.

Based upon the information, schematic and analytical data submitted, you are hereby conditionally authorized to discharge up to 9,000 gpd of groundwater, treated through the above system, per provided schematic and information, as specified in your submissions, **for a period of one year,** to the combined sewer at the above mentioned location. **This Letter of Approval shall expire at midnight on October 20, 2009.**

This conditional approval, however, is subject to your obtaining a groundwater discharge Approval, specifying allowable flow rates, from the Division of Permitting and Connections, Bureau of Water and Sewer Operations, if discharges exceed 10,000 gpd. You are also required to follow manufacture specifications for the operation and maintenance of the selected equipment. **This Letter of Approval is contingent upon permittee's compliance with any other Federal, State or Local laws applicable to the permitted activity.**

Payment shall be made to the Bureau of Customer Service for groundwater discharge into the New York City Wastewater System in accordance with the Water and Wastewater Rate Schedule established by the New York City Water Board.

You must notify this section in writing prior to the commencement of discharge. In addition, you are required to hold the groundwater to the maximum extent practicable during heavy wet weather events. Refer to the File Case C-4473 in any correspondence to this office.

NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DEP
www.nyc.gov/dep
DIAL 311 Government Information and Services for NYC

You must contact the Division of Air, Noise, Permitting, Enforcement and Policy regarding the air stripper. You are also required to properly maintain the selected treatment equipment.

This Letter of Approval is an order of the Commissioner of the Department of Environmental Protection. Please be advised that failure to comply with this Letter of Approval may result in the issuance of Notices of Violation (returnable to the New York City Environmental Control Board). Notices of Violation carry penalties of up to $10,000 a day, per violation and/or revocation of the Letter of Approval.

If you have any questions concerning this matter, please contact Mr. Sean Hulbert, Engineer, at (718) 595-4715.

Sincerely,

Frances Leung

Frances Leung, P.E., Chief,
IPP Inspection & Permit Section

ORDER TYPE POMSC PO-BLDG PRPS MS
ACCOUNT 8000409765001 NAME U S ARMY DPW, FT. HAMILTON PHONE 718-630-4961
ADD NM BORO 3 BLK 6153 LOT 1 SEC 18 COMM BRD 310
ADDR 9275 FT HAMILTON PY SPCL PREM INS
BROOKLYN NY 11209
SPCL READ INSTR
BUILDING CLASS Y4 MILITARY/NAVAL
CROSS STREETS 92 STREET 94 STREET
UMS VARIANCE CODE
NON UMS VARIANCE CODE

ISSUED BY
CITY OF NEW YORK
DEP/BCSLLR
CSR

ASGN TO 0000 STATUS A PEND/INITIATED REAS A NORMAL ISS DATE 02/13/09
CONTRACT 0000 BATCH 00000 PLACED BY EXPEDITOR PH #
WANTED BY DATE 04/13/09 TIME 0000 CREATED BY SLG DATE 02/13/09
CONTRACT ITEM CODES
SPCL INST PO-BLDG PRPS MS U.S. ARMY GARRISON FORT HAMILTON, DEWATERING @
FORT HAMILTON, CASE#: C-4473, TTL DISCHARGE 1,594,440 GALLONS

POMSC - PO-BLDG PRPS MS PERMIT NUMBER 533119
SVC SIZE 000 SVC SIZE DESC TAP SIZE 000 TAP SIZE DESC
FEE 7,822.97 NO DAYS USAGE 000 START/END DATE 00/00/00 00/00/00
APPLICATION DATE 00/00/00 EXPIRE DATE 00/00/00 START/END TIME 0000 0000
PLUMBER LICENSE NO 0000000 EXPIRE DATE 00/00/00 STATUS
ADDRESS

ADDITIONAL ORDER INFORMATION

COMPLETION DATE _____ WO STATUS _____
COMPLETED BY (ID) _____ WO STATUS REASON _____
COMPLETION TIME IN _____ COMPLETION TIME OUT _____

COMMENTS _____

_____

_____

_____

Appendix C
Groundwater Analytical Report

CT LABORATORIES

delivering more than data from your environmental analyses

ANALYTICAL REPORT

This package contains ____24____ page(s).
(including the cover page)

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

For analyses that require NELAP accreditation, all analytes, by matrix and method, are accredited following current NELAP standards unless specifically noted in this document.

ACCREDITED IN ACCORDANCE WITH nelac

1230 Lange Court • Baraboo, WI 53913 • 608-356-2760 • www.ctlaboratories.com

CT LABORATORIES
delivering more than data from your environmental analyses

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www.ctlaboratories.com

ANALYTICAL REPORT

PLEXUS SCIENTIFIC CORPORATION
JOHN KEARNS
9104 GUILFORD ROAD
SUITE 1010
COLUMBIA, MD 21046

Project Name: FORT HAMILTON
Contract #: 2145
Project #: 8095-065
Folder #: 75731
Purchase Order #: 2386

Arrival Temperature: See COC
Report Date: 10/19/2009
Date Received: 10/6/2009
Reprint Date: 10/19/2009

CT LAB#: 732151 Sample Description: SYSTEM GROUNDWATER-INF Sampled: 10/5/2009 1041

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results											
Acetophenone	<0.13	ug/L	0.13	0.46	0.13	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Aniline	<0.33	ug/L	0.33	1.1	0.33	1	M,Y	10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C
Hexachlorocyclopentadiene	<0.12	ug/L	0.12	0.42	0.12	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Pyridine	<1.8	ug/L	1.8	6.1	1.8	1	Y	10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
1,2,4-Trichlorobenzene	<0.072	ug/L	0.072	0.24	0.072	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
1,2-Dichlorobenzene	<0.082	ug/L	0.082	0.29	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
1,3-Dichlorobenzene	<0.082	ug/L	0.082	0.27	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
1,4-Dichlorobenzene	<0.082	ug/L	0.082	0.29	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,4,5-Trichlorophenol	<0.81	ug/L	0.81	2.7	0.81	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,4,6-Trichlorophenol	<0.89	ug/L	0.89	2.9	0.89	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,4-Dichlorophenol	<0.63	ug/L	0.63	2.1	0.63	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,4-Dimethylphenol	<1.2	ug/L	1.2	4.1	1.2	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,4-Dinitrophenol	<1.6	ug/L	1.6	5.2	1.6	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,4-Dinitrotoluene	<0.20	ug/L	0.20	0.64	0.20	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,6-Dichlorophenol	<0.95	ug/L	0.95	3.2	0.95	1	Q,M	10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2,6-Dinitrotoluene	<0.12	ug/L	0.12	0.39	0.12	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2-Chloronaphthalene	<0.10	ug/L	0.10	0.35	0.10	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^

Solid sample results reported on a Dry Weight Basis

ACCREDITED IN ACCORDANCE WITH nelac

CT LAB#: 732151 Sample Description: SYSTEM GROUNDWATER-INF Sampled: 10/5/2009 1041

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
2-Chlorophenol	<0.70	ug/L	0.70	2.3	0.70	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2-Methylnaphthalene	2.2	ug/L	0.12	0.42	0.12	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2-Methylphenol	<0.90	ug/L	0.90	3.0	0.90	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2-Nitroaniline	<0.11	ug/L	0.11	0.36	0.11	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
2-Nitrophenol	<0.62	ug/L	0.62	2.1	0.62	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
3 & 4-Methylphenol	<0.69	ug/L	0.69	2.3	0.69	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
3,3'-Dichlorobenzidine	<3.1	ug/L	3.1	10	3.1	1	M,Y	10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
3-Nitroaniline	<0.22	ug/L	0.22	0.72	0.22	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
4,6-Dinitro-2-methylphenol	<0.96	ug/L	0.96	3.2	0.96	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
4-Bromophenyl-phenyl ether	<0.15	ug/L	0.15	0.53	0.15	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
4-Chloro-3-methylphenol	<1.1	ug/L	1.1	3.8	1.1	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
4-Chloroaniline	<0.18	ug/L	0.18	0.59	0.18	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
4-Chlorophenyl-phenyl ether	<0.082	ug/L	0.082	0.26	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
4-Nitroaniline	<0.47	ug/L	0.47	1.6	0.47	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
4-Nitrophenol	<0.64	ug/L	0.64	2.1	0.64	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Acenaphthene	<0.10	ug/L	0.10	0.36	0.10	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Acenaphthylene	<0.12	ug/L	0.12	0.40	0.12	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Anthracene	<0.093	ug/L	0.093	0.31	0.093	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Azobenzene & 1,2-Diphenylhydra	<0.19	ug/L	0.19	0.62	0.19	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzidine	<30	ug/L	30	100	30	1	Q,M	10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzo(a)anthracene	<0.082	ug/L	0.082	0.26	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzo(a)pyrene	<0.072	ug/L	0.072	0.23	0.072	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzo(b)fluoranthene	<0.10	ug/L	0.10	0.33	0.10	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzo(g,h,i)perylene	<0.10	ug/L	0.10	0.33	0.10	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzo(k)fluoranthene	<0.093	ug/L	0.093	0.30	0.093	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzoic acid	<12	ug/L	12	39	12	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Benzyl alcohol	<0.32	ug/L	0.32	1.1	0.32	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Bis(2-chloroethoxy)methane	<0.093	ug/L	0.093	0.30	0.093	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Bis(2-chloroethyl)ether	<0.21	ug/L	0.21	0.68	0.21	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^

Solid sample results reported on a Dry Weight Basis

ACCREDITED IN ACCORDANCE WITH nelac

CT LAB#: 732151 Sample Description: SYSTEM GROUNDWATER-INF Sampled: 10/5/2009 1041

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Bis(2-chloroisopropyl)ether	<0.093	ug/L	0.093	0.32	0.093	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Bis(2-ethylhexyl)phthalate	<0.63	ug/L	0.63	2.1	0.63	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Butylbenzylphthalate	<0.11	ug/L	0.11	0.39	0.11	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Carbazole	<0.14	ug/L	0.14	0.46	0.14	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Chrysene	<0.082	ug/L	0.082	0.29	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Di-n-butylphthalate	<0.77	ug/L	0.77	2.6	0.77	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Di-n-octylphthalate	1.5	ug/L	0.16	0.54	0.16	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Dibenzo(a,h)anthracene	<0.14	ug/L	0.14	0.49	0.14	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Dibenzofuran	<0.082	ug/L	0.082	0.29	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Diethylphthalate	<0.18	ug/L	0.18	0.58	0.18	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Dimethylphthalate	<0.093	ug/L	0.093	0.31	0.093	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Fluoranthene	<0.093	ug/L	0.093	0.31	0.093	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Fluorene	<0.15	ug/L	0.15	0.53	0.15	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Hexachlorobenzene	<0.23	ug/L	0.23	0.76	0.23	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Hexachlorobutadiene	<0.31	ug/L	0.31	1.0	0.31	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Hexachloroethane	<0.072	ug/L	0.072	0.25	0.072	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Indeno(1,2,3-cd)pyrene	<0.093	ug/L	0.093	0.30	0.093	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Isophorone	<0.11	ug/L	0.11	0.39	0.11	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
N-Nitroso-di-n-propylamine	<0.19	ug/L	0.19	0.62	0.19	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
N-Nitrosodimethylamine	<0.72	ug/L	0.72	2.4	0.72	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
N-Nitrosodiphenylamine & Diphn	<0.20	ug/L	0.20	0.66	0.20	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
N-Nitrosopyrrolidine	<0.11	ug/L	0.11	0.38	0.11	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Naphthalene	5.3	ug/L	0.072	0.24	0.072	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Nitrobenzene	<0.15	ug/L	0.15	0.53	0.15	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Pentachlorophenol	<0.92	ug/L	0.92	3.0	0.92	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Phenanthrene	<0.082	ug/L	0.082	0.29	0.082	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Phenol	<0.32	ug/L	0.32	1.1	0.32	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Pyrene	<0.10	ug/L	0.10	0.34	0.10	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C ^
Surr: 2,4,6-Tribromophenol	81	% Recovery	40	125	40-125	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C

Solid sample results reported on a Dry Weight Basis

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CT LAB#: 732151 Sample Description: SYSTEM GROUNDWATER-INF Sampled: 10/5/2009 1041

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Surr: 2-Fluorobiphenyl	68	% Recovery	50	110	50-110	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C
Surr: 2-Fluorophenol	44	% Recovery	20	110	20-110	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C
Surr: Nitrobenzene-d5	71	% Recovery	40	110	40-110	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C
Surr: Phenol-d5	27	% Recovery	10	115	10-115	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C
Surr: Terphenyl-d14	70	% Recovery	50	135	50-135	1		10/7/2009 13:00	10/09/2009 11:57	JJY	EPA 8270C
1,2,4-Trimethylbenzene	160	ug/L	1.2	4.1	5.0	5			10/14/2009 23:46	BMS	EPA 8260B ^
1,3,5-Trimethylbenzene	110	ug/L	0.95	3.2	5.0	5			10/14/2009 23:46	BMS	EPA 8260B ^
Benzene	0.96	ug/L	0.16	0.55	1.0	1	J		10/14/2009 15:03	APG	EPA 8260B ^
Ethylbenzene	0.57	ug/L	0.28	0.94	1.0	1	J		10/14/2009 15:03	APG	EPA 8260B ^
Isopropylbenzene	0.60	ug/L	0.20	0.67	1.0	1	J		10/14/2009 15:03	APG	EPA 8260B ^
m & p-Xylene	86	ug/L	0.50	1.6	2.0	1			10/14/2009 15:03	APG	EPA 8260B ^
Methyl tert-butyl ether	4.0	ug/L	0.23	0.76	1.0	1			10/14/2009 15:03	APG	EPA 8260B ^
n-Butylbenzene	24	ug/L	0.24	0.79	1.0	1			10/14/2009 15:03	APG	EPA 8260B ^
n-Propylbenzene	0.48	ug/L	0.20	0.68	1.0	1	J		10/14/2009 15:03	APG	EPA 8260B ^
Naphthalene	18	ug/L	0.60	1.8	1.8	1			10/14/2009 15:03	APG	EPA 8260B ^
o-Xylene	54	ug/L	0.50	1.6	1.6	1			10/14/2009 15:03	APG	EPA 8260B ^
p-Isopropyltoluene	3.8	ug/L	0.17	0.56	1.0	1			10/14/2009 15:03	APG	EPA 8260B ^
sec-Butylbenzene	0.73	ug/L	0.29	0.98	1.0	1	J		10/14/2009 15:03	APG	EPA 8260B ^
tert-Butylbenzene	0.27	ug/L	0.23	0.76	1.0	1	J		10/14/2009 15:03	APG	EPA 8260B ^
Toluene	2.9	ug/L	0.20	0.68	1.0	1			10/14/2009 15:03	APG	EPA 8260B ^
1,2 Dichloroethane-d4	99	% Recovery	70	120	70-120	1			10/14/2009 15:03	APG	EPA 8260B
Bromofluorobenzene	96	% Recovery	75	120	75-120	1			10/14/2009 15:03	APG	EPA 8260B
d8-Toluene	101	% Recovery	85	120	85-120	1			10/14/2009 15:03	APG	EPA 8260B
Dibromofluoromethane	101	% Recovery	85	115	85-115	1			10/14/2009 15:03	APG	EPA 8260B

CT LAB#: 732152 Sample Description: SYSTEM GROUNDWATER-EFF Sampled: 10/5/2009 1034

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method

Solid sample results reported on a Dry Weight Basis

CT LAB#: 732152 Sample Description: SYSTEM GROUNDWATER-EFF Sampled: 10/5/2009 1034

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Organic Results											
Acetophenone	<0.14	ug/L	0.14	0.47	0.14	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Aniline	<0.33	ug/L	0.33	1.1	0.33	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C
Hexachlorocyclopentadiene	<0.13	ug/L	0.13	0.43	0.13	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Pyridine	<1.8	ug/L	1.8	6.1	1.8	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
1,2,4-Trichlorobenzene	<0.073	ug/L	0.073	0.24	0.073	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
1,2-Dichlorobenzene	<0.083	ug/L	0.083	0.29	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
1,3-Dichlorobenzene	<0.083	ug/L	0.083	0.27	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
1,4-Dichlorobenzene	<0.083	ug/L	0.083	0.29	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,4,5-Trichlorophenol	<0.82	ug/L	0.82	2.8	0.82	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,4,6-Trichlorophenol	<0.90	ug/L	0.90	3.0	0.90	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,4-Dichlorophenol	<0.64	ug/L	0.64	2.1	0.64	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,4-Dimethylphenol	<1.2	ug/L	1.2	4.1	1.2	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,4-Dinitrophenol	<1.6	ug/L	1.6	5.3	1.6	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,4-Dinitrotoluene	<0.20	ug/L	0.20	0.65	0.20	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,6-Dichlorophenol	<0.96	ug/L	0.96	3.2	0.96	1	Q	10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2,6-Dinitrotoluene	<0.13	ug/L	0.13	0.40	0.13	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2-Chloronaphthalene	<0.10	ug/L	0.10	0.35	0.10	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2-Chlorophenol	<0.71	ug/L	0.71	2.4	0.71	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2-Methylnaphthalene	<0.13	ug/L	0.13	0.43	0.13	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2-Methylphenol	<0.91	ug/L	0.91	3.0	0.91	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2-Nitroaniline	<0.11	ug/L	0.11	0.36	0.11	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
2-Nitrophenol	<0.63	ug/L	0.63	2.1	0.63	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
3 & 4-Methylphenol	<0.70	ug/L	0.70	2.3	0.70	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
3,3'-Dichlorobenzidine	<3.1	ug/L	3.1	10	3.1	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
3-Nitroaniline	<0.22	ug/L	0.22	0.73	0.22	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
4,6-Dinitro-2-methylphenol	<0.97	ug/L	0.97	3.2	0.97	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
4-Bromophenyl-phenyl ether	<0.16	ug/L	0.16	0.53	0.16	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^

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CT LAB#: 732152 Sample Description: SYSTEM GROUNDWATER-EFF Sampled: 10/5/2009 1034

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
4-Chloro-3-methylphenol	<1.2	ug/L	1.2	3.9	1.2	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
4-Chloroaniline	<0.18	ug/L	0.18	0.59	0.18	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
4-Chlorophenyl-phenyl ether	<0.083	ug/L	0.083	0.26	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
4-Nitroaniline	<0.48	ug/L	0.48	1.6	0.48	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
4-Nitrophenol	<0.65	ug/L	0.65	2.2	0.65	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Acenaphthene	<0.10	ug/L	0.10	0.36	0.10	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Acenaphthylene	<0.13	ug/L	0.13	0.41	0.13	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Anthracene	<0.094	ug/L	0.094	0.31	0.094	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Azobenzene & 1,2-Diphenylhydra	<0.19	ug/L	0.19	0.63	0.19	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzidine	<31	ug/L	31	100	31	1	Q	10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzo(a)anthracene	<0.083	ug/L	0.083	0.26	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzo(a)pyrene	<0.073	ug/L	0.073	0.23	0.073	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzo(b)fluoranthene	<0.10	ug/L	0.10	0.33	0.10	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzo(g,h,i)perylene	<0.10	ug/L	0.10	0.33	0.10	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzo(k)fluoranthene	<0.094	ug/L	0.094	0.30	0.094	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzoic acid	<12	ug/L	12	40	12	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Benzyl alcohol	<0.32	ug/L	0.32	1.1	0.32	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Bis(2-chloroethoxy)methane	<0.094	ug/L	0.094	0.30	0.094	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Bis(2-chloroethyl)ether	<0.21	ug/L	0.21	0.69	0.21	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Bis(2-chloroisopropyl)ether	<0.094	ug/L	0.094	0.32	0.094	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Bis(2-ethylhexyl)phthalate	<0.64	ug/L	0.64	2.1	0.64	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Butylbenzylphthalate	<0.11	ug/L	0.11	0.40	0.11	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Carbazole	<0.15	ug/L	0.15	0.47	0.15	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Chrysene	<0.083	ug/L	0.083	0.29	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Di-n-butylphthalate	<0.78	ug/L	0.78	2.6	0.78	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Di-n-octylphthalate	<0.17	ug/L	0.17	0.54	0.17	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Dibenzo(a,h)anthracene	<0.15	ug/L	0.15	0.50	0.15	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Dibenzofuran	<0.083	ug/L	0.083	0.29	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Diethylphthalate	<0.18	ug/L	0.18	0.58	0.18	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^

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Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Dimethylphthalate	<0.094	ug/L	0.094	0.31	0.094	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Fluoranthene	<0.094	ug/L	0.094	0.31	0.094	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Fluorene	<0.16	ug/L	0.16	0.53	0.16	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Hexachlorobenzene	<0.23	ug/L	0.23	0.77	0.23	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Hexachlorobutadiene	<0.31	ug/L	0.31	1.0	0.31	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Hexachloroethane	<0.073	ug/L	0.073	0.25	0.073	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Indeno(1,2,3-cd)pyrene	<0.094	ug/L	0.094	0.30	0.094	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Isophorone	<0.11	ug/L	0.11	0.40	0.11	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
N-Nitroso-di-n-propylamine	<0.19	ug/L	0.19	0.63	0.19	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
N-Nitrosodimethylamine	<0.73	ug/L	0.73	2.4	0.73	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
N-Nitrosodiphenylamine & Diphn	<0.20	ug/L	0.20	0.67	0.20	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
N-Nitrosopyrrolidine	<0.11	ug/L	0.11	0.39	0.11	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Naphthalene	<0.073	ug/L	0.073	0.24	0.073	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Nitrobenzene	<0.16	ug/L	0.16	0.53	0.16	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Pentachlorophenol	<0.93	ug/L	0.93	3.1	0.93	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Phenanthrene	<0.083	ug/L	0.083	0.29	0.083	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Phenol	<0.32	ug/L	0.32	1.1	0.32	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Pyrene	<0.10	ug/L	0.10	0.34	0.10	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C ^
Surr: 2,4,6-Tribromophenol	80	% Recovery	40	125	40-125	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C
Surr: 2-Fluorobiphenyl	75	% Recovery	50	110	50-110	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C
Surr: 2-Fluorophenol	49	% Recovery	20	110	20-110	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C
Surr: Nitrobenzene-d5	75	% Recovery	40	110	40-110	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C
Surr: Phenol-d5	30	% Recovery	10	115	10-115	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C
Surr: Terphenyl-d14	74	% Recovery	50	135	50-135	1		10/7/2009 13:00	10/09/2009 11:38	JJY	EPA 8270C
1,2,4-Trimethylbenzene	<0.24	ug/L	0.24	0.81	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
1,3,5-Trimethylbenzene	<0.19	ug/L	0.19	0.63	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
Benzene	<0.16	ug/L	0.16	0.55	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
Ethylbenzene	<0.28	ug/L	0.28	0.94	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
Isopropylbenzene	<0.20	ug/L	0.20	0.67	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^

Solid sample results reported on a Dry Weight Basis

ACCREDITED IN ACCORDANCE WITH nelac

CT LAB#: 732152 Sample Description: SYSTEM GROUNDWATER-EFF Sampled: 10/5/2009 1034

Analyte	Result	Units	LOD	LOQ	Reporting Limit	Dilution	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
m & p-Xylene	<0.50	ug/L	0.50	1.6	2.0	1			10/14/2009 23:04	APG	EPA 8260B ^
Methyl tert-butyl ether	<0.23	ug/L	0.23	0.76	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
n-Butylbenzene	<0.24	ug/L	0.24	0.79	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
n-Propylbenzene	<0.20	ug/L	0.20	0.68	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
Naphthalene	<0.60	ug/L	0.60	1.8	1.8	1			10/14/2009 23:04	APG	EPA 8260B ^
o-Xylene	<0.50	ug/L	0.50	1.6	1.6	1			10/14/2009 23:04	APG	EPA 8260B ^
p-Isopropyltoluene	<0.17	ug/L	0.17	0.56	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
sec-Butylbenzene	<0.29	ug/L	0.29	0.98	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
tert-Butylbenzene	<0.23	ug/L	0.23	0.76	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
Toluene	<0.20	ug/L	0.20	0.68	1.0	1			10/14/2009 23:04	APG	EPA 8260B ^
1,2 Dichloroethane-d4	93	% Recovery	70	120	70-120	1			10/14/2009 23:04	APG	EPA 8260B
Bromofluorobenzene	99	% Recovery	75	120	75-120	1			10/14/2009 23:04	APG	EPA 8260B
d8-Toluene	100	% Recovery	85	120	85-120	1			10/14/2009 23:04	APG	EPA 8260B
Dibromofluoromethane	103	% Recovery	85	115	85-115	1			10/14/2009 23:04	APG	EPA 8260B

Solid sample results reported on a Dry Weight Basis

ACCREDITED IN ACCORDANCE WITH nelac

Notes regarding entire Chain of Custody:

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. The test results in this report meet NELAP requirements for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

Submitted by: _PML___

Pat M. Letterer
Project Manager
608-356-2760

QC Qualifiers

Code	Description
A	Analyte averaged calibration criteria within acceptable limits.
B	Analyte detected in associated Method Blank.
C	Toxicity present in BOD sample.
D	Diluted Out.
E	Safe, No Total Coliform detected.
F	Unsafe, Total Coliform detected, no E. Coli detected.
G	Unsafe, Total Coliform detected and E. Coli detected.
H	Holding time exceeded.
J	Estimated value.
L	Significant peaks were detected outside the chromatographic window.
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.
N	Insufficient BOD oxygen depletion.
O	Complete BOD oxygen depletion.
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.
Q	Laboratory Control Sample outside acceptance limits.
R	See Narrative at end of report.
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.
T	Sample received with improper preservation or temperature.
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.
W	Sample amount received was below program minimum.
X	Analyte exceeded calibration range.
Y	Replicate/Duplicate precision outside acceptance limits.
Z	Calibration criteria exceeded.

Current CT Laboratories Certifications

Illinois NELAP ID# 200046

Kansas NELAP ID# E-10368

Kentucky ID# 0023

Pennsylvania NELAP ID# 68-04201

New Jersey NELAP ID# WI001

North Dakota ID# R-171

Wisconsin Chemistry ID# 157066030

Wisconsin Bacteriology ID# 105-289

Rev. 3/2006

Chain of Custody

Page 1 of 1

CTLaboratories

1230 Lange Court, Baraboo, WI 53913

Company: PLEXUS SCIENTIFIC
Project Contact: ADAM GREGORY
Telephone: 410-715-3865 XT 109
Project Name: FT HAMILTON AAFES
Project Number: 6095-065
Project Location: BROOKLYN, NY
Sampled By: AG

Regulatory Program:
UST RCRA SDWA NPDES
Solid Waste Other

Turnaround Time
Normal RUSH*
Date Needed

*Notify Lab prior to sending in RUSH samples. Surcharges: 24 hr 200%, ~~2-3 days 100%~~, ~~4-9~~ days 50%, subject to change without notice.

Folder #: 75731
Company: PLEXUS SCIENTIFIC C
Project: FORT HAMILTON
Logged By: LAW PM: PM

Mail Report To: ADAM GREGORY
Company: PLEXUS SCIENTIFIC
Address: 9104 GUILFORD RD STE 10
City/State/Zip: COLUMBIA, MD 21045
Invoice To: BOB HOBSON
Company: SAA
Address:
City/State/Zip:
PO No.

Client Special Instructions:

Landfill License Number:

Filt? Y(N)

Collection Date	Collection Time	Grab/Comp	Sample ID Description	WDNR Well ID #	**Matrix	SVOC 8270	VOC 8260						Total # of Containers	Preservation*	Lab ID #
				AG	~~G~~ AG	Fill in Spaces with Bottles per Test									
5 OCT 2009	1041	G	SYSTEM GROUNDWATER-INF	—	W	2	3						5		732151
5 OCT 2009	1034	G	SYSTEM GROUNDWATER-EFF	—	W	2	3						5		732152

**Preservation Code
A=None B=HCL
C=H2SO4 D=HNO3
E=Encore F=Methanol
G=NaOH
O=Other

Relinquished By	Date/Time	Relinquished By:	Date/Time
[signature]	6 OCT. 1700		
Received by:	**Date/Time**	**Received for Laboratory by:**	**Date/Time**
		LW	10-6-09 1500

Ice Present Yes No
Temperature 3.8°C
Cooler # 1.6
10-6-09 1457

**Matrix
S-Soil A-Air SI-Sludge M-Misc Waste
GW-Groundwater SW-Surface Water
WW-Wastewater DW-Drinking Water

9/10/2009 8:19 AM FROM: (608) 356-2766 CT Laboratories TO: 914107153866 PAGE: 001 OF 001

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QC SUMMARY REPORT

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Matrix Spike Duplicate Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	GROUND WATER
CTLab #:	732457	Analysis Time:	14:04	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:	732454	Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
1,2,4-Trichlorobenzene	28.0	ug/L	0		40.8	69	35	---	105	5	30
1,2-Dichlorobenzene	26.7	ug/L	0		40.8	65	35	---	100	5	30
1,3-Dichlorobenzene	25.4	ug/L	0		40.8	62	30	---	100	5	30
1,4-Dichlorobenzene	25.7	ug/L	0		40.8	63	30	---	100	6	30
2,4,5-Trichlorophenol	30.1	ug/L	0		40.8	74	50	---	110	8	30
2,4,6-Trichlorophenol	30.6	ug/L	0		40.8	75	50	---	115	8	30
2,4-Dichlorophenol	29.2	ug/L	0		40.8	72	50	---	105	5	30
2,4-Dimethylphenol	30.0	ug/L	0		40.8	74	30	---	110	8	30
2,4-Dinitrophenol	38.9	ug/L	0		40.8	95	15	---	140	11	30
2,4-Dinitrotoluene	29.8	ug/L	0		40.8	73	50	---	120	12	30
2,6-Dichlorophenol	21.3	ug/L	0		40.8	52	68	---	112	8	30
2,6-Dinitrotoluene	29.4	ug/L	0		40.8	72	50	---	115	9	30
2-Chloronaphthalene	28.4	ug/L	0		40.8	70	50	---	105	11	30
2-Chlorophenol	27.4	ug/L	0		40.8	67	35	---	105	7	30
2-Methylnaphthalene	31.1	ug/L	2.2		40.8	71	45	---	105	6	30
2-Methylphenol	26.7	ug/L	0		40.8	65	40	---	110	11	30
2-Nitroaniline	30.1	ug/L	0		40.8	74	50	---	115	4	30
2-Nitrophenol	31.0	ug/L	0		40.8	76	40	---	115	7	30
3 & 4-Methylphenol	26.8	ug/L	0		40.8	66	30	---	110	9	30
3,3'-Dichlorobenzidine	9.90	ug/L	0		40.8	24	20	---	110	40	30
3-Nitroaniline	22.1	ug/L	0		40.8	54	20	---	125	4	30
4,6-Dinitro-2-methylphenol	33.8	ug/L	0		40.8	83	40	---	130	9	30
4-Bromophenyl-phenyl ether	30.4	ug/L	0		40.8	75	50	---	115	8	30
4-Chloro-3-methylphenol	32.2	ug/L	0		40.8	79	45	---	110	2	30
4-Chloroaniline	7.35	ug/L	0		40.8	18	15	---	110	2	30
4-Chlorophenyl-phenyl ether	29.4	ug/L	0		40.8	72	50	---	110	8	30
4-Nitroaniline	22.0	ug/L	0		40.8	54	35	---	120	0	30
4-Nitrophenol	29.7	ug/L	0		40.8	73	1	---	125	16	30
Acenaphthene	28.5	ug/L	0		40.8	70	45	---	110	10	30
Acenaphthylene	28.6	ug/L	0		40.8	70	50	---	105	9	30
Acetophenone	47.8	ug/L	0		40.8	117	38	---	141	6	30
Aniline	2.38	ug/L	0		40.8	6	15	---	118	32	30
Anthracene	31.1	ug/L	0		40.8	76	55	---	110	5	30
Azobenzene & 1,2-Diphenylhydra	56.2	ug/L	0		81.6	69	55	---	115	6	30
Benzidine	2.04	ug/L	0	U	40.8	0	1	---	165	0	30

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Matrix Spike Duplicate Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	GROUND WATER
CTLab #:	732457	Analysis Time:	14:04	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:	732454	Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Benzo(a)anthracene	30.5	ug/L	0		40.8	75	55	---	110	3	30
Benzo(a)pyrene	30.1	ug/L	0		40.8	74	55	---	110	4	30
Benzo(b)fluoranthene	30.3	ug/L	0		40.8	74	45	---	120	1	30
Benzo(g,h,i)perylene	31.9	ug/L	0		40.8	78	40	---	125	3	30
Benzo(k)fluoranthene	29.0	ug/L	0		40.8	71	45	---	125	11	30
Benzoic acid	37.5	ug/L	0		40.8	92	0	---	125	17	30
Benzyl alcohol	30.6	ug/L	0		40.8	75	30	---	110	8	30
Bis(2-chloroethoxy)methane	29.4	ug/L	0		40.8	72	45	---	105	6	30
Bis(2-chloroethyl)ether	28.1	ug/L	0		40.8	69	35	---	110	7	30
Bis(2-chloroisopropyl)ether	27.1	ug/L	0		40.8	66	25	---	130	8	30
Bis(2-ethylhexyl)phthalate	29.6	ug/L	0		40.8	73	40	---	125	4	30
Butylbenzylphthalate	30.8	ug/L	0		40.8	75	45	---	115	5	30
Carbazole	33.5	ug/L	0		40.8	82	50	---	115	6	30
Chrysene	28.4	ug/L	0		40.8	70	55	---	110	9	30
Di-n-butylphthalate	32.3	ug/L	0		40.8	79	55	---	115	7	30
Di-n-octylphthalate	33.6	ug/L	1.5		40.8	79	35	---	115	1	30
Dibenzo(a,h)anthracene	32.2	ug/L	0		40.8	79	40	---	125	1	30
Dibenzofuran	29.7	ug/L	0		40.8	73	55	---	105	7	30
Diethylphthalate	30.3	ug/L	0		40.8	74	40	---	120	6	30
Dimethylphthalate	29.6	ug/L	0		40.8	73	25	---	125	8	30
Fluoranthene	31.2	ug/L	0		40.8	76	55	---	115	6	30
Fluorene	29.4	ug/L	0		40.8	72	50	---	110	8	30
Hexachlorobenzene	29.6	ug/L	0		40.8	73	50	---	110	9	30
Hexachlorobutadiene	27.0	ug/L	0		40.8	66	25	---	105	3	30
Hexachlorocyclopentadiene	27.3	ug/L	0		40.8	67	36	---	106	13	30
Hexachloroethane	28.6	ug/L	0		40.8	70	30	---	95	6	30
Indeno(1,2,3-cd)pyrene	31.4	ug/L	0		40.8	77	45	---	125	2	30
Isophorone	28.6	ug/L	0		40.8	70	50	---	110	8	30
N-Nitroso-di-n-propylamine	37.3	ug/L	0		40.8	91	35	---	130	1	30
N-Nitrosodimethylamine	25.0	ug/L	0		40.8	61	25	---	110	10	30
N-Nitrosodiphenylamine & Diphn	54.1	ug/L	0		81.6	66	50	---	110	4	30
N-Nitrosopyrrolidine	26.1	ug/L	0		40.8	64	49	---	110	3	30
Naphthalene	31.5	ug/L	5.3		40.8	64	40	---	100	3	30
Nitrobenzene	33.9	ug/L	0		40.8	83	45	---	110	8	30
Pentachlorophenol	34.5	ug/L	0		40.8	85	40	---	115	7	30
Phenanthrene	30.9	ug/L	0		40.8	76	50	---	115	5	30
Phenol	19.7	ug/L	0		40.8	48	1	---	115	17	30
Pyrene	28.6	ug/L	0		40.8	70	50	---	130	8	30
Pyridine	4.44	ug/L	0		40.8	11	1	---	78	74	30
Surr: 2,4,6-Tribromophenol	74.6	% Recovery				74.6	40	---	125		
Surr: 2-Fluorobiphenyl	67.0	% Recovery				67.0	50	---	110		
Surr: 2-Fluorophenol	55.8	% Recovery				55.8	20	---	110		

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Matrix Spike Duplicate Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	GROUND WATER
CTLab #:	732457	Analysis Time:	14:04	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:	732454	Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Surr: Nitrobenzene-d5	77.9	% Recovery				77.9	40 --- 110		
Surr: Phenol-d5	45.1	% Recovery				45.1	10 --- 115		
Surr: Terphenyl-d14	70.6	% Recovery				70.6	50 --- 135		

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Lab Control Spike Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	LIQUID
CTLab #:	732452	Analysis Time:	11:19	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:		Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
1,2,4-Trichlorobenzene	16.2	ug/L			20.0	81	35	---	105		30
1,2-Dichlorobenzene	15.9	ug/L			20.0	80	35	---	100		30
1,3-Dichlorobenzene	15.4	ug/L			20.0	77	30	---	100		30
1,4-Dichlorobenzene	15.7	ug/L			20.0	78	30	---	100		30
2,4,5-Trichlorophenol	17.7	ug/L			20.0	88	50	---	110		30
2,4,6-Trichlorophenol	18.0	ug/L			20.0	90	50	---	115		30
2,4-Dichlorophenol	17.5	ug/L			20.0	88	50	---	105		30
2,4-Dimethylphenol	16.6	ug/L			20.0	83	30	---	110		30
2,4-Dinitrophenol	21.7	ug/L			20.0	108	15	---	140		30
2,4-Dinitrotoluene	17.7	ug/L			20.0	88	50	---	120		30
2,6-Dichlorophenol	12.4	ug/L			20.0	62	68	---	112		30
2,6-Dinitrotoluene	17.5	ug/L			20.0	88	50	---	115		30
2-Chloronaphthalene	16.4	ug/L			20.0	82	50	---	105		30
2-Chlorophenol	16.4	ug/L			20.0	82	35	---	105		30
2-Methylnaphthalene	17.7	ug/L			20.0	88	45	---	105		30
2-Methylphenol	15.3	ug/L			20.0	76	40	---	110		30
2-Nitroaniline	18.3	ug/L			20.0	92	50	---	115		30
2-Nitrophenol	17.4	ug/L			20.0	87	40	---	115		30
3 & 4-Methylphenol	14.8	ug/L			20.0	74	30	---	110		30
3,3'-Dichlorobenzidine	20.3	ug/L			20.0	102	20	---	110		30
3-Nitroaniline	15.5	ug/L			20.0	78	20	---	125		30
4,6-Dinitro-2-methylphenol	19.4	ug/L			20.0	97	40	---	130		30
4-Bromophenyl-phenyl ether	17.0	ug/L			20.0	85	50	---	115		30
4-Chloro-3-methylphenol	17.5	ug/L			20.0	88	45	---	110		30
4-Chloroaniline	14.9	ug/L			20.0	74	15	---	110		30
4-Chlorophenyl-phenyl ether	17.1	ug/L			20.0	86	50	---	110		30
4-Nitroaniline	19.9	ug/L			20.0	100	35	---	120		30
4-Nitrophenol	11.2	ug/L			20.0	56	1	---	125		30
Acenaphthene	16.7	ug/L			20.0	84	45	---	110		30
Acenaphthylene	16.9	ug/L			20.0	84	50	---	105		30
Acetophenone	16.0	ug/L			20.0	80	50	---	136		30
Aniline	14.3	ug/L			20.0	72	15	---	118		30
Anthracene	17.9	ug/L			20.0	90	55	---	110		30
Azobenzene & 1,2-Diphenylhydra	30.8	ug/L			40.0	77	55	---	115		30
Benzidine	0	ug/L			20.0	0	1	---	165		30
Benzo(a)anthracene	17.5	ug/L			20.0	88	55	---	110		30
Benzo(a)pyrene	17.2	ug/L			20.0	86	55	---	110		30
Benzo(b)fluoranthene	16.2	ug/L			20.0	81	45	---	120		30
Benzo(g,h,i)perylene	18.9	ug/L			20.0	94	40	---	125		30
Benzo(k)fluoranthene	18.5	ug/L			20.0	92	45	---	125		30
Benzoic acid	8.98	ug/L			20.0	45	0	---	125		30
Benzyl alcohol	16.0	ug/L			20.0	80	30	---	110		30

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Lab Control Spike Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	LIQUID
CTLab #:	732452	Analysis Time:	11:19	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:		Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Bis(2-chloroethoxy)methane	16.6	ug/L			20.0	83	45 --- 105		30
Bis(2-chloroethyl)ether	16.6	ug/L			20.0	83	35 --- 110		30
Bis(2-chloroisopropyl)ether	16.5	ug/L			20.0	82	25 --- 130		30
Bis(2-ethylhexyl)phthalate	15.8	ug/L			20.0	79	40 --- 125		30
Butylbenzylphthalate	17.2	ug/L			20.0	86	45 --- 115		30
Carbazole	19.8	ug/L			20.0	99	50 --- 115		30
Chrysene	17.2	ug/L			20.0	86	55 --- 110		30
Di-n-butylphthalate	18.6	ug/L			20.0	93	55 --- 115		30
Di-n-octylphthalate	16.6	ug/L			20.0	83	35 --- 115		30
Dibenzo(a,h)anthracene	18.7	ug/L			20.0	94	40 --- 125		30
Dibenzofuran	17.0	ug/L			20.0	85	55 --- 105		30
Diethylphthalate	17.7	ug/L			20.0	88	40 --- 120		30
Dimethylphthalate	17.5	ug/L			20.0	88	25 --- 125		30
Fluoranthene	18.3	ug/L			20.0	92	55 --- 115		30
Fluorene	17.2	ug/L			20.0	86	50 --- 110		30
Hexachlorobenzene	17.1	ug/L			20.0	86	50 --- 110		30
Hexachlorobutadiene	15.4	ug/L			20.0	77	25 --- 105		30
Hexachlorocyclopentadiene	14.5	ug/L			20.0	72	36 --- 106		30
Hexachloroethane	15.3	ug/L			20.0	76	30 --- 95		30
Indeno(1,2,3-cd)pyrene	18.6	ug/L			20.0	93	45 --- 125		30
Isophorone	16.6	ug/L			20.0	83	50 --- 110		30
N-Nitroso-di-n-propylamine	17.2	ug/L			20.0	86	35 --- 130		30
N-Nitrosodimethylamine	11.7	ug/L			20.0	58	25 --- 110		30
N-Nitrosodiphenylamine & Diphn	30.5	ug/L			40.0	76	50 --- 110		30
N-Nitrosopyrrolidine	14.2	ug/L			20.0	71	59 --- 111		30
Naphthalene	16.4	ug/L			20.0	82	40 --- 100		30
Nitrobenzene	17.2	ug/L			20.0	86	45 --- 110		30
Pentachlorophenol	18.6	ug/L			20.0	93	40 --- 115		30
Phenanthrene	17.5	ug/L			20.0	88	50 --- 115		30
Phenol	7.75	ug/L			20.0	39	1 --- 115		30
Pyrene	16.5	ug/L			20.0	82	50 --- 130		30
Pyridine	7.23	ug/L			20.0	36	1 --- 78		30
Surr: 2,4,6-Tribromophenol	92.8	% Recovery				92.8	40 --- 125		30
Surr: 2-Fluorobiphenyl	82.1	% Recovery				82.1	50 --- 110		30
Surr: 2-Fluorophenol	57.0	% Recovery				57.0	20 --- 110		30
Surr: Nitrobenzene-d5	84.6	% Recovery				84.6	40 --- 110		30
Surr: Phenol-d5	37.8	% Recovery				37.8	10 --- 115		30
Surr: Terphenyl-d14	86.3	% Recovery				86.3	50 --- 135		30

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Method Blank Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	LIQUID
CTLab #:	732451	Analysis Time:	11:00	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:		Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.07	ug/L		U	0		0.07		
1,2-Dichlorobenzene	0.08	ug/L		U	0		0.08		
1,3-Dichlorobenzene	0.08	ug/L		U	0		0.08		
1,4-Dichlorobenzene	0.08	ug/L		U	0		0.08		
2,4,5-Trichlorophenol	0.79	ug/L		U	0		0.79		
2,4,6-Trichlorophenol	0.86	ug/L		U	0		0.86		
2,4-Dichlorophenol	0.61	ug/L		U	0		0.61		
2,4-Dimethylphenol	1.19	ug/L		U	0		1.19		
2,4-Dinitrophenol	1.52	ug/L		U	0		1.52		
2,4-Dinitrotoluene	0.19	ug/L		U	0		0.19		
2,6-Dichlorophenol	0.92	ug/L		U	0		0.92		
2,6-Dinitrotoluene	0.12	ug/L		U	0		0.12		
2-Chloronaphthalene	0.10	ug/L		U	0		0.10		
2-Chlorophenol	0.68	ug/L		U	0		0.68		
2-Methylnaphthalene	0.12	ug/L		U	0		0.12		
2-Methylphenol	0.87	ug/L		U	0		0.87		
2-Nitroaniline	0.11	ug/L		U	0		0.11		
2-Nitrophenol	0.60	ug/L		U	0		0.60		
3 & 4-Methylphenol	0.67	ug/L		U	0		0.67		
3,3'-Dichlorobenzidine	2.96	ug/L		U	0		2.96		
3-Nitroaniline	0.21	ug/L		U	0		0.21		
4,6-Dinitro-2-methylphenol	0.93	ug/L		U	0		0.93		
4-Bromophenyl-phenyl ether	0.15	ug/L		U	0		0.15		
4-Chloro-3-methylphenol	1.11	ug/L		U	0		1.11		
4-Chloroaniline	0.17	ug/L		U	0		0.17		
4-Chlorophenyl-phenyl ether	0.08	ug/L		U	0		0.08		
4-Nitroaniline	0.46	ug/L		U	0		0.46		
4-Nitrophenol	0.62	ug/L		U	0		0.62		
Acenaphthene	0.10	ug/L		U	0		0.10		
Acenaphthylene	0.12	ug/L		U	0		0.12		
Acetophenone	0.13	ug/L		U	0		0.13		
Aniline	0.32	ug/L		U	0		0.32		
Anthracene	0.32	ug/L		U	0		0.32		
Azobenzene & 1,2-Diphenylhydra	0.18	ug/L		U	0		0.18		
Benzidine	29.47	ug/L		U	0		29.47		
Benzo(a)anthracene	0.08	ug/L		U	0		0.08		
Benzo(a)pyrene	0.07	ug/L		U	0		0.07		
Benzo(b)fluoranthene	0.10	ug/L		U	0		0.10		
Benzo(g,h,i)perylene	0.10	ug/L		U	0		0.10		
Benzo(k)fluoranthene	0.09	ug/L		U	0		0.09		
Benzoic acid	11.46	ug/L		U	0		11.46		
Benzyl alcohol	0.31	ug/L		U	0		0.31		

Method Blank Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	LIQUID
CTLab #:	732451	Analysis Time:	11:00	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:		Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Bis(2-chloroethoxy)methane	0.09	ug/L		U	0		0.09		
Bis(2-chloroethyl)ether	0.20	ug/L		U	0		0.20		
Bis(2-chloroisopropyl)ether	0.09	ug/L		U	0		0.09		
Bis(2-ethylhexyl)phthalate	0.61	ug/L		U	0		0.61		
Butylbenzylphthalate	0.11	ug/L		U	0		0.11		
Carbazole	0.14	ug/L		U	0		0.14		
Chrysene	0.08	ug/L		U	0		0.08		
Di-n-butylphthalate	0.75	ug/L		U	0		0.75		
Di-n-octylphthalate	0.16	ug/L		U	0		0.16		
Dibenzo(a,h)anthracene	0.14	ug/L		U	0		0.14		
Dibenzofuran	0.08	ug/L		U	0		0.08		
Diethylphthalate	0.17	ug/L		U	0		0.17		
Dimethylphthalate	0.09	ug/L		U	0		0.09		
Fluoranthene	0.09	ug/L		U	0		0.09		
Fluorene	0.15	ug/L		U	0		0.15		
Hexachlorobenzene	0.22	ug/L		U	0		0.22		
Hexachlorobutadiene	0.30	ug/L		U	0		0.30		
Hexachlorocyclopentadiene	0.12	ug/L		U	0		0.12		
Hexachloroethane	0.07	ug/L		U	0		0.07		
Indeno(1,2,3-cd)pyrene	0.09	ug/L		U	0		0.09		
Isophorone	0.11	ug/L		U	0		0.11		
N-Nitroso-di-n-propylamine	0.18	ug/L		U	0		0.18		
N-Nitrosodimethylamine	0.70	ug/L		U	0		0.70		
N-Nitrosodiphenylamine & Diphn	0.19	ug/L		U	0		0.19		
N-Nitrosopyrrolidine	0.11	ug/L		U	0		0.11		
Naphthalene	0.07	ug/L		U	0		0.07		
Nitrobenzene	0.15	ug/L		U	0		0.15		
Pentachlorophenol	0.89	ug/L		U	0		0.89		
Phenanthrene	0.08	ug/L		U	0		0.08		
Phenol	0.31	ug/L		U	0		0.31		
Pyrene	0.10	ug/L		U	0		0.10		
Pyridine	1.76	ug/L		U	0		1.76		
Surr: 2,4,6-Tribromophenol	83.8	% Recovery				83.8	40 --- 125		
Surr: 2-Fluorobiphenyl	78.6	% Recovery				78.6	50 --- 110		
Surr: 2-Fluorophenol	55.2	% Recovery				55.2	20 --- 110		
Surr: Nitrobenzene-d5	82.2	% Recovery				82.2	40 --- 110		
Surr: Phenol-d5	34.8	% Recovery				34.8	10 --- 115		
Surr: Terphenyl-d14	77.5	% Recovery				77.5	50 --- 135		

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Matrix Spike Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	GROUND WATER
CTLab #:	732454	Analysis Time:	13:44	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:	732151	Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
1,2,4-Trichlorobenzene	29.4	ug/L	0		40.8	72	35	---	105		
1,2-Dichlorobenzene	28.0	ug/L	0		40.8	69	35	---	100		
1,3-Dichlorobenzene	26.8	ug/L	0		40.8	66	30	---	100		
1,4-Dichlorobenzene	27.2	ug/L	0		40.8	67	30	---	100		
2,4,5-Trichlorophenol	32.6	ug/L	0		40.8	80	50	---	110		
2,4,6-Trichlorophenol	33.0	ug/L	0		40.8	81	50	---	115		
2,4-Dichlorophenol	30.7	ug/L	0		40.8	75	50	---	105		
2,4-Dimethylphenol	32.6	ug/L	0		40.8	80	30	---	110		
2,4-Dinitrophenol	43.3	ug/L	0		40.8	106	15	---	140		
2,4-Dinitrotoluene	33.5	ug/L	0		40.8	82	50	---	120		
2,6-Dichlorophenol	23.1	ug/L	0		40.8	57	68	---	112		
2,6-Dinitrotoluene	32.2	ug/L	0		40.8	79	50	---	115		
2-Chloronaphthalene	31.6	ug/L	0		40.8	77	50	---	105		
2-Chlorophenol	29.5	ug/L	0		40.8	72	35	---	105		
2-Methylnaphthalene	32.9	ug/L	2.2		40.8	75	45	---	105		
2-Methylphenol	29.7	ug/L	0		40.8	73	40	---	110		
2-Nitroaniline	31.2	ug/L	0		40.8	76	50	---	115		
2-Nitrophenol	33.4	ug/L	0		40.8	82	40	---	115		
3 & 4-Methylphenol	29.3	ug/L	0		40.8	72	30	---	110		
3,3'-Dichlorobenzidine	6.59	ug/L	0		40.8	16	20	---	110		
3-Nitroaniline	21.3	ug/L	0		40.8	52	20	---	125		
4,6-Dinitro-2-methylphenol	37.0	ug/L	0		40.8	91	40	---	130		
4-Bromophenyl-phenyl ether	32.9	ug/L	0		40.8	81	50	---	115		
4-Chloro-3-methylphenol	32.8	ug/L	0		40.8	80	45	---	110		
4-Chloroaniline	7.49	ug/L	0		40.8	18	15	---	110		
4-Chlorophenyl-phenyl ether	32.0	ug/L	0		40.8	78	50	---	110		
4-Nitroaniline	22.1	ug/L	0		40.8	54	35	---	120		
4-Nitrophenol	34.9	ug/L	0		40.8	86	1	---	125		
Acenaphthene	31.6	ug/L	0		40.8	77	45	---	110		
Acenaphthylene	31.3	ug/L	0		40.8	77	50	---	105		
Acetophenone	50.6	ug/L	0		40.8	124	38	---	141		
Aniline	1.72	ug/L	0		40.8	4	15	---	118		
Anthracene	32.7	ug/L	0		40.8	80	55	---	110		
Azobenzene & 1,2-Diphenylhydra	59.4	ug/L	0		81.6	73	55	---	115		
Benzidine	2.04	ug/L	0	U	40.8	0	1	---	165		
Benzo(a)anthracene	31.3	ug/L	0		40.8	77	55	---	110		
Benzo(a)pyrene	31.3	ug/L	0		40.8	77	55	---	110		
Benzo(b)fluoranthene	30.0	ug/L	0		40.8	74	45	---	120		
Benzo(g,h,i)perylene	32.9	ug/L	0		40.8	81	40	---	125		
Benzo(k)fluoranthene	32.4	ug/L	0		40.8	79	45	---	125		
Benzoic acid	44.4	ug/L	0		40.8	109	0	---	125		
Benzyl alcohol	33.1	ug/L	0		40.8	81	30	---	110		

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Matrix Spike Water

Analytical Run #:	62011	Analysis Date:	10/9/2009	Prep Batch #:	30901	Matrix:	GROUND WATER
CTLab #:	732454	Analysis Time:	13:44	Prep Date/Time:	10/07/2009 13:00	Method:	SW8270
Parent Sample #:	732151	Analyst:	JJY	Prep Analyst:	CCQ		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits			RPD	RPD Limit
Bis(2-chloroethoxy)methane	31.2	ug/L	0		40.8	76	45	---	105		
Bis(2-chloroethyl)ether	30.1	ug/L	0		40.8	74	35	---	110		
Bis(2-chloroisopropyl)ether	29.4	ug/L	0		40.8	72	25	---	130		
Bis(2-ethylhexyl)phthalate	30.9	ug/L	0		40.8	76	40	---	125		
Butylbenzylphthalate	32.4	ug/L	0		40.8	79	45	---	115		
Carbazole	35.5	ug/L	0		40.8	87	50	---	115		
Chrysene	31.0	ug/L	0		40.8	76	55	---	110		
Di-n-butylphthalate	34.8	ug/L	0		40.8	85	55	---	115		
Di-n-octylphthalate	33.8	ug/L	1.5		40.8	79	35	---	115		
Dibenzo(a,h)anthracene	32.5	ug/L	0		40.8	80	40	---	125		
Dibenzofuran	32.0	ug/L	0		40.8	78	55	---	105		
Diethylphthalate	32.3	ug/L	0		40.8	79	40	---	120		
Dimethylphthalate	32.1	ug/L	0		40.8	79	25	---	125		
Fluoranthene	33.0	ug/L	0		40.8	81	55	---	115		
Fluorene	31.8	ug/L	0		40.8	78	50	---	110		
Hexachlorobenzene	32.4	ug/L	0		40.8	79	50	---	110		
Hexachlorobutadiene	27.8	ug/L	0		40.8	68	25	---	105		
Hexachlorocyclopentadiene	31.0	ug/L	0		40.8	76	36	---	106		
Hexachloroethane	30.4	ug/L	0		40.8	75	30	---	95		
Indeno(1,2,3-cd)pyrene	31.9	ug/L	0		40.8	78	45	---	125		
Isophorone	30.9	ug/L	0		40.8	76	50	---	110		
N-Nitroso-di-n-propylamine	36.8	ug/L	0		40.8	90	35	---	130		
N-Nitrosodimethylamine	27.6	ug/L	0		40.8	68	25	---	110		
N-Nitrosodiphenylamine & Diphn	56.4	ug/L	0		81.6	69	50	---	110		
N-Nitrosopyrrolidine	27.0	ug/L	0		40.8	66	49	---	110		
Naphthalene	32.5	ug/L	5.3		40.8	67	40	---	100		
Nitrobenzene	36.8	ug/L	0		40.8	90	45	---	110		
Pentachlorophenol	37.1	ug/L	0		40.8	91	40	---	115		
Phenanthrene	32.6	ug/L	0		40.8	80	50	---	115		
Phenol	23.4	ug/L	0		40.8	57	1	---	115		
Pyrene	30.9	ug/L	0		40.8	76	50	---	130		
Pyridine	3.59	ug/L	0	U	40.8	5	1	---	78		
Surr: 2,4,6-Tribromophenol	80.4	% Recovery				80.4	40	---	125		
Surr: 2-Fluorobiphenyl	73.6	% Recovery				73.6	50	---	110		
Surr: 2-Fluorophenol	62.8	% Recovery				62.8	20	---	110		
Surr: Nitrobenzene-d5	76.6	% Recovery				76.6	40	---	110		
Surr: Phenol-d5	51.9	% Recovery				51.9	10	---	115		
Surr: Terphenyl-d14	75.3	% Recovery				75.3	50	---	135		

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Matrix Spike Duplicate Water

Analytical Run #:	62037	Analysis Date:	10/15/2009	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	735376	Analysis Time:	02:23	Prep Date/Time:		Method:	SW8260B
Parent Sample #:	735375	Analyst:	APG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,2 Dichloroethane-d4	107	% Recovery				107	70 --- 120		
1,2,4-Trimethylbenzene	9.80	ug/L	0		10.0	98	75 --- 130	3	30
1,3,5-Trimethylbenzene	9.85	ug/L	0		10.0	98	75 --- 130	3	30
Benzene	10.5	ug/L	0		10.0	105	80 --- 120	1	30
Bromofluorobenzene	95.0	% Recovery				95.0	75 --- 120		
d8-Toluene	101	% Recovery				101	85 --- 120		
Dibromofluoromethane	102	% Recovery				102	85 --- 115		
Ethylbenzene	10.7	ug/L	0		10.0	107	75 --- 125	0	30
Isopropylbenzene	9.72	ug/L	0		10.0	97	75 --- 125	2	30
m & p-Xylene	22.0	ug/L	0		20.0	110	75 --- 130	3	30
Methyl tert-butyl ether	10.5	ug/L	0		10.0	105	65 --- 125	2	30
n-Butylbenzene	10.3	ug/L	0		10.0	103	70 --- 135	1	30
n-Propylbenzene	9.91	ug/L	0		10.0	99	70 --- 130	1	30
Naphthalene	7.67	ug/L	0		10.0	77	55 --- 140	2	30
o-Xylene	10.9	ug/L	0		10.0	109	80 --- 120	9	30
p-Isopropyltoluene	10.4	ug/L	0		10.0	104	75 --- 130	1	30
sec-Butylbenzene	10.7	ug/L	0		10.0	107	70 --- 125	0	30
tert-Butylbenzene	10.3	ug/L	0		10.0	103	70 --- 130	2	30
Toluene	10.7	ug/L	0		10.0	107	75 --- 120	1	30

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Lab Control Spike Water

Analytical Run #:	62037	Analysis Date:	10/14/2009	Prep Batch #:		Matrix:	LIQUID
CTLab #:	735368	Analysis Time:	09:48	Prep Date/Time:		Method:	SW8260B
Parent Sample #:		Analyst:	APG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,2 Dichloroethane-d4	102	% Recovery				102	70 --- 120		
1,2,4-Trimethylbenzene	10.3	ug/L			10.0	103	75 --- 130		20
1,3,5-Trimethylbenzene	10.7	ug/L			10.0	107	75 --- 130		20
Benzene	10.7	ug/L			10.0	107	80 --- 120		20
Bromofluorobenzene	98.0	% Recovery				98.0	75 --- 120		
d8-Toluene	101	% Recovery				101	85 --- 120		
Dibromofluoromethane	99.0	% Recovery				99.0	85 --- 115		
Ethylbenzene	10.8	ug/L			10.0	108	75 --- 125		20
Isopropylbenzene	10.9	ug/L			10.0	109	75 --- 125		20
m & p-Xylene	22.0	ug/L			20.0	110	75 --- 130		20
Methyl tert-butyl ether	9.99	ug/L			10.0	100	65 --- 125		20
n-Butylbenzene	10.6	ug/L			10.0	106	70 --- 135		20
n-Propylbenzene	10.3	ug/L			10.0	103	70 --- 130		20
Naphthalene	6.64	ug/L			10.0	66	55 --- 140		20
o-Xylene	11.0	ug/L			10.0	110	80 --- 120		20
p-Isopropyltoluene	11.0	ug/L			10.0	110	75 --- 130		20
sec-Butylbenzene	10.6	ug/L			10.0	106	70 --- 125		20
tert-Butylbenzene	10.4	ug/L			10.0	104	70 --- 130		20
Toluene	10.9	ug/L			10.0	109	75 --- 120		20

Method Blank Water

Analytical Run #:	62037	Analysis Date:	10/14/2009	Prep Batch #:		Matrix:	LIQUID
CTLab #:	735369	Analysis Time:	11:09	Prep Date/Time:		Method:	SW8260B
Parent Sample #:		Analyst:	APG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,2 Dichloroethane-d4	97.0	% Recovery				97.0	70 --- 120		
1,2,4-Trimethylbenzene	0.24	ug/L		U	0		0.24		
1,3,5-Trimethylbenzene	0.19	ug/L		U	0		0.19		
Benzene	0.16	ug/L		U	0		0.16		
Bromofluorobenzene	96.0	% Recovery				96.0	75 --- 120		
d8-Toluene	99.0	% Recovery				99.0	85 --- 120		
Dibromofluoromethane	101	% Recovery				101	85 --- 115		
Ethylbenzene	0.28	ug/L		U	0		0.28		
Isopropylbenzene	0.20	ug/L		U	0		0.20		
m & p-Xylene	0.5	ug/L		U	0		0.5		
Methyl tert-butyl ether	0.23	ug/L		U	0		0.23		
n-Butylbenzene	0.24	ug/L		U	0		0.24		
n-Propylbenzene	0.2	ug/L		U	0		0.2		
Naphthalene	0.6	ug/L		U	0		0.6		
o-Xylene	0.5	ug/L		U	0		0.5		
p-Isopropyltoluene	0.17	ug/L		U	0		0.17		
sec-Butylbenzene	0.29	ug/L		U	0		0.29		
tert-Butylbenzene	0.23	ug/L		U	0		0.23		
Toluene	0.2	ug/L		U	0		0.2		

PLEXUS SCIENTIFIC CORPORATION **Project Name: FORT HAMILTON**

SDG #: 0 **CTLabs Folder #: 75731** **Project Number: 8095-065**

Matrix Spike Water

Analytical Run #:	62037	Analysis Date:	10/15/2009	Prep Batch #:		Matrix:	GROUND WATER
CTLab #:	735375	Analysis Time:	01:45	Prep Date/Time:		Method:	SW8260B
Parent Sample #:	732152	Analyst:	APG	Prep Analyst:			

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
1,2 Dichloroethane-d4	97.0	% Recovery				97.0	70 --- 120		
1,2,4-Trimethylbenzene	9.55	ug/L	0		10.0	96	75 --- 130		30
1,3,5-Trimethylbenzene	10.2	ug/L	0		10.0	102	75 --- 130		30
Benzene	10.6	ug/L	0		10.0	106	80 --- 120		30
Bromofluorobenzene	94.0	% Recovery				94.0	75 --- 120		
d8-Toluene	101	% Recovery				101	85 --- 120		
Dibromofluoromethane	101	% Recovery				101	85 --- 115		
Ethylbenzene	10.7	ug/L	0		10.0	107	75 --- 125		30
Isopropylbenzene	9.51	ug/L	0		10.0	95	75 --- 125		30
m & p-Xylene	21.3	ug/L	0		20.0	106	75 --- 130		30
Methyl tert-butyl ether	10.7	ug/L	0		10.0	107	65 --- 125		30
n-Butylbenzene	10.2	ug/L	0		10.0	102	70 --- 135		30
n-Propylbenzene	10.0	ug/L	0		10.0	100	70 --- 130		30
Naphthalene	7.80	ug/L	0		10.0	78	55 --- 140		30
o-Xylene	9.98	ug/L	0		10.0	100	80 --- 120		30
p-Isopropyltoluene	10.3	ug/L	0		10.0	103	75 --- 130		30
sec-Butylbenzene	10.7	ug/L	0		10.0	107	70 --- 125		30
tert-Butylbenzene	10.5	ug/L	0		10.0	105	70 --- 130		30
Toluene	10.8	ug/L	0		10.0	108	75 --- 120		30

Appendix D
System Off-Gas Analytical Report

Air Toxics LTD.
Laboratory Services Since 1989

8/18/2009
Mr. Pat Letterer
CT Laboratories
1230 Lange Court

Baraboo WI 53913

Project Name: Ft. Hammilton
Project #: 8095-06F
Workorder #: 0908150B

Dear Mr. Pat Letterer

The following report includes the data for the above referenced project for sample(s) received on 8/7/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brandon Dunmore at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Brandon M. Dunmore

Brandon Dunmore
Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908150B

Work Order Summary

CLIENT:	Mr. Pat Letterer CT Laboratories 1230 Lange Court Baraboo, WI 53913	**BILL TO:**	Mr. Pat Letterer CT Laboratories 1230 Lange Court Baraboo, WI 53913
PHONE:	608-356-2760	**P.O. #**	N/A
FAX:	608-356-2766	**PROJECT #**	8095-06F Ft. Hammilton
DATE RECEIVED:	08/07/2009	**CONTACT:**	Brandon Dunmore
DATE COMPLETED:	08/18/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	Inf. Air	Modified TO-3	1.0 "Hg	5 psi
02A	Eff. Air	Modified TO-3	2.0 "Hg	5 psi
03A	Lab Blank	Modified TO-3	NA	NA
04A	LCS	Modified TO-3	NA	NA

CERTIFIED BY: Linda L. Freeman DATE: 08/18/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-3
CT Laboratories
Workorder# 0908150B

Two 6 Liter Summa Canister samples were received on August 07, 2009. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***TO-3***	***ATL Modifications***
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch </= 20 samples
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The recovery of surrogate Fluorobenzene in sample Inf. Air was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Summary of Detected Compounds
MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: Inf. Air

Lab ID#: 0908150B-01A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
TPH (Gasoline Range)	3.5	14	1400	5900

Client Sample ID: Eff. Air

Lab ID#: 0908150B-02A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
TPH (Gasoline Range)	0.036	0.15	3.8	15

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Inf. Air

Lab ID#: 0908150B-01A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d081326**	**Date of Collection:**	**8/5/09 3:30:00 PM**
Dil. Factor:	**139**	**Date of Analysis:**	**8/13/09 08:52 PM**

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
TPH (Gasoline Range)	3.5	14	1400	5900

Q = Exceeds Quality Control limits, possibly due to matrix effects.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	169 Q	75-150

Air Toxics LTD.
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Client Sample ID: Eff. Air

Lab ID#: 0908150B-02A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d081325**	**Date of Collection:**	**8/5/09 3:35:00 PM**
Dil. Factor:	**1.44**	**Date of Analysis:**	**8/13/09 07:36 PM**

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
TPH (Gasoline Range)	0.036	0.15	3.8	15

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	101	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908150B-03A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d081303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/13/09 06:38 AM**	

Compound	**Rpt. Limit (ppmv)**	**Rpt. Limit (ug/L)**	**Amount (ppmv)**	**Amount (ug/L)**
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Fluorobenzene (FID)	103	75-150

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908150B-04A

MODIFIED EPA METHOD TO-3 GC/FID

File Name:	**d081327**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/13/09 09:30 PM**	

Compound	**%Recovery**
TPH (Gasoline Range)	107

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Fluorobenzene (FID)	111	75-150

Air Toxics LTD.
Laboratory Services Since 1989

8/21/2009
Mr. Pat Letterer
CT Laboratories
1230 Lange Court

Baraboo WI 53913

Project Name: Ft. Hammilton
Project #: 8095-06F
Workorder #: 0908150A

Dear Mr. Pat Letterer

The following report includes the data for the above referenced project for sample(s) received on 8/7/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brandon Dunmore at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Brandon M. Dunmore

Brandon Dunmore
Project Manager

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908150A

Work Order Summary

CLIENT:	Mr. Pat Letterer CT Laboratories 1230 Lange Court Baraboo, WI 53913	**BILL TO:**	Mr. Pat Letterer CT Laboratories 1230 Lange Court Baraboo, WI 53913
PHONE:	608-356-2760	**P.O. #**	N/A
FAX:	608-356-2766	**PROJECT #**	8095-06F Ft. Hammilton
DATE RECEIVED:	08/07/2009	**CONTACT:**	Brandon Dunmore
DATE COMPLETED:	08/20/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	Inf. Air	Modified TO-15	1.0 "Hg	5 psi
02A	Eff. Air	Modified TO-15	2.0 "Hg	5 psi
03A	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: Linda L. Freeman DATE: 08/21/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
CT Laboratories
Workorder# 0908150A

Two 6 Liter Summa Canister samples were received on August 07, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***TO-15***	***ATL Modifications***
Daily CCV	</= 30% Difference	</= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Air Toxics LTD.
Laboratory Services Since 1989

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: Inf. Air

Lab ID#: 0908150A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	140	23000	490	82000
Cyclohexane	140	8300	480	28000
2,2,4-Trimethylpentane	140	45000	650	210000
Benzene	140	3200	440	10000
Heptane	140	13000	570	55000
Toluene	140	38000	520	140000
Ethyl Benzene	140	8100	600	35000
m,p-Xylene	140	34000	600	150000
o-Xylene	140	15000	600	64000
Cumene	140	1100	680	5200
Propylbenzene	140	2600	680	13000
4-Ethyltoluene	140	14000	680	68000
1,3,5-Trimethylbenzene	140	4600	680	22000
1,2,4-Trimethylbenzene	140	15000	680	73000

Client Sample ID: Eff. Air

Lab ID#: 0908150A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Chloromethane	4.6	5.2	9.5	11
1,3-Butadiene	1.2	54	2.5	120
Chloroethane	1.2	3.6	3.0	9.6
Ethanol	4.6	8.8	8.7	16
Acetone	4.6	340	11	810
2-Propanol	4.6	5.1	11	12
Carbon Disulfide	1.2	4.8	3.6	15
Hexane	1.2	8.5	4.0	30
2-Butanone (Methyl Ethyl Ketone)	1.2	34	3.4	100
Cyclohexane	1.2	3.7	4.0	13
2,2,4-Trimethylpentane	1.2	15	5.4	70
Benzene	1.2	270	3.7	860
Heptane	1.2	95	4.7	390
4-Methyl-2-pentanone	1.2	1.9	4.7	7.7
Toluene	1.2	140	4.3	520
Ethyl Benzene	1.2	5.5	5.0	24
m,p-Xylene	1.2	15	5.0	67

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: Eff. Air

Lab ID#: 0908150A-02A

o-Xylene	1.2	5.6	5.0	24
Styrene	1.2	2.7	4.9	12
4-Ethyltoluene	1.2	1.4	5.6	6.7

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Inf. Air

Lab ID#: 0908150A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081811**	**Date of Collection:**	**8/5/09 3:30:00 PM**
Dil. Factor:	**278**	**Date of Analysis:**	**8/18/09 03:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	140	Not Detected	690	Not Detected
Freon 114	140	Not Detected	970	Not Detected
Chloromethane	560	Not Detected	1100	Not Detected
Vinyl Chloride	140	Not Detected	360	Not Detected
1,3-Butadiene	140	Not Detected	310	Not Detected
Bromomethane	140	Not Detected	540	Not Detected
Chloroethane	140	Not Detected	370	Not Detected
Freon 11	140	Not Detected	780	Not Detected
Ethanol	560	Not Detected	1000	Not Detected
Freon 113	140	Not Detected	1100	Not Detected
1,1-Dichloroethene	140	Not Detected	550	Not Detected
Acetone	560	Not Detected	1300	Not Detected
2-Propanol	560	Not Detected	1400	Not Detected
Carbon Disulfide	140	Not Detected	430	Not Detected
3-Chloropropene	560	Not Detected	1700	Not Detected
Methylene Chloride	140	Not Detected	480	Not Detected
Methyl tert-butyl ether	140	Not Detected U J	500	Not Detected U J
trans-1,2-Dichloroethene	140	Not Detected	550	Not Detected
Hexane	140	23000	490	82000
1,1-Dichloroethane	140	Not Detected	560	Not Detected
2-Butanone (Methyl Ethyl Ketone)	140	Not Detected	410	Not Detected
cis-1,2-Dichloroethene	140	Not Detected	550	Not Detected
Tetrahydrofuran	140	Not Detected	410	Not Detected
Chloroform	140	Not Detected	680	Not Detected
1,1,1-Trichloroethane	140	Not Detected	760	Not Detected
Cyclohexane	140	8300	480	28000
Carbon Tetrachloride	140	Not Detected	870	Not Detected
2,2,4-Trimethylpentane	140	45000	650	210000
Benzene	140	3200	440	10000
1,2-Dichloroethane	140	Not Detected	560	Not Detected
Heptane	140	13000	570	55000
Trichloroethene	140	Not Detected	750	Not Detected
1,2-Dichloropropane	140	Not Detected	640	Not Detected
1,4-Dioxane	560	Not Detected	2000	Not Detected
Bromodichloromethane	140	Not Detected	930	Not Detected
cis-1,3-Dichloropropene	140	Not Detected	630	Not Detected
4-Methyl-2-pentanone	140	Not Detected	570	Not Detected
Toluene	140	38000	520	140000
trans-1,3-Dichloropropene	140	Not Detected	630	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Inf. Air

Lab ID#: 0908150A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081811**	**Date of Collection:**	**8/5/09 3:30:00 PM**
Dil. Factor:	**278**	**Date of Analysis:**	**8/18/09 03:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	140	Not Detected	760	Not Detected
Tetrachloroethene	140	Not Detected	940	Not Detected
2-Hexanone	560	Not Detected	2300	Not Detected
Dibromochloromethane	140	Not Detected	1200	Not Detected
1,2-Dibromoethane (EDB)	140	Not Detected	1100	Not Detected
Chlorobenzene	140	Not Detected	640	Not Detected
Ethyl Benzene	140	8100	600	35000
m,p-Xylene	140	34000	600	150000
o-Xylene	140	15000	600	64000
Styrene	140	Not Detected	590	Not Detected
Bromoform	140	Not Detected	1400	Not Detected
Cumene	140	1100	680	5200
1,1,2,2-Tetrachloroethane	140	Not Detected	950	Not Detected
Propylbenzene	140	2600	680	13000
4-Ethyltoluene	140	14000	680	68000
1,3,5-Trimethylbenzene	140	4600	680	22000
1,2,4-Trimethylbenzene	140	15000	680	73000
1,3-Dichlorobenzene	140	Not Detected	840	Not Detected
1,4-Dichlorobenzene	140	Not Detected	840	Not Detected
alpha-Chlorotoluene	140	Not Detected	720	Not Detected
1,2-Dichlorobenzene	140	Not Detected	840	Not Detected
1,2,4-Trichlorobenzene	560	Not Detected	4100	Not Detected
Hexachlorobutadiene	560	Not Detected	5900	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	91	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Eff. Air

Lab ID#: 0908150A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081812**	**Date of Collection:**	**8/5/09 3:35:00 PM**
Dil. Factor:	**2.30**	**Date of Analysis:**	**8/18/09 04:16 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.7	Not Detected
Freon 114	1.2	Not Detected	8.0	Not Detected
Chloromethane	4.6	5.2	9.5	11
Vinyl Chloride	1.2	Not Detected	2.9	Not Detected
1,3-Butadiene	1.2	54	2.5	120
Bromomethane	1.2	Not Detected	4.5	Not Detected
Chloroethane	1.2	3.6	3.0	9.6
Freon 11	1.2	Not Detected	6.5	Not Detected
Ethanol	4.6	8.8	8.7	16
Freon 113	1.2	Not Detected	8.8	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	4.6	340	11	810
2-Propanol	4.6	5.1	11	12
Carbon Disulfide	1.2	4.8	3.6	15
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	1.2	Not Detected	4.0	Not Detected
Methyl tert-butyl ether	1.2	Not Detected U J	4.1	Not Detected U J
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	8.5	4.0	30
1,1-Dichloroethane	1.2	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	34	3.4	100
cis-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	Not Detected	5.6	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.3	Not Detected
Cyclohexane	1.2	3.7	4.0	13
Carbon Tetrachloride	1.2	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.2	15	5.4	70
Benzene	1.2	270	3.7	860
1,2-Dichloroethane	1.2	Not Detected	4.6	Not Detected
Heptane	1.2	95	4.7	390
Trichloroethene	1.2	Not Detected	6.2	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.2	Not Detected	7.7	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.2	1.9	4.7	7.7
Toluene	1.2	140	4.3	520
trans-1,3-Dichloropropene	1.2	Not Detected	5.2	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Eff. Air

Lab ID#: 0908150A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081812**	**Date of Collection:**	**8/5/09 3:35:00 PM**
Dil. Factor:	**2.30**	**Date of Analysis:**	**8/18/09 04:16 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.3	Not Detected
Tetrachloroethene	1.2	Not Detected	7.8	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected
Dibromochloromethane	1.2	Not Detected	9.8	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	8.8	Not Detected
Chlorobenzene	1.2	Not Detected	5.3	Not Detected
Ethyl Benzene	1.2	5.5	5.0	24
m,p-Xylene	1.2	15	5.0	67
o-Xylene	1.2	5.6	5.0	24
Styrene	1.2	2.7	4.9	12
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	7.9	Not Detected
Propylbenzene	1.2	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.2	1.4	5.6	6.7
1,3,5-Trimethylbenzene	1.2	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	6.9	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	6.9	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	6.9	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	79	70-130
4-Bromofluorobenzene	90	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908150A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081807**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/18/09 11:26 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected U J	1.8	Not Detected U J
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: Lab Blank

Lab ID#: 0908150A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081807**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/18/09 11:26 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	89	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0908150A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081804**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/18/09 09:04 AM**	

Compound	%Recovery
Freon 12	82
Freon 114	90
Chloromethane	84
Vinyl Chloride	90
1,3-Butadiene	92
Bromomethane	83
Chloroethane	104
Freon 11	94
Ethanol	100
Freon 113	101
1,1-Dichloroethene	93
Acetone	100
2-Propanol	96
Carbon Disulfide	105
3-Chloropropene	111
Methylene Chloride	94
Methyl tert-butyl ether	65 Q
trans-1,2-Dichloroethene	105
Hexane	104
1,1-Dichloroethane	107
2-Butanone (Methyl Ethyl Ketone)	116
cis-1,2-Dichloroethene	104
Tetrahydrofuran	107
Chloroform	98
1,1,1-Trichloroethane	96
Cyclohexane	106
Carbon Tetrachloride	91
2,2,4-Trimethylpentane	107
Benzene	102
1,2-Dichloroethane	86
Heptane	111
Trichloroethene	102
1,2-Dichloropropane	110
1,4-Dioxane	110
Bromodichloromethane	94
cis-1,3-Dichloropropene	106
4-Methyl-2-pentanone	107
Toluene	108
trans-1,3-Dichloropropene	108

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0908150A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081804**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/18/09 09:04 AM**	

Compound	**%Recovery**
1,1,2-Trichloroethane	112
Tetrachloroethene	104
2-Hexanone	115
Dibromochloromethane	101
1,2-Dibromoethane (EDB)	108
Chlorobenzene	109
Ethyl Benzene	110
m,p-Xylene	108
o-Xylene	107
Styrene	111
Bromoform	102
Cumene	109
1,1,2,2-Tetrachloroethane	114
Propylbenzene	119
4-Ethyltoluene	116
1,3,5-Trimethylbenzene	101
1,2,4-Trimethylbenzene	110
1,3-Dichlorobenzene	109
1,4-Dichlorobenzene	110
alpha-Chlorotoluene	116
1,2-Dichlorobenzene	111
1,2,4-Trichlorobenzene	103
Hexachlorobutadiene	101

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	93	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908150A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081805**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 8/18/09 09:52 AM**

Compound	%Recovery
Freon 12	74
Freon 114	78
Chloromethane	78
Vinyl Chloride	80
1,3-Butadiene	79
Bromomethane	72
Chloroethane	91
Freon 11	82
Ethanol	70
Freon 113	100
1,1-Dichloroethene	91
Acetone	94
2-Propanol	89
Carbon Disulfide	94
3-Chloropropene	100
Methylene Chloride	90
Methyl tert-butyl ether	54 Q
trans-1,2-Dichloroethene	96
Hexane	93
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	102
cis-1,2-Dichloroethene	104
Tetrahydrofuran	94
Chloroform	89
1,1,1-Trichloroethane	85
Cyclohexane	96
Carbon Tetrachloride	76
2,2,4-Trimethylpentane	95
Benzene	94
1,2-Dichloroethane	80
Heptane	104
Trichloroethene	95
1,2-Dichloropropane	100
1,4-Dioxane	101
Bromodichloromethane	87
cis-1,3-Dichloropropene	96
4-Methyl-2-pentanone	100
Toluene	102
trans-1,3-Dichloropropene	97

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0908150A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**y081805**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 8/18/09 09:52 AM**

Compound	%Recovery
1,1,2-Trichloroethane	101
Tetrachloroethene	96
2-Hexanone	104
Dibromochloromethane	92
1,2-Dibromoethane (EDB)	94
Chlorobenzene	99
Ethyl Benzene	98
m,p-Xylene	97
o-Xylene	97
Styrene	99
Bromoform	93
Cumene	100
1,1,2,2-Tetrachloroethane	101
Propylbenzene	108
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	90
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	106
1,2-Dichlorobenzene	99
1,2,4-Trichlorobenzene	86
Hexachlorobutadiene	83

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	84	70-130
4-Bromofluorobenzene	92	70-130