DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON
4551 LLEWELLYN AVENUE, SUITE 5000
FORT GEORGE G. MEADE, MARYLAND 20755-5000

REPLY TO ATTENTION OF:

December 22, 2014

Environmental Division

Mr. John Burchette
NPL/BRAC/Federal Facilities Branch
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Burchette:

Enclosed please find the *2014 Annual Operation and Maintenance Report, Operable Unit 4 / Lower Patapsco Aquifer* for your review and comment. Copies of the Report have been furnished to Fran Coulters (U.S. Army Environmental Command), Sherry Deskins (Architect of the Capitol), Elisabeth Green (Maryland Department of the Environment), and the Fort Meade Restoration Advisory Board.

While the Federal Facility Agreement allows for a 60 calendar day review period, the Army requests expedited review on or before December 26, 2014. Written comments should be addressed to Fort George. G. Meade, Attention: IMME-PWE (George Knight), 4216 Roberts Ave., Suite 5115, Fort Meade, Maryland 20755-7068 or george.b.knight7.civ@mail.mil.

If you have any questions, please feel free to contact Ms. Denise Tegtmeyer at (301) 677-9559 or me at (301) 677-7999.

Sincerely,

George B. Knight, PG
Acting Program Manager, Installation Restoration Program
Directorate of Public Works-Environmental Division

Enclosure

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Environment

Mr. George Knight
Installation Restoration Program
Fort George G. Meade
4216 Roberts Avenue, Suite 5115
Fort Meade, Maryland 20755

Subject:
2014 Annual Operation and Maintenance Report
Operable Unit 4 / Lower Patapsco Aquifer
Fort George G. Meade, Anne Arundel County, Maryland

Date:
December 22, 2014

Contact:
John Cherry

Phone:
410.987.0032

Email:
John.Cherry@arcadis-us.com

Our ref:
GP09MEAD.OU41

Dear Mr. Knight:

This 2014 Annual Operation and Maintenance Report (O&M) summarizes the first year of full-scale remediation operations at the Operable Unit 4 (OU-4) / Lower Patapsco Aquifer (LPA) Study Area at Fort George G. Meade (FGGM) including data trends since remedy implementation and future actions at the Site. This report also includes details on the routine O&M activities conducted during the fourth quarter of 2014 (October 1, 2014 – December 31, 2014) including quarterly groundwater sampling and/or groundwater gauging completed in the three following Areas of Concern (AOC). ARCADIS U.S., Inc. (ARCADIS) performed all work in accordance with Contract No. W91ZLK-05-D-0015 Task Order 0005 between ARCADIS and the United States Army Environmental Command. As a Federal Facility, the groundwater remediation activities are being implemented under the Comprehensive Environmental Response, Compensation, and Liability Act as an Interim Removal Action (IRA) with approval and oversight by United States Environmental Protection Agency (USEPA) and consultation from the Maryland Department of the Environment (MDE).

Details regarding the implementation and construction of the various remedial systems installed across the OU-4/LPA Study Areas are provided in the Interim Removal Action Report (IRA) for Operable Unit 4 Area of Concern 3 (Lower Patapsco Aquifer Study Area) (ARCADIS, 2014b) and IRAR for Operable Unit 4 Area of Concern 1 and 2 (Building 2286/2276 and Building 2250) (ARCADIS, 2014c). Quarterly groundwater monitoring results and summaries of O&M activities completed between January 1, 2014 through September 30, 2014 are detailed in previous Quarterly O&M Reports (ARCADIS, 2014a/d/e). Performance monitoring and semi-annual groundwater monitoring schedules for the various AOC are included as **Tables 1** and **2**, respectively.

- AOC 1 - Building 2286 and Former Building 2276

- AOC 2 – Building 2250
- AOC 3 – LPA Study Area

All field activities and sampling methodology completed during the reporting period were conducted in accordance with procedures established in the IRA Work Plan (ARCADIS, 2013b) and site-wide plans developed for work under the FGGM Performance Based Acquisition including:

- Quality Assurance Project Plan (QAPP) for the Performance Based Acquisition at Fort Meade (ARCADIS, 2011a).
- Sample and Analysis Plan for the Performance Based Acquisition at Fort Meade (ARCADIS, 2011b).
- Waste Management Plan for the Performance Based Acquisition at Fort Meade (ARCADIS, 2011c).
- Site-wide Health and Safety Plan for the Performance Based Acquisition at Fort Meade (ARCADIS, 2010).

All groundwater samples collected from monitoring wells were sent to Eurofins Laboratories in Lancaster, Pennsylvania, for laboratory analysis. Level 2 Data Validation was completed on 100 percent of the data by Laboratory Data Consultants Inc. of Carlsbad, California, in accordance with the FGGM site-wide QAPP. Influent and effluent samples collected at the LPA Hydraulic Containment (HC) system were sent to Shealy Laboratories in West Columbia, South Carolina for laboratory analysis. Laboratory Reports are provided as **Attachment 1** (FTM15, FTM16, PJ04009, PK15014) and Data Validation Reports are provided as **Attachment 2**.

Table 3 includes groundwater elevations measured through the fourth quarter 2014; the last Site-wide synoptic groundwater elevation event was completed during the third quarter of 2014 (see **Table 3**). A groundwater elevation contour map for the Site-wide gauging event completed during the third quarter is provided as **Figure 1.** Third quarter groundwater elevations in the LPA ranged from 124.70 feet (ft) above mean seal level (amsl) (FGGM86-MW08) to 86.40 ft amsl (MW-116D). Groundwater elevations in the Upper Patapsco Aquifer/Middle Patapsco Clay ranged from 162.02 ft amsl (VERSAR-MW05) to 167.30 ft amsl (VERSAR-MW02). Performance monitoring and routine O&M activities completed in each of the AOCs during the fourth quarter is detailed in the following sections.

AOC 1 - Building 2286 and Former Building 2276 – In-Situ Chemical Oxidation (ISCO) Fourth Quarter Analytical Results

In accordance with the IRA Work Plan (ARCADIS, 2013b), full-scale ISCO injections were completed during the second quarter between May 11 and June 6, 2014 by ARCADIS personnel. Field activities associated with implementation and completion of the ISCO injections are detailed in the IRA Report (ARCADIS, 2014b).

In the fourth quarter of 2014, quarterly performance monitoring was completed on October 14 – 15, 2014. Groundwater samples were collected from seven monitoring wells in AOC 1: FGGM86-MW07, FGGM86-MW08, FGGM86-MW11, OU4-MW01, OU4-MW44, OU4-MW45, and OU4-IW08 and analyzed for volatile organic compounds (VOCs) via USEPA Method 8260B and sulfate via USEPA Method 300.0. Monitoring well FGGM86-MW11 was damaged during Site construction activities and could not be sampled during the third quarter of 2014. Prior to the fourth quarter sampling event, FGGM86-MW11 was re-installed under United States Army Corps of Engineers (USACE) oversight. Groundwater samples was conducted at FGGM86-MW11 on October 14, 2014 (fourth quarter 2014) to complete the 2014 semi-annual sampling schedule.

Monitoring well locations are displayed on **Figure 2**. Analytical results are summarized in **Table 4** and Maximum Contaminant Level (MCL) exceedances are summarized below. Groundwater sampling logs are included as **Attachment 3**.

- Tetrachloroethene (PCE) exceeded its MCL of 5 micrograms per liter (µg/L) at six locations at concentrations between 24 µg/L (FMOU4-IW08) and 250 µg/L (FGGM86-MW08).

- Trichloroethene (TCE) exceeded its MCL of 5 µg/L at one location at a concentration of 13 µg/L (FGGM86-MW08).

AOC 1 - Data Trend Analysis

VOC trend plots for five AOC 1 – Building 2286 and Former Building 2276 monitoring locations (FGGM86-MW07, FGGM86-MW08, FMOU4-MW01, FMOU4-MW44, and FMOU4-MW45) are included in **Attachment 4**. The trend plots display concentrations of PCE, TCE, and cis-1,2-Dichloroethene (DCE) reported from pre-remedial baseline monitoring (February 2014) and three quarterly monitoring events in 2014 subsequent to the remedial system start-up on March 20, 2014. Site historical detections (2009 through present) are included in data boxes with each respective figure in **Attachment 4**.

Comparison of pre-remedial baseline results to post-remediation results demonstrate that the sodium persulfate injections resulted in decreases in VOC concentrations at all locations. Qualitative review of the trend plots indicates the following:

- A decrease in PCE concentrations was observed at all five locations. Of note, at the locations with pre-remedial baseline PCE concentrations of approximately 1,000 µg/L (FGGM86-MW07, FGGM86-MW08, and FMOU4-MW45), the concentrations of PCE decreased to 33 µg/L, 250 J µg/L, and 140 J µg/L, respectively, in Fourth Quarter of 2014.

- TCE concentrations were decreasing or stable at all locations. The pre-remedial baseline concentration of TCE exceeded the MCL of 5 µg/L at three locations (FGGM86-MW07, FGGM86-MW08, and FMOU4-MW45). In Fourth Quarter of 2014, the TCE concentrations were below the MCL at all but one location (FGGM86-MW08), at a concentration of 13 J µg/L.

- Cis-1,2-DCE concentrations were decreasing or stable at all locations. The pre-remedial baseline concentration of cis-1,2-DCE exceeded the MCL of 70 µg/L at two locations (FGGM86-MW07 and FGGM86-MW08). In Fourth Quarter of 2014, the cis-1,2-DCE concentrations were below the MCL at all locations.

AOC 2 - Building 2250 – Air Sparge (AS)/Soil Vapor Extraction (SVE) System Fourth Quarter Analytical Results

Quarterly performance monitoring in AOC 2 was completed between October 12 and October 15, 2014. It should be noted that the AS/SVE system was temporarily shut-down prior to performance monitoring activities commencing. Groundwater samples were analyzed for VOCs via USEPA Method 8260B. Monitoring well locations are displayed on **Figure 3.** Analytical results are summarized in **Table 4** and MCL exceedances are summarized below. Groundwater sampling logs are included as **Attachment 3**.

- PCE exceeded its MCL of 5 µg/L at all five locations at concentrations between 43 µg/L (MW-5-VERSAR) and 3,500 µg/L (MW-3-VERSAR).

During the reporting period, three O&M mobilizations were made to the Site and are summarized below. Field notes recorded during O&M visits are provided in **Attachment 5**.

- 10/15/14: Completed quarterly performance monitoring sampling event.

- 11/13/14: Routine O&M visit to optimize system operating parameters. Note that AS-2, -3, -5, and -9 were left off. [1] High pressure alarm for the sparge blower was reset and the air sparge blower was restarted.

- 11/14/15: Site visit to check on the water level in the SVE knock-out tank. The knock-out tank was full and a treated water sample was collected from the effluent portion of the knockout tank was collected and analyzed for VOCs via USEPA Method 8260B. The analytical Laboratory Report (PK15014) for the treated sample is included as **Attachment 1**. Low level detections of the following compounds were detected in the effluent sample: 2-Butanone, acetone, carbon disulfide, dichloromethane, and methyl n-butyl ketone. No compounds were detected at concentrations exceeding MCLs and PCE was not detected. During the Site visit it was noted that there was a hole in the granular activated carbon (GAC) drum. The system was shut-down until a replacement drum could be installed and MDE approval for surface discharge was received.

- 12/5/14: Site visit to install the replacement GAC drum. The MDE approved ground surface discharge of the treated water on December 2, 2014. Approximately 37 gallons was treated and discharged to the ground surface. During the Site visit, the high pressure switch on the air sparge blower was also adjusted.

AOC 2 – Data Trend Analysis

VOC trend plots for the five AOC 2 – Building 2250 monitoring locations (MW-1-VERSAR through MW-5-VERSAR) are included in **Attachment 4**. The trend plots display concentrations of PCE and TCE reported from pre-remedial baseline monitoring (February 2014) and three quarterly monitoring events. Site historical detections (2009 through present) are included in data boxes with each respective figure. Qualitative review of the trend plots indicates the following:

- A decrease in PCE concentration at MW-1-VERSAR, stable PCE concentrations of PCE at MW-4-VERSAR and MW-5-VERSAR, and increasing PCE concentrations at MW-2-VERSAR and MW-3-VERSAR were observed. However, it should be noted that PCE has been historically detected at MW-2-VERSAR and MW-3-VERSAR at concentrations as high

[1] Due to the predominance of clay and silt in this area, some AS wells (AS-2, AS-3, AS-5, and AS-9) are not readily receiving air and have been valved-off.

as 45,000 µg/L (November 1996) and 8,400 µg/L (November 1996), respectively. Active air sparging in the formation initiated in March 2014 has led to recent concentration increases. Considering the elevated historical detections noted above, the concentration increases indicate residual mass remains in the formation and active treatment has affected groundwater concentrations in the treatment zone. With continued operation of the AS/SVE system and removal of contaminant mass, PCE concentrations are anticipated to decrease. Evaluation of data trends and system performance will be documented with future quarterly sampling and reporting.

- TCE was only detected at MW-4-VERSAR and MW-5-VERSAR. The concentrations were stable at all locations and exceeded the MCL of 5 µg/L only at MW-4-VERSAR at a concentration of 15 µg/L.

AOC 3 – LPA Study Area – HC System Fourth Quarter Analytical Results

In accordance with the Semi-Annual Monitoring schedule, groundwater sampling was not completed during the fourth quarter of 2014. OU4-MW119D was not accessible during the semi-annual sampling event completed in August 2014 so it was sampled on October 15, 2014 and analyzed for VOCs via USEPA Method 8260B. No VOCs were detected at concentrations exceeding MCLs at OU4-MW119D (see **Table 4**). Groundwater sampling logs are included as **Attachment 3**. The next semi-annual monitoring event is planned for the second quarter of 2015.

The HC system was designed with the assumption that a portion of the treated groundwater would be discharged to the retention pond located at the Closed Sanitary Landfill (CSL). During the reporting period, all treated groundwater extracted at the HC system was re-injected back into the formation and no surface water discharge to the retention pond located at the CSL displayed on **Figure 4** was necessary. **Table 5** provides a summary of water pumped from the extraction wells and re-injected into the LPA via the injection wells.

In lieu of the surface water discharge, the total volume extracted (56,615,826 gallons – through November 14, 2014) is reflective of the actual flow totals extracted, treated and re-injected back into the formation. Because the HC system is currently re-injecting all of the treated groundwater back into the formation, the increased volume of water moving through the effluent flow meters is out of the normal operating range (0.5 – 30 gallons per minute) at three of the four injection wells, which decreases accuracy. This, coupled with the flow meter standard factory +/- 1.5 % accuracy rate, results in a discrepancy between the total volumes extracted and total volumes injected during the reporting period presented in **Table 5**. It should be noted that the

volume of water moving through the influent flow meters is within normal operational ranges.

During the reporting period, two O&M mobilizations were made to the Site and activities are summarized below. Field notes recorded during O&M visits are provided in **Attachment 6**.

- 10/03/14: Routine O&M visit to optimize system operational parameters and complete the O&M checklist. A system total effluent sample was collected and analyzed for VOC analysis via USEPA Method 8260B. The Laboratory Report is provided in **Attachment 1** (PJ04009). The analytical results are presented in **Table 6** and screened against MCLs and surface water discharge criteria (Human Health for Consumption of Organism Only and Aquatic Life Fresh Water Acute) for reference, though surface water discharge is not currently being conducted. No VOCs were detected at concentrations exceeding MCLs or surface water discharge criteria in the effluent sample.

- 11/14/14: O&M visit to optimize system operational parameters and downloaded transducer data at IW-1 through IW-4. System total influent and effluent and lag carbon vessels VOC samples were collected and analyzed for VOC analysis via USEPA Method 8260B. The Laboratory Report is provided in **Attachment 1** (PK15014). The analytical results are presented in **Table 6** and screened against MCLs and surface water discharge criteria (Human Health for Consumption of Organism Only and Aquatic Life Fresh Water Acute) for reference, though surface water discharge is not currently being conducted. No VOCs were detected at concentrations exceeding MCLs or surface water discharge criteria in the effluent sample.

AOC 3 – Data Trend Analysis

The HC system is a long-term cleanup operation aimed to reduce mass flux of VOCs from OU-4, down gradient VOC concentrations, and attenuation rates. The groundwater capture model presented in the Engineering Evaluation/Cost Analysis (ARCADIS, 2013a) predicts a clean water front will reach the FGGM property boundary within 10 years. Given the anticipated operating timeframe and the nature of the remedy (i.e. not source area treatment), it is not anticipated that rapid reduction in VOC concentrations in groundwater will be observed. Therefore, there is no specific groundwater performance monitoring program other than the semi-annual monitoring program (see **Table 2**). The monitoring program includes wells up gradient of the extraction line to monitor influent concentrations and groundwater gradients, and wells down gradient of the injection wells to monitor the clean water

front as it moves down gradient (to the southeast). The down gradient monitoring wells also monitor for decreasing trends of constituents of concern in monitoring wells all the way to the FGGM property boundary. Overall performance of the HC system will be gauged using long-term trend analysis. Operation of the HC system was initiated in March 2014 and only one semi-annual sampling event was completed in August 2014 following system startup. Long-term trend analysis will be performed semi-annually and documented in forthcoming annual O&M reports to confirm trends in contaminant concentrations, and overall performance of the HC system to meet remedial objectives.

The HC groundwater treatment system is operating reliably and has extracted, treated, and re-injected approximately 56,615,826 gallons of groundwater since system start-up on March 14, 2014 through November 14, 2014 (**Table 5**). The system operational summary for 2014 is provided as **Attachment 7** and includes a series of comprehensive data tables and graphical illustrations necessary to monitor system performance. Operational parameters detailed in **Attachment 7** are summarized below:

- Flow totalizer data – Includes flow totals for the following: total influent, total effluent, backwash cycles, surface water discharge, decant tank, extraction wells EW-1 through EW-6, and injection wells IW-1 through IW-4.

- Flow rate data – Includes flow rate data for the following: extraction wells EW-1 through EW-6, injection wells IW-1 through IW-4, total influent pump, media filter backwash, injection pump, surface water discharge pump, and decant pump.

- Pressure and sensor data – Includes pressure data for the following sensors: influent, media filters, granular activated carbon, effluent, blower, surface water effluent. Dissolved oxygen and pH data from the surface water discharge tank are also provided.

- Water Level data – Includes water level data for extraction wells EW-1 through EW-6 and influent and effluent tanks.

- Variable frequency drive (VFD) – Includes data for the recorded speed of the various pumps (system influent, system injection, surface water discharge, and extraction wells (EW-1 through EW-6).

- Injection Well Transducer Data – Includes pressure, temperature, and water level data for the injection wells (IW-1 through IW-4)

Future Activities in 2015

Future monitoring and reporting activities defined in the IRA Work Plan (ARCADIS, 2013b) are summarized below for each of the study areas:

- AOC 1 - Building 2286 and Former Building 2276
    - A follow up full-scale ISCO injection is planned during the second quarter of 2015. The injection wells included in the program will be confirmed following review of analytical results collected during the first quarter performance monitoring event.
    - Quarterly performance monitoring for VOCs, sulfate, and field parameters will be conducted at six wells (FGGM86-MW07, -08, OU4-MW01, -44, -45, and OU4-IW08). Following the second full-scale ISCO injection, sodium persulfate monitoring will be conducted monthly for one quarter at FGGM86-MW08, OU4-MW44, -45, and OU4-IW08. Note that select metals presented in **Table 1** will also be analyzed annually during active remediation.
    - Semi-annual monitoring for VOCs, hexavalent chromium, and field parameters will be conducted at 14 wells (FGGM86-MW03, -04, -07, -08, -11, -12, -13R, OU4-MW01, -03, -06, -44, -45, OU4-IW08 and -10).
    - Upon completion of the construction, grading, and asphalt work in the 2286 area finalization of the injection and monitoring wells will be completed. This includes cutting well risers to the ground surface, installing well manholes and concrete pads, and completion of well survey activities.
- AOC 2 – Building 2250
    - Quarterly performance monitoring for VOCs and field parameters will be conducted at five monitoring wells (Versar-MW01 – MW05).
    - Routine O&M visits to monitor treatment system operational parameters.
- AOC 3 – LPA Study Area
    - Monthly sampling for the parameters required for the National Pollution Discharge Elimination System (NPDES) permit equivalency will be conducted when surface discharge is on-going. NPDES data will be reported quarterly in accordance with the IRA Work Plan (ARCADIS, 2013b).

- Semi-annual monitoring for VOC and field parameters at 27 wells (see **Table 2**) and water elevation gauging.

- Routine O&M visits to monitor treatment system operational parameters.

The next quarterly report will be for the period January 1, 2014, through March 31, 2014 and will be the Fifth Quarterly Operation and Maintenance Report and will include quarterly performance monitoring results and system performance during the first quarter of 2015.

Sincerely,

ARCADIS U.S., Inc.

John Cherry,
Phase Manager

Tim Llewellyn
Project Manager

Tables:
Table 1 – Performance Monitoring Sampling Program
Table 2 – Semi-annual Sampling Program
Table 3 – Groundwater Elevations – 2014
Table 4 – Groundwater Analytical Results –2014
Table 5 – LPA Hydraulic Containment System Water Treatment Log - 2014
Table 6 – LPA Hydraulic Containment System Influent and Effluent Analytical Results

Figures:
Figure 1 – Operable Unit 4 / Lower Patapsco Aquifer Groundwater Elevations – August 2014
Figure 2 – Building 2276/2286 Site Plan
Figure 3 – Building 2250 Air Sparge/Soil Vapor Extraction System Layout
Figure 4 – Lower Patapsco Aquifer Study Area Hydraulic Containment System Layout

Attachments:
Attachment 1 – Laboratory Reports (on CD)
Attachment 2 – Data Validation Reports (on CD)
Attachment 3 – Groundwater Sampling Logs (on CD)
Attachment 4 – VOC Trend Plots

Attachment 5 – AS/SVE O&M Field Logs (on CD)
Attachment 6 – HC Groundwater Treatment System Field Logs (on CD)
Attachment 7 – HC Groundwater Treatment System Operational Summary

References

ARCADIS. 2010. Site-wide Health and Safety Plan for the Performance Based Acquisition at Fort Meade. October 2010.

ARCADIS. 2011a. Quality Assurance Project Plan (QAPP) for the Performance Based Acquisition at Fort Meade. March 2011.

ARCADIS. 2011b. Sample and Analysis Plan for the Performance Based Acquisition at Fort Meade. March 2011.

ARCADIS. 2011c. Waste Management Plan for the Performance Based Acquisition at Fort Meade. October 2011.

ARCADIS. 2013a. Final Engineering Evaluation/Cost Analysis Operable Unit 4, Fort George G. Meade, Maryland. Prepared for the US Army. June 2013.

ARCADIS. 2013b. Interim Removal Action Work Plan for Operable Unit 4, Fort George G. Meade, Maryland. December 2013.

ARCADIS. 2014a. First Quarter Operation and Maintenance Report (January 1 – March 31, 2014) Operable Unit 4 / Lower Patapsco Aquifer, Fort George G. Meade, Maryland. August 2014.

ARCADIS. 2014b. Interim Removal Action Report for Operable Unit 4 Area of Concern 3 (Lower Patapsco Aquifer Study Area), Fort George G. Meade, Maryland. Final. October 2014.

ARCADIS. 2014c. Interim Removal Action Report for Operable Unit 4 Areas of Concern 1 and 2 (Buildings 2286/2276 and Building 2250), Fort George G. Meade, Maryland. Draft. October 2014.

ARCADIS. 2014d. Second Quarter Operation and Maintenance Report (April 1 – June 30, 2014) Operable Unit 4 / Lower Patapsco Aquifer, Fort George G. Meade, Maryland. October 2014.

ARCADIS. 2014e. Third Quarter Operation and Maintenance Report (July 1 – September 31, 2014) Operable Unit 4 / Lower Patapsco Aquifer, Fort George G. Meade, Maryland. November 2014.

Tables

Table 1
Performance Monitoring Sampling Program
Operable Unit 4/ Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

			Sampling Parameters				
Area of Concern	Monitoring Well Identification	Monitoring Frequency	Field Parameters [1]	VOCs	Metals (Select Subset) [2,3]	Sodium Persulfate (field kits)[4]	Sulfate
Bldg. 2286/2276	FGGM86-MW07	Quarterly	X	X	X		X
	FGGM86-MW08	Quarterly	X	X	X	X	X
	OU4-MW01	Quarterly	X	X	X		X
	OU4MW44	Quarterly	X	X	X	X	X
	OU4MW45	Quarterly	X	X	X	X	X
	OU4IW08	Quarterly	X	X	X	X	X
Bldg 2250	VERSAR-MW01	Quarterly	X	X			
	VERSAR-MW02	Quarterly	X	X			
	VERSAR-MW03	Quarterly	X	X			
	VERSAR-MW04	Quarterly	X	X			
	VERSAR-MW05	Quarterly	X	X			

Notes:

This table presents Performance Monitoring sampling schedules. Baseline well sampling will include additional analytes.

[1] - Field Parameters include pH, dissolved oxygen, oxidation reduction potential, specific conductivity, turbidity and temperature

[2]- Monitor wells sampled annually for these compounds during active remediation.

[3] - Aluminum, Arsenic, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Nickel, Sodium, Zinc

[4] - Monthly field sampling for one quarter following an injection event to asses sodium persulfate utilization.

VOCs - volatile organic compounds

Table 2
Semi-Annual Sampling Program
Operable Unit 4/ Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

			Sampling Parameters		
Area of Concern	Monitoring Well Identification	Monitoring Frequency	Field Parameters[2]	VOCs	Hexavalent Chromium
Bldg. 2286/2276	FGGM86-MW03	Semi-Annual during NTCRA	X	X	X
	FGGM86-MW04[4]		X	X	X
	FGGM86-MW07		X	X	X
	FGGM86-MW08		X	X	X
	FGGM86-MW11		X	X	X
	FGGM86-MW12		X	X	X
	FGGM86-MW13R		X	X	X
	OU4-MW01		X	X	X
	OU4-MW03		X	X	X
	OU4-MW06		X	X	X
	OU4MW44		X	X	X
	OU4MW45		X	X	X
	OU4IW08		X	X	X
	OU4IW10[3]		X	X	X
Bldg. 2250	VERSAR-MW01[1]	Semi-Annual during NTCRA	X	X	
	VERSAR-MW02[1]		X	X	
	VERSAR-MW03[1]		X	X	
	VERSAR-MW04[1]		X	X	
	VERSAR-MW05[1]		X	X	
LPA Study Area	AOC-MW103	Semi-Annual during NTCRA	X	X	
	AOC-MW104		X	X	
	GS-6D		X	X	
	MW-2D		X	X	
	MW-4DR		X	X	
	MW-7D		X	X	
	MW-10D		X	X	
	MW-12D		X	X	
	MW-13D		X	X	
	MW-101D		X	X	
	MW-113D		X	X	
	MW-114D		X	X	
	MW-115D		X	X	
	MW-116D		X	X	
	MW-117D		X	X	
	MW-118D		X	X	
	MW-119D		X	X	
	MW-122D		X	X	
	MW-125D		X	X	
	MW-126D		X	X	
	OU4-MW31		X	X	
	OU4-MW32		X	X	
	OU4-MW33		X	X	
	OU4-MW34		X	X	
	OU4-MW37		X	X	
	OU4-MW38		X	X	
	OU4-MW39		X	X	

Notes:
This table presents the Semi-annual sampling schedule. Baseline well sampling will include additional analytes.

[1]- VERSAR-MW01 - VERSAR-MW05 will be monitored quarterly for one year to monitor rebound as part of the sampling program

[2] - Field Parameters include pH, dissolved oxygen, oxidation reduction potential, specific conductivity, turbidity, and temperature

[3] - This well serves as a replacement monitoring location to OU4IW13 which was included in the injection program.

[4] - This well serves as a replacement monitoring location to FGGM86MW10 which was dry during the semi-annual event. FGGM86-MW05 was removed from the approved semi-annual monitoring plan as it has not been located in the field. OU4-IW08 was added to the monitoring plan.

LPA - Lower Patapsco Aquifer

VOCs - volatile organic compounds

NTCRA - Non-Time Critical Removal Action

Table 3
Groundwater Elevations - 2014
Operable Unit 4
Fort George G. Meade, Maryland

Well ID	Aquifer Classification	TOC Elev (ft msl)	February 2014		June 2014		August 2014		October 2014	
			Sounded Depth (ft bTOC)	Corrected Groundwater Elevation (ft amsl)	Sounded Depth (ft bTOC)	Corrected Groundwater Elevation (ft amsl)	Sounded Depth (ft bTOC)	Corrected Groundwater Elevation (ft amsl)	Sounded Depth (ft bTOC)	Corrected Groundwater Elevation (ft amsl)
AOC 1 (Building 2286/2276)										
FGGM86MW-03	LPA	137.50	--	--	--	--	13.18	124.32	--	--
FGGM86MW-04[3]	LPA	140.20	--	--	--	--	22.53	117.67	--	--
FGGM86MW-07	LPA	144.85	--	--	--	--	20.86	123.99	22.52	122.33
FGGM86MW-08	LPA	140.71	--	--	--	--	16.01	124.70	17.09	123.62
FGGM86MW-11[2]	LPA	149.50	--	--	--	--	--	--	26.75	122.75
FGGM86MW-12	LPA	143.89	--	--	--	--	19.88	124.01	--	--
FGGM86MW-13R[1]	LPA	--	--	--	--	--	18.86	--	--	--
OU4MW-01	LPA	138.80	--	--	--	--	16.96	121.84	18.38	120.42
OU4MW-03	LPA	140.59	--	--	--	--	20.45	120.14	--	--
OU4MW-06	LPA	146.28	--	--	--	--	31.94	114.34	--	--
OU4MW-44[1]	LPA	--	--	--	--	--	14.89	--	16.54	--
OU4MW-45[1]	LPA	--	--	--	--	--	16.96	--	18.30	--
OU4IW-08[1]	LPA	--	--	--	--	--	23.80	--	--	--
OU4IW-10[1]	LPA	--	--	--	--	--	15.07	--	--	--
AOC 2 (Building 2250)										
VERSARMW-01	MPC/UPA	174.98	9.33	165.65	9.90	165.08	12.02	162.96	11.62	163.36
VERSARMW-02	MPC/UPA	175.65	7.62	168.03	5.92	169.73	8.35	167.30	6.92	168.73
VERSARMW-03	MPC/UPA	175.74	9.26	166.48	8.35	167.39	9.77	165.97	9.42	166.32
VERSARMW-04	MPC/UPA	176.96	9.81	167.15	10.21	166.75	11.64	165.32	11.69	165.27
VERSARMW-05	MPC/UPA	163.84	0.65	163.19	1.16	162.68	1.82	162.02	1.31	162.53
AOC 3 (LPA Study Area)										
AOCMW-103	LPA	150.96	44.71	106.25	--	--	43.63	107.33	--	--
AOCMW-104	LPA	140.72	31.70	109.02	--	--	30.70	110.02	--	--
GS-6D	LPA	148.49	43.34	105.15	--	--	42.83	105.66	--	--
MW-2D	LPA	162.27	68.79	93.48	--	--	70.94	91.33	--	--
MW-4DR	LPA	167.76	39.26	128.50	--	--	66.62	101.14	--	--
MW-7D	LPA	137.37	63.83	73.54	--	--	37.52	99.85	--	--
MW-10D	LPA	159.62	74.24	85.38	--	--	62.52	97.10	--	--
MW-12D	LPA	174.52	84.41	90.11	--	--	83.83	90.69	--	--
MW-13D	LPA	168.05	72.28	95.77	--	--	72.00	96.05	--	--
MW-101D	LPA	161.17	73.19	87.98	--	--	73.44	87.73	--	--
MW-113D	LPA	169.90	72.49	97.41	--	--	70.77	99.13	--	--
MW-114D	LPA	168.67	76.56	92.11	--	--	75.63	93.04	--	--
MW-115D	LPA	166.03	71.03	95.00	--	--	69.87	96.16	--	--
MW-116D	LPA	173.61	87.92	85.69	--	--	87.21	86.40	--	--
MW117D	LPA	148.45	43.28	105.17	--	--	42.92	105.53	--	--
MW-118D	LPA	137.13	33.41	103.72	--	--	32.97	104.16	--	--
MW-119D	LPA	154.56	NG	NG	--	--	NG	NG	52.31	102.25
MW-122D	LPA	150.34	43.52	106.82	--	--	42.46	107.88	--	--
MW125D	LPA	181.96	94.93	87.03	--	--	94.45	87.51	--	--
MW126D	LPA	188.20	102.11	86.09	--	--	101.73	86.47	--	--
OU4MW-31	LPA	163.48	58.85	104.63	--	--	58.03	105.45	--	--
OU4MW-32	LPA	139.85	35.74	104.11	--	--	35.35	104.50	--	--
OU4MW-33	LPA	162.75	64.22	98.53	--	--	62.98	99.77	--	--
OU4MW-34	LPA	163.31	60.31	103.00	--	--	59.02	104.29	--	--
OU4MW-35	LPA	167.42	--	--	--	--	65.50	101.92	--	--
OU4MW-37	LPA	150.62	53.10	97.52	--	--	51.53	99.09	--	--
OU4MW-38	LPA	165.79	76.62	89.17	--	--	76.12	89.67	--	--
OU4MW-39	LPA	162.48	73.37	89.11	--	--	72.61	89.87	--	--

Notes-
[1] - Well not surveyed because of ongoing construction activities in that area
[2] - Well is damaged and no depth to water was recorded
[3] - This well serves as a replacement monitoring location to FGGM86MW10 which was dry during the semi-annual event.
LPA - Lower Patapsco Aquifer
TOC - top of casing
AOC - Area of Concern
NG - not gauged because it was inaccessible
bTOC - below top of casing
ft bgs - feet below ground surface
amsl - above mean sea level
-- Not collected or not available

Table 4
Analytical Results - 2014
Operable Unit 4 / Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

					AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1
					Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276
				Location ID	FGGM86-MW03	FGGM86-MW04	FGGM86-MW07	FGGM86-MW07	FGGM86-MW07	FGGM86-MW07	FGGM86-MW07	FGGM86-MW08	FGGM86-MW08	FGGM86-MW08	FGGM86-MW08	FGGM86-MW08	FGGM86-MW08	FGGM86-MW08	FGGM86-MW08	FGGM86-MW08
				Sample Date	8/14/2014	8/19/2014	2/12/2014	2/20/2014	6/24/2014	8/14/2014	10/14/2014	2/11/2014	2/12/2014	2/20/2014	6/24/2014	6/24/2014	7/23/2014	8/13/2014	8/13/2014	10/14/2014
				Sample ID	FGGM86MW-03(081414)	FGGM86MW-04(081914)	FGGM86MW-07(021214)	FGGM86MW-07(022014)	FGGM86MW-07(062414)	FGGM86MW-07(081414)	FGGM86MW-07(101414)	FGGM86MW-08(02114)	FGGM86MW-08(021214)	FGGM86MW-08(022014)	DUP02(062414)	FGGM86MW-08(062414)	--	DUP02(081314)FD	FGGM86MW-08(081314)	DUP02(101414)
Group	Chemical	Units	Fraction	MCL																
Anions	Sulfate	ug/l	N	--	--	--	25000	--	20600	18200	15400	21000	23000	--	18600	18300	--	19700	20000	107000
TOC	Total Organic Carbon	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Aluminum	ug/l	T	--	--	--	730	--	418	--	--	4000	--	--	1790	1350	--	--	--	--
Metals	Arsenic	ug/l	D	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	T	10	--	--	< 10 U	--	< 40.0 U	--	--	< 4.7 U	--	--	< 40.0 U	< 40.0 U	--	--	--	--
Metals	Beryllium	ug/l	D	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	T	4	--	--	< 4.0 U	--	< 10.0 U	--	--	< 4.0 U	--	--	< 10.0 U	< 10.0 U	--	--	--	--
Metals	Cadmium	ug/l	T	5	--	--	0.66 J	--	1.1 J	--	--	< 2.0 U	--	--	0.51 J	0.45 J	--	--	--	--
Metals	Chromium	ug/l	T	100	--	--	1.9 J	--	< 30.0 U	--	--	13	--	--	5.4 J	3.7 J	--	--	--	--
Metals	Chromium VI	ug/l	T	--	< 30 U	< 30 U	14 J	39	< 30 U	15 J	--	130 J	38 J	8.3 J	< 30 U	< 30 U	--	< 30 U	< 30 U	--
Metals	Cobalt	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Copper	ug/l	T	1000	--	--	13	--	3.2 J	--	--	13	--	--	7.4 J	5.9 J	--	--	--	--
Metals	Iron	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	T	--	--	--	180	--	280 J	--	--	11000	--	--	3460	2460	--	--	--	--
Metals	Lead	ug/l	T	15	--	--	3.9 J	--	< 30.0 U	--	--	< 10 U	--	--	< 30.0 U	< 30.0 U	--	--	--	--
Metals	Manganese	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	T	--	--	--	56	--	56.5	--	--	67	--	--	71.7	79.4	--	--	--	--
Metals	Nickel	ug/l	T	--	--	--	< 40 U	--	2.8 J	--	--	< 40 U	--	--	3.5 J	3.4 J	--	--	--	--
Metals	Sodium	ug/l	T	--	--	--	15000	--	8000	--	--	35000	--	--	43800	44100	--	--	--	--
Metals	Zinc	ug/l	T	--	--	--	75	--	63	--	--	16 J	--	--	12.3 J	11.6 J	--	--	--	--
VOCs	1,1,1,2-Tetrachloroethane	ug/l	N	--	--	--	< 50 U	--	--	--	--	< 50 U	--	--	--	--	--	--	--	--
VOCs	1,1,1-Trichloroethane	ug/l	N	200	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,1,2,2-Tetrachloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	0.3 J
VOCs	1,1,2-trichloro-1,2,2-trifluoroethane	ug/l	N	--	< 0.5 U	< 0.5 U	--	--	< 0.5 U	< 0.5 U	< 0.5 U	--	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,1,2-Trichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,1-Dichloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,1-Dichloroethene	ug/l	N	7	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,1-Dichloropropene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	1,2,3-Trichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,2,3-Trichloropropane	ug/l	N	--	--	--	< 50 U	--	--	--	--	< 50 U	--	--	--	--	--	--	--	--
VOCs	1,2,4-Trichlorobenzene	ug/l	N	70	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,2,4-Trimethylbenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	1,2-Dibromo-3-chloropropane	ug/l	N	0.2	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,2-Dibromoethane	ug/l	N	0.05	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,2-Dichlorobenzene	ug/l	N	600	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,2-Dichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	0.1 J
VOCs	1,2-Dichloropropane	ug/l	N	5	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,3,5-Trimethylbenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	1,3-Dichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	1,3-Dichloropropane	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	1,4-Dichlorobenzene	ug/l	N	75	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	2,2-Dichloropropane	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	2-Butanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 100 U	--	< 5.0 U	< 5.0 U	< 5.0 U	< 100 U	--	--	< 25 U	< 25 U	--	< 25 U	< 50 U	1.4 J
VOCs	2-Chlorotoluene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	4-Chlorotoluene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	4-Methyl-2-Pentanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 100 U	--	< 5.0 U	< 5.0 U	< 5.0 U	< 100 U	--	--	< 25 U	< 25 U	--	< 25 U	< 50 U	< 5.0 UJ
VOCs	Acetone	ug/l	N	--	< 5.0 U	< 5.0 U	< 200 U	--	< 5.0 U	< 5.0 U	< 5.0 U	< 200 U	--	--	< 25 U	< 25 U	--	< 25 U	< 50 U	72 J
VOCs	Benzene	ug/l	N	5	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Bromobenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	Bromodichloromethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	0.2 J
VOCs	Bromoform	ug/l	N	80	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	0.7 J
VOCs	Bromomethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	9.0 J
VOCs	Carbon Disulfide	ug/l	N	--	< 1.0 U	< 1.0 U	< 50 U	--	< 0.5 U	< 1.0 U	< 1.0 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 5.0 U	< 10 U	< 1.0 UJ
VOCs	Carbon Tetrachloride	ug/l	N	5	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	CFC-11	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	CFC-12	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Chlorobenzene	ug/l	N	100	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Chlorobromomethane	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	Chlorodibromomethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	0.5 J
VOCs	Chloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	0.2 J
VOCs	Chloroform	ug/l	N	80	< 0.5 U	0.1 J	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	3.2 J
VOCs	Chloromethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	43 J
VOCs	cis-1,2-Dichloroethene	ug/l	N	70	< 0.5 U	5.2	140	--	6.6	4.4	3	110	--	--	65	67	--	64	58	6.4 J
VOCs	cis-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Cyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	--	--	< 0.5 U	< 0.5 U	< 0.5 U	--	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Cymene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	Dibromomethane	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	Dichloromethane	ug/l	N	3000	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Ethylbenzene	ug/l	N	500000	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Hexachloro-1,3-butadiene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	Isopropylbenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	m,p-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Methyl Acetate	ug/l	N	--	< 1.0 U	< 1.0 U	--	--	< 1.0 U	< 1.0 U	< 1.0 U	--	--	--	< 5.0 U	< 5.0 U	--	< 5.0 U	< 10 U	< 1.0 UJ
VOCs	Methyl N-Butyl Ketone	ug/l	N	--	< 5.0 U	< 5.0 U	< 100 U	--	< 5.0 U	< 5.0 U	< 5.0 U	< 100 U	--	--	< 25 U	< 25 U	--	< 25 U	< 50 U	< 5.0 UJ
VOCs	Methylcyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	--	--	< 0.5 U	< 0.5 U	< 0.5 U	--	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Methyl-tert-butylether	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Naphthalene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	N-Butylbenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	N-Propylbenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	o-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	sec-Butylbenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	Styrene (Monomer)	ug/l	N	100	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	tert-Butylbenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	Tetrachloroethene	ug/l	N	5	< 0.5 U	57	960	--	59	41	33	1200	--	--	780	790	--	650	570	280 J
VOCs	Toluene	ug/l	N	1000	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Total Xylenes	ug/l	N	10000	--	--	< 50 U	--	--	--		< 50 U	--	--	--	--	--	--	--	
VOCs	trans-1,2-Dichloroethene	ug/l	N	100	< 0.5 U	0.2 J	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	5.4	4.5	--	5	6.8	1.7 J
VOCs	trans-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 50 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 50 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
VOCs	Trichloroethene	ug/l	N	5	< 0.5 U	5.7	110	--	6.7	4.5	3.3	97	--	--	64	63	--	61	58	10 J
VOCs	Vinyl chloride	ug/l	N	--	< 0.5 U	< 0.5 U	< 20 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 20 U	--	--	< 2.5 U	< 2.5 U	--	< 2.5 U	< 5.0 U	< 0.5 UJ
Field Test Kit	Sodium Persulfate[1]	g/L	N	--	--	--	0	--	--	--	--	0	--	--	--	2.5	0	--	--	--

Notes:

[1]- Collected via field test kits

AOC - Area of Concern

< U - analyte not detected above method detection limit

-- Not analyzed

MCL - Maximum Contaminant Level

FD - field duplicate

N - normal

J - Estimated detection less than the practical quantation limit and greater than the method detection limit

ug/L - micrograms per liter

g/L - grams per liter

MCL exceedances are shaded

Baseline data collected prior to active remediation (February 2014)

Table 4
Analytical Results - 2014
Operable Unit 4 / Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

					AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1
					Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276
				Location ID	FGGM86-MW11	FGGM86-MW12	FGGM86-MW13R	FMOU4-IW08	FMOU4-IW08	FMOU4-IW08	FMOU4-IW10	FMOU4-MW01	FMOU4-MW01	FMOU4-MW01	FMOU4-MW01	FMOU4-MW03	FMOU4-MW06	FMOU4-MW44	FMOU4-MW44	FMOU4-MW44	FMOU4-MW44
				Sample Date	10/14/2014	8/13/2014	8/13/2014	8/13/2014	8/13/2014	10/14/2014	8/14/2014	2/20/2014	6/24/2014	8/13/2014	10/14/2014	8/14/2014	8/13/2014	2/12/2014	2/19/2014	6/24/2014	7/23/2014
				Sample ID	FGGM86MW-11(101414)	FGGM86MW-12(081314)	FGGM86MW-13R(081314)	--	OU4IW-08(081314)	OU4IW-08(101414)	OU4IW10(081414)	OU4MW01(022014)	OU4MW-01(062414)	OU4MW-01(081314)	OU4MW-01(101414)	OU4MW03(081414)	OU4MW-06(081314)	OU4MW-44(021214)	OU4MW-44(021914)	OU4MW-44(062414)	--
Group	Chemical	Units	Fraction	MCL																	
Anions	Sulfate	ug/l	N	--	--	--	--	--	40600	29800	34900	17000	18300	16500	14600	--	--	680000	--	363000	--
TOC	Total Organic Carbon	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Aluminum	ug/l	T	--	--	--	--	--	--	--	--	500	254 J	--	--	--	--	15000	--	19400	--
Metals	Arsenic	ug/l	D	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	T	10	--	--	--	--	--	--	--	< 10 U	< 40.0 U	--	--	--	--	6.5 J	--	14.4 J	--
Metals	Beryllium	ug/l	D	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	T	4	--	--	--	--	--	--	--	< 4.0 U	< 10.0 U	--	--	--	--	1.6 J	--	1.2 J	--
Metals	Cadmium	ug/l	T	5	--	--	--	--	--	--	--	< 2.0 U	0.34 J	--	--	--	--	< 2.0 U	--	0.82 J	--
Metals	Chromium	ug/l	T	100	--	--	--	--	--	--	--	4.9 J	5.1 J	--	--	--	--	36	--	24.0 J	--
Metals	Chromium VI	ug/l	T	--	--	< 30 U	< 30 U	--	< 30 U	--	< 30 U	19 J	< 30 U	< 30 U	--	< 30 U	< 30 U	65 J	< 210 U	< 30 U	--
Metals	Cobalt	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Copper	ug/l	T	1000	--	--	--	--	--	--	--	< 2.7 U	< 20.0 U	--	--	--	--	220	--	30.4	--
Metals	Iron	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	T	--	--	--	--	--	--	--	--	670	396 J	--	--	--	--	1300	--	5110	--
Metals	Lead	ug/l	T	15	--	--	--	--	--	--	--	< 10 U	< 30.0 U	--	--	--	--	< 50 U	--	11.2 J	--
Metals	Manganese	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	T	--	--	--	--	--	--	--	--	18	20.8	--	--	--	--	12 J	--	41.2	--
Metals	Nickel	ug/l	T	--	--	--	--	--	--	--	--	< 40 U	< 20.0 U	--	--	--	--	< 40 U	--	10.5 J	--
Metals	Sodium	ug/l	T	--	--	--	--	--	--	--	--	31000	33000	--	--	--	--	1100000	--	1920000	--
Metals	Zinc	ug/l	T	--	--	--	--	--	--	--	--	6.6 J	6.9 J	--	--	--	--	120	--	34.6 J	--
VOCs	1,1,1,2-Tetrachloroethane	ug/l	N	--	--	--	--	--	--	--	--	< 5.0 U	--	--	--	--	--	< 25 U	--	--	--
VOCs	1,1,1-Trichloroethane	ug/l	N	200	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,1,2,2-Tetrachloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,1,2-trichloro-1,2,2-trifluoroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	--	< 0.5 U	--
VOCs	1,1,2-Trichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,1-Dichloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,1-Dichloroethene	ug/l	N	7	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,1-Dichloropropene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	1,2,3-Trichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,2,3-Trichloropropane	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	1,2,4-Trichlorobenzene	ug/l	N	70	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,2,4-Trimethylbenzene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	1,2-Dibromo-3-chloropropane	ug/l	N	0.2	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,2-Dibromoethane	ug/l	N	0.05	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,2-Dichlorobenzene	ug/l	N	600	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,2-Dichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,2-Dichloropropane	ug/l	N	5	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,3,5-Trimethylbenzene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	1,3-Dichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	1,3-Dichloropropane	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	1,4-Dichlorobenzene	ug/l	N	75	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	2,2-Dichloropropane	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	2-Butanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 25 U	--	< 5.0 U	< 5.0 U	< 10 U	< 10 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 50 U	--	1.2 J	--
VOCs	2-Chlorotoluene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	4-Chlorotoluene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	4-Methyl-2-Pentanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 25 U	--	< 5.0 U	< 5.0 U	< 10 U	< 10 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 50 U	--	< 5.0 U	--
VOCs	Acetone	ug/l	N	--	< 5.0 U	10	< 25 U	--	4.7 J	< 5.0 U	24	< 20 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	90 J	--	53	--
VOCs	Benzene	ug/l	N	5	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Bromobenzene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	Bromodichloromethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	1	--
VOCs	Bromoform	ug/l	N	80	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	1.1	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	1.3	--
VOCs	Bromomethane	ug/l	N	--	< 0.5 U	1	< 2.5 U	--	0.1 J	< 0.5 U	0.9 J	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	33	--	6.7	--
VOCs	Carbon Disulfide	ug/l	N	--	< 1.0 U	< 1.0 U	< 5.0 U	--	< 1.0 U	< 1.0 U	< 2.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 25 U	--	< 0.5 U	--
VOCs	Carbon Tetrachloride	ug/l	N	5	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	0.3 J	--
VOCs	CFC-11	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	CFC-12	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Chlorobenzene	ug/l	N	100	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Chlorobromomethane	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	5.4 J	--	--	--
VOCs	Chlorodibromomethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	1.8	--
VOCs	Chloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	0.4 J	--
VOCs	Chloroform	ug/l	N	80	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	0.21 J	0.3 J	0.2 J	0.2 J	< 0.5 U	< 0.5 U	1.8 J	--	2.7	--
VOCs	Chloromethane	ug/l	N	--	< 0.5 U	0.4 J	< 2.5 U	--	< 0.5 U	< 0.5 U	3.4	< 5.0 U	0.4 J	0.2 J	0.9	< 0.5 U	< 0.5 U	250	--	66	--
VOCs	cis-1,2-Dichloroethene	ug/l	N	70	< 0.5 U	< 0.5 U	57	--	0.4 J	0.8	4.6	5.6	5.1	3.1	3.9	25	1.9	2.7 J	--	< 0.5 U	--
VOCs	cis-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Cyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	--	< 0.5 U	--
VOCs	Cymene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	Dibromomethane	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	Dichloromethane	ug/l	N	3000	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	4.0 J	--	0.9	--
VOCs	Ethylbenzene	ug/l	N	500000	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Hexachloro-1,3-butadiene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	Isopropylbenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	m,p-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Methyl Acetate	ug/l	N	--	< 1.0 U	< 1.0 U	< 5.0 U	--	< 1.0 U	< 1.0 U	< 2.0 U	--	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	--	--	< 1.0 U	--
VOCs	Methyl N-Butyl Ketone	ug/l	N	--	< 5.0 U	< 5.0 U	< 25 U	--	< 5.0 U	< 5.0 U	< 10 U	< 10 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 50 U	--	< 5.0 U	--
VOCs	Methylcyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	--	< 0.5 U	--
VOCs	Methyl-tert-butylether	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	0.2 J	0.1 J	< 25 U	--	< 0.5 U	--
VOCs	Naphthalene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	N-Butylbenzene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	N-Propylbenzene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	o-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	sec-Butylbenzene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	Styrene (Monomer)	ug/l	N	100	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	tert-Butylbenzene	ug/l	N	--		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	Tetrachloroethene	ug/l	N	5	0.7	1.8	320	--	18	24	200	160	130	83	110	65	19	390	--	120	--
VOCs	Toluene	ug/l	N	1000	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Total Xylenes	ug/l	N	10000		--	--	--	--		--	< 5.0 U	--	--		--	--	< 25 U	--	--	--
VOCs	trans-1,2-Dichloroethene	ug/l	N	100	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	1.1	0.32 J	0.7	0.3 J	0.7	0.3 J	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	trans-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 25 U	--	< 0.5 U	--
VOCs	Trichloroethene	ug/l	N	5	< 0.5 U	< 0.5 U	55	--	0.8	1.8	3.2	3.6 J	3.3	2.3	2.9	4.5	1.2	2.3 J	--	< 0.5 U	--
VOCs	Vinyl chloride	ug/l	N	--	< 0.5 U	< 0.5 U	< 2.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 2.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 10 U	--	< 0.5 U	--
Field Test Kit	Sodium Persulfate[1]	g/L	N	--	--	--	--	0	--	--	--	--	--	--	--	--	--	0	--	8.5	5.5

Notes:

[1]- Collected via field test kits

AOC - Area of Concern

< U - analyte not detected above method detection limit

-- Not analyzed

MCL - Maximum Contaminant Level

FD - field duplicate

N - normal

J - Estimated detection less than the practical quantation limit and greater than the method detection limit

ug/L - micrograms per liter

g/L - grams per liter

MCL exceedances are shaded

Baseline data collected prior to active remediation (February 2014)

Table 4
Analytical Results - 2014
Operable Unit 4 / Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

					AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 1	AOC 2	AOC 2	AOC 2	AOC 2	AOC 2	AOC 2	AOC 2	AOC 2	AOC 2	AOC 2
					Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2286/2276	Building 2250	Building 2250	Building 2250	Building 2250	Building 2250	Building 2250	Building 2250	Building 2250	Building 2250	Building 2250
				Location ID	FMOU4-MW44	FMOU4-MW44	FMOU4-MW45	FMOU4-MW45	FMOU4-MW45	FMOU4-MW45	FMOU4-MW45	MW-1-VERSAR	MW-1-VERSAR	MW-1-VERSAR	MW-1-VERSAR	MW-1-VERSAR	MW-1-VERSAR	MW-2-VERSAR	MW-2-VERSAR	MW-2-VERSAR	MW-2-VERSAR
				Sample Date	8/14/2014	10/15/2014	2/12/2014	2/19/2014	6/24/2014	8/14/2014	10/14/2014	2/4/2014	2/4/2014	6/25/2014	8/12/2014	10/15/2014	10/15/2014	2/4/2014	6/25/2014	6/25/2014	8/12/2014
				Sample ID	OU4MW44(081414)	OU4MW-44(101514)	OU4MW-45(021214)	OU4MW-45(021914)	OU4MW-45(062414)	OU4MW45(081414)	OU4MW-45(101414)	DUP-1(020414)	MW-1-VERSAR(020414)	MW1-VERSAR(062514)	MW1-VERSAR(081214)	MW-1VERSAR(101514)	MW-2-VERSAR(020414)	DUP01(062514)	MW2-VERSAR(062514)	DUP01(081214)FD	MW2-VERSAR(081214)
Group	Chemical	Units	Fraction	MCL																	
Anions	Sulfate	ug/l	N	--	288000	489000	19000	--	105000	150000	216000	--	--	--	--	--	--	--	--	--	--
TOC	Total Organic Carbon	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Aluminum	ug/l	T	--	--	--	16000	--	4700	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	D	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	T	10	--	--	18	--	< 40.0 U	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	D	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	T	4	--	--	< 4.0 U	--	0.71 J	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cadmium	ug/l	T	5	--	--	< 2.0 U	--	1.1 J	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Chromium	ug/l	T	100	--	--	74	--	6.1 J	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Chromium VI	ug/l	T	--	< 30 U	--	36 J	< 11 U	< 30 U	< 30 U	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Copper	ug/l	T	1000	--	--	39	--	39.3	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	T	--	--	--	38000	--	1530	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Lead	ug/l	T	15	--	--	7.2 J	--	4.7 J	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	T	--	--	--	90	--	60.5	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Nickel	ug/l	T	--	--	--	18 J	--	17.0 J	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Sodium	ug/l	T	--	--	--	57000	--	308000	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Zinc	ug/l	T	--	--	--	30	--	45.8	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,1,1,2-Tetrachloroethane	ug/l	N	--	--	--	< 50 U	--	--	--	--	< 50 U	< 25 U	--	--	--	< 5.0 U	--	--	--	--
VOCs	1,1,1-Trichloroethane	ug/l	N	200	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,1,2-trichloro-1,2,2-trifluoroethane	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	--	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	--	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,1,2-Trichloroethane	ug/l	N	5	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,1-Dichloroethane	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,1-Dichloroethene	ug/l	N	7	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,1-Dichloropropene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--	--	< 5.0 U	--	--	--	--
VOCs	1,2,3-Trichlorobenzene	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 25 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,2,3-Trichloropropane	ug/l	N	--	--	--	< 50 U	--	--	--	--	< 50 U	< 25 U	--	--	--	< 5.0 U	--	--	--	--
VOCs	1,2,4-Trichlorobenzene	ug/l	N	70	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,2,4-Trimethylbenzene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	1,2-Dibromo-3-chloropropane	ug/l	N	0.2	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,2-Dibromoethane	ug/l	N	0.05	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,2-Dichlorobenzene	ug/l	N	600	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,2-Dichloroethane	ug/l	N	5	0.2 J	0.3 J	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,2-Dichloropropane	ug/l	N	5	< 1.0 UJ	0.3 J	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,3,5-Trimethylbenzene	ug/l	N	--	--	--	< 50 U	--	--	--		< 50 U	< 25 U	--	--	--	< 5.0 U	--	--	--	--
VOCs	1,3-Dichlorobenzene	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	1,3-Dichloropropane	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	1,4-Dichlorobenzene	ug/l	N	75	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	2,2-Dichloropropane	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	2-Butanone	ug/l	N	--	< 10 UJ	< 10 UJ	< 100 U	--	< 5.0 U	< 10 UJ	< 10 UJ	< 100 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	< 10 U	< 5.0 U	< 5.0 U	< 10 U	< 25 U
VOCs	2-Chlorotoluene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	4-Chlorotoluene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	4-Methyl-2-Pentanone	ug/l	N	--	< 10 UJ	< 10 UJ	< 100 U	--	< 5.0 U	< 10 UJ	< 10 UJ	< 100 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	< 10 U	< 5.0 U	< 5.0 U	< 10 U	< 25 U
VOCs	Acetone	ug/l	N	--	93 J	78 J	< 200 U	--	16	33 J	35 J	< 200 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	< 20 U	< 5.0 U	< 5.0 U	< 10 U	< 25 U
VOCs	Benzene	ug/l	N	5	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Bromobenzene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	Bromodichloromethane	ug/l	N	80	0.6 J	0.4 J	< 50 U	--	0.3 J	0.2 J	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Bromoform	ug/l	N	80	0.5 J	0.2 J	< 50 U	--	1.2	0.6 J	0.5 J	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Bromomethane	ug/l	N	--	25 J	25 J	< 50 U	--	0.1 J	1.5 J	6.2 J	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Carbon Disulfide	ug/l	N	--	< 2.0 UJ	< 2.0 UJ	< 50 U	--	< 0.5 U	< 2.0 UJ	< 2.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 2.0 U	< 2.5 U
VOCs	Carbon Tetrachloride	ug/l	N	5	0.2 J	< 1.0 UJ	< 50 U	--	0.2 J	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	CFC-11	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	CFC-12	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Chlorobenzene	ug/l	N	100	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Chlorobromomethane	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	Chlorodibromomethane	ug/l	N	80	0.6 J	0.2 J	< 50 U	--	1.1	0.3 J	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Chloroethane	ug/l	N	--	0.5 J	1.0 J	< 50 U	--	< 0.5 U	< 1.0 UJ	0.5 J	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Chloroform	ug/l	N	80	2.3 J	1.2 J	< 50 U	--	1.8	0.6 J	0.5 J	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Chloromethane	ug/l	N	--	84	120 J	< 50 U	--	0.6	3.3 J	17 J	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	cis-1,2-Dichloroethene	ug/l	N	70	< 1.0 UJ	0.5 J	56	--	3.5	3.5 J	3.0 J	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	cis-1,3-Dichloropropene	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Cyclohexane	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	--	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	--	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Cymene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	Dibromomethane	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	Dichloromethane	ug/l	N	3000	0.9 J	0.7 J	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Ethylbenzene	ug/l	N	500000	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Hexachloro-1,3-butadiene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	Isopropylbenzene	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	m,p-Xylene	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 25 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Methyl Acetate	ug/l	N	--	< 2.0 UJ	< 2.0 UJ	--	--	< 1.0 U	< 2.0 UJ	< 2.0 UJ	--	< 5.0 U	< 1.0 U	< 1.0 U	< 1.0 U	--	< 1.0 U	< 1.0 U	< 2.0 U	< 5.0 U
VOCs	Methyl N-Butyl Ketone	ug/l	N	--	< 10 UJ	< 10 UJ	< 100 U	--	< 5.0 U	< 10 UJ	< 10 UJ	< 100 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	< 10 U	< 5.0 U	< 5.0 U	< 10 U	< 25 U
VOCs	Methylcyclohexane	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	--	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	--	< 25 U	< 0.5 U	< 0.5 U	< 0.5 U	--	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Methyl-tert-butylether	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Naphthalene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	N-Butylbenzene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	N-Propylbenzene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	o-Xylene	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 25 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	sec-Butylbenzene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	Styrene (Monomer)	ug/l	N	100	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	tert-Butylbenzene	ug/l	N	--	--		< 50 U	--	--	--		< 50 U	< 25 U	--	--		< 5.0 U	--	--	--	--
VOCs	Tetrachloroethene	ug/l	N	5	120	90 J	960	--	270	200	140 J	880 J	410 J	15	140	210	190	40	36	290	320
VOCs	Toluene	ug/l	N	1000	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Total Xylenes	ug/l	N	10000	--		< 50 U	--	--	--		< 50 U	< 2.5 U	--	--		< 5.0 U	--	--	--	--
VOCs	trans-1,2-Dichloroethene	ug/l	N	100	< 1.0 UJ	< 1.0 UJ	< 50 U	--	1.1	1.2 J	1.1 J	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	trans-1,3-Dichloropropene	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 50 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 50 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Trichloroethene	ug/l	N	5	< 1.0 UJ	0.3 J	22 J	--	3	2.6 J	2.0 J	< 50 U	< 2.5 U	< 0.5 U	0.1 J	0.2 J	< 5.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
VOCs	Vinyl chloride	ug/l	N	--	< 1.0 UJ	< 1.0 UJ	< 20 U	--	< 0.5 U	< 1.0 UJ	< 1.0 UJ	< 20 U	< 2.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 2.0 U	< 0.5 U	< 0.5 U	< 1.0 U	< 2.5 U
Field Test Kit	Sodium Persulfate[1]	g/L	N	--	9.89	--	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1]- Collected via field test kits

AOC - Area of Concern

< U - analyte not detected above method detection limit

-- Not analyzed

MCL - Maximum Contaminant Level

FD - field duplicate

N - normal

J - Estimated detection less than the practical quantation limit and greater than the method detection limit

ug/L - micrograms per liter

g/L - grams per liter

MCL exceedances are shaded

Baseline data collected prior to active remediation (February 2014)

Table 4
Analytical Results - 2014
Operable Unit 4 / Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

					AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 2 Building 2250	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area
				Location ID	MW-2-VERSAR	MW-2-VERSAR	MW-3-VERSAR	MW-3-VERSAR	MW-3-VERSAR	MW-3-VERSAR	MW-4-VERSAR	MW-4-VERSAR	MW-4-VERSAR	MW-4-VERSAR	MW-5-VERSAR	MW-5-VERSAR	MW-5-VERSAR	MW-5-VERSAR	AOC-MW103	AOC-MW104	FM17MW02D
				Sample Date	10/15/2014	10/15/2014	2/4/2014	6/25/2014	8/12/2014	10/15/2014	2/4/2014	6/25/2014	8/12/2014	10/15/2014	2/4/2014	6/23/2014	8/13/2014	10/15/2014	8/21/2014	8/20/2014	8/18/2014
				Sample ID	DUP01(101514)	MW-2VERSAR(101514)	MW-3-VERSAR(020414)	MW3-VERSAR(062514)	MW3-VERSAR(081214)	MW-3VERSAR(101514)	MW-4-VERSAR(020414)	MW4-VERSAR(062514)	MW4-VERSAR(081214)	MW-4VERSAR(101514)	MW-5-VERSAR(020414)	MW5-VERSAR(062314)	MW5-VERSAR(081314)	MW-5VERSAR(101514)	AOC-MW103(082114)	AOC-MW104(082014)	FM17MW-2D(081814)
Group	Chemical	Units	Fraction	MCL																	
Anions	Sulfate	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC	Total Organic Carbon	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Aluminum	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	D	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	T	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	D	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	T	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cadmium	ug/l	T	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Chromium	ug/l	T	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Chromium VI	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Copper	ug/l	T	1000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Lead	ug/l	T	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Nickel	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Sodium	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Zinc	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,1,1,2-Tetrachloroethane	ug/l	N	--	--	--	< 50 U	--	--	--	< 5.0 U	--	--	--	< 5.0 U	--	--	--	--	--	--
VOCs	1,1,1-Trichloroethane	ug/l	N	200	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-trichloro-1,2,2-trifluoroethane	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	--	< 0.5 U	< 1.0 U	< 1.0 U	--	< 0.5 U	< 0.5 U	< 0.5 U	4.9	< 0.5 U	< 0.5 U
VOCs	1,1,2-Trichloroethane	ug/l	N	5	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloroethane	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.1 J
VOCs	1,1-Dichloroethene	ug/l	N	7	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	0.2 J	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloropropene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	1,2,3-Trichlorobenzene	ug/l	N	--	< 0.5 U	< 2.5 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,3-Trichloropropane	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	1,2,4-Trichlorobenzene	ug/l	N	70	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-Trimethylbenzene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	1,2-Dibromo-3-chloropropane	ug/l	N	0.2	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dibromoethane	ug/l	N	0.05	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichlorobenzene	ug/l	N	600	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichloroethane	ug/l	N	5	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichloropropane	ug/l	N	5	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,3,5-Trimethylbenzene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	1,3-Dichlorobenzene	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,3-Dichloropropane	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	1,4-Dichlorobenzene	ug/l	N	75	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.1 J
VOCs	2,2-Dichloropropane	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	2-Butanone	ug/l	N	--	< 5.0 U	< 25 U	< 100 U	< 50 U	< 50 U	< 50 U	< 10 U	< 5.0 U	< 10 U	< 10 U	0.76 J	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	2-Chlorotoluene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	4-Chlorotoluene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	4-Methyl-2-Pentanone	ug/l	N	--	< 5.0 U	< 25 U	< 100 U	< 50 U	< 50 U	< 50 U	< 10 U	< 5.0 U	< 10 U	< 10 U	< 10 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Acetone	ug/l	N	--	< 5.0 U	< 25 U	< 100 U	< 50 U	< 50 U	< 50 U	< 20 U	< 5.0 U	< 10 U	< 10 U	< 20 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Benzene	ug/l	N	5	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromobenzene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	Bromodichloromethane	ug/l	N	80	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromoform	ug/l	N	80	< 0.5 U	< 2.5 U	6.8	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromomethane	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Carbon Disulfide	ug/l	N	--	< 1.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 10 U	< 10 U	< 5.0 U	< 0.5 U	< 2.0 U	< 2.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VOCs	Carbon Tetrachloride	ug/l	N	5	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	0.7	0.2 J	< 0.5 U
VOCs	CFC-11	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	0.1 J	< 0.5 U	< 0.5 U
VOCs	CFC-12	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chlorobenzene	ug/l	N	100	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chlorobromomethane	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	Chlorodibromomethane	ug/l	N	80	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chloroethane	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chloroform	ug/l	N	80	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	1.2	1.7	< 0.5 U
VOCs	Chloromethane	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	cis-1,2-Dichloroethene	ug/l	N	70	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	0.46 J	2.2	1.6	0.4 J	< 5.0 U	< 0.5 U	0.6	0.2 J	8.6	4.2	< 0.5 U
VOCs	cis-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Cyclohexane	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	--	< 0.5 U	< 1.0 U	< 1.0 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Cymene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	Dibromomethane	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	Dichloromethane	ug/l	N	3000	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Ethylbenzene	ug/l	N	500000	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Hexachloro-1,3-butadiene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	Isopropylbenzene	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	m,p-Xylene	ug/l	N	--	< 0.5 U	< 2.5 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Methyl Acetate	ug/l	N	--	< 1.0 U	< 5.0 U	< 10 U	< 10 U	< 10 U	< 10 U	--	< 1.0 U	< 2.0 U	< 2.0 U	--	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VOCs	Methyl N-Butyl Ketone	ug/l	N	--	< 5.0 U	< 25 U	< 100 U	< 50 U	< 50 U	< 50 U	< 10 U	< 5.0 U	< 10 U	< 10 U	< 10 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Methylcyclohexane	ug/l	N	--	< 0.5 U	< 2.5 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	--	< 0.5 U	< 1.0 U	< 1.0 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Methyl-tert-butylether	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	1	0.5 J	< 0.5 U
VOCs	Naphthalene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	N-Butylbenzene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	N-Propylbenzene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	o-Xylene	ug/l	N	--	< 0.5 U	< 2.5 U	< 50 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	sec-Butylbenzene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	Styrene (Monomer)	ug/l	N	100	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	tert-Butylbenzene	ug/l	N	--			< 50 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	Tetrachloroethene	ug/l	N	5	780	690	700	1300	1200	3500	68	130	120	59	54	36	52	43	39	33	< 0.5 U
VOCs	Toluene	ug/l	N	1000	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	4.4 J	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Total Xylenes	ug/l	N	10000			< 5.0 U	--	--		< 5.0 U	--	--		< 5.0 U	--	--		--	--	--
VOCs	trans-1,2-Dichloroethene	ug/l	N	100	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	0.2 J	0.1 J	< 0.5 U
VOCs	trans-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 5.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Trichloroethene	ug/l	N	5	0.2 J	< 2.5 UJ	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	1.3 J	15	15	2.1	0.44 J	0.4 J	0.6	0.9	39	1.3	< 0.5 U
VOCs	Vinyl chloride	ug/l	N	--	< 0.5 U	< 2.5 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 2.0 U	< 0.5 U	< 1.0 U	< 1.0 U	< 2.0 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Field Test Kit	Sodium Persulfate[1]	g/L	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1]- Collected via field test kits

AOC - Area of Concern

< U - analyte not detected above method detection limit

-- Not analyzed

MCL - Maximum Contaminant Level

FD - field duplicate

N - normal

J - Estimated detection less than the practical quantation limit and greater than the method detection limit

ug/L - micrograms per liter

g/L - grams per liter

MCL exceedances are shaded

Baseline data collected prior to active remediation (February 2014)

Table 4
Analytical Results - 2014
Operable Unit 4 / Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

				Location ID	AOC 3 LPA Study Area FM17MW04DR	AOC 3 LPA Study Area FM17MW07D	AOC 3 LPA Study Area FM17MW101D	AOC 3 LPA Study Area FM17MW10D	AOC 3 LPA Study Area FM17MW12D	AOC 3 LPA Study Area FM17MW13D	AOC 3 LPA Study Area FMOU4-GS6D	AOC 3 LPA Study Area FMOU4-MW113D	AOC 3 LPA Study Area FMOU4-MW114D	AOC 3 LPA Study Area FMOU4-MW115D	AOC 3 LPA Study Area FMOU4-MW116D	AOC 3 LPA Study Area FMOU4-MW117D	AOC 3 LPA Study Area FMOU4-MW118D	AOC 3 LPA Study Area FMOU4-MW122D	AOC 3 LPA Study Area FMOU4-MW125D	AOC 3 LPA Study Area FMOU4-MW126D	AOC 3 LPA Study Area FMOU4-MW31
				Sample Date	8/19/2014	8/21/2014	8/18/2014	8/21/2014	8/21/2014	8/18/2014	8/20/2014	8/19/2014	8/15/2014	8/18/2014	8/19/2014	8/20/2014	8/18/2014	8/20/2014	8/15/2014	8/20/2014
				Sample ID	FM17MW-4DR(081914)	FM17MW-7D(082114)	FM17MW-101D(081814)	FM17MW-10D(082114)	FM17MW-12D(082114)	FM17MW13D(081814)	GS-6D(082014)	MW-113D(081914)	MW-114D(081514)	MW-115D(081814)	MW-116D(081914)	MW-117D(082014)	MW-118D(081814)	MW-122D(082014)	MW-125D(081514)	MW-126D(081514)	DUP03(082014)
Group	Chemical	Units	Fraction	MCL																	
Anions	Sulfate	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TOC	Total Organic Carbon	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Aluminum	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	D	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	T	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	D	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	T	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cadmium	ug/l	T	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Chromium	ug/l	T	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Chromium VI	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Copper	ug/l	T	1000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Lead	ug/l	T	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Nickel	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Sodium	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals	Zinc	ug/l	T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,1,1,2-Tetrachloroethane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,1,1-Trichloroethane	ug/l	N	200	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.2 J	< 0.5 U	0.2 J	0.2 J	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	0.1 J	< 0.5 U	< 0.5 U
VOCs	1,1,2-trichloro-1,2,2-trifluoroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	5.7
VOCs	1,1,2-Trichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloroethene	ug/l	N	7	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloropropene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,2,3-Trichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,3-Trichloropropane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,2,4-Trichlorobenzene	ug/l	N	70	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-Trimethylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,2-Dibromo-3-chloropropane	ug/l	N	0.2	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dibromoethane	ug/l	N	0.05	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichlorobenzene	ug/l	N	600	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichloropropane	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,3,5-Trimethylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,3-Dichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,3-Dichloropropane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,4-Dichlorobenzene	ug/l	N	75	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.6	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2,2-Dichloropropane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	2-Butanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	2-Chlorotoluene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	4-Chlorotoluene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	4-Methyl-2-Pentanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Acetone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	14	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Benzene	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromobenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	Bromodichloromethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromoform	ug/l	N	80	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromomethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Carbon Disulfide	ug/l	N	--	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VOCs	Carbon Tetrachloride	ug/l	N	5	3.9	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	9.8	9.1	< 0.5 U	< 0.5 U	0.1 J	4.7	9.9	53	6.5
VOCs	CFC-11	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.4 J
VOCs	CFC-12	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chlorobenzene	ug/l	N	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.2 J
VOCs	Chlorobromomethane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	Chlorodibromomethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chloroform	ug/l	N	80	1.7	< 0.5 U	0.2 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	3.9	3.2	< 0.5 U	0.6	2.6	0.8	2.5	2.3	1.4
VOCs	Chloromethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	cis-1,2-Dichloroethene	ug/l	N	70	< 0.5 U	< 0.5 U	5.9	< 0.5 U	< 0.5 U	0.3 J	< 0.5 U	< 0.5 U	0.9	0.5	< 0.5 U	0.2 J	0.2 J	< 0.5 U	0.2 J	0.5	1.8
VOCs	cis-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Cyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Cymene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	Dibromomethane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	Dichloromethane	ug/l	N	3000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Ethylbenzene	ug/l	N	500000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Hexachloro-1,3-butadiene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	Isopropylbenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	m,p-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Methyl Acetate	ug/l	N	--	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VOCs	Methyl N-Butyl Ketone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Methylcyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Methyl-tert-butylether	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 U	0.2 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	1.5	< 0.5 U	< 0.5 U	7.9
VOCs	Naphthalene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	N-Butylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	N-Propylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	o-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	sec-Butylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	Styrene (Monomer)	ug/l	N	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	tert-Butylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	Tetrachloroethene	ug/l	N	5	< 0.5 U	< 0.5 U	19	0.1 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 U	0.5	2.1	0.3 J	0.4 J	0.8	4.8	22
VOCs	Toluene	ug/l	N	1000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.1 J	0.5 J	0.1 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Total Xylenes	ug/l	N	10000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
VOCs	trans-1,2-Dichloroethene	ug/l	N	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	trans-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Trichloroethene	ug/l	N	5	0.2 J	< 0.5 U	2.4	< 0.5 U	< 0.5 U	0.1 J	< 0.5 U	< 0.5 U	0.6	0.4 J	< 0.5 U	0.2 J	0.4 J	< 0.5 U	0.6	1.6	35
VOCs	Vinyl chloride	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Field Test Kit	Sodium Persulfate[1]	g/L	N	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1]- Collected via field test kits

AOC - Area of Concern

< U - analyte not detected above method detection limit

-- Not analyzed

MCL - Maximum Contaminant Level

FD - field duplicate

N - normal

J - Estimated detection less than the practical quantation limit and greater than the method detection limit

ug/L - micrograms per liter

g/L - grams per liter

MCL exceedances are shaded

Baseline data collected prior to active remediation (February 2014)

Table 4
Analytical Results - 2014
Operable Unit 4 / Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

					AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area	AOC 3 LPA Study Area
				Location ID	FMOU4-MW31	FMOU4-MW32	FMOU4-MW32	FMOU4-MW33	FMOU4-MW34	FMOU4-MW35	FMOU4-MW37	FMOU4-MW38	FMOU4-MW39	FMOU4-MW119D
				Sample Date	8/20/2014	8/18/2014	8/18/2014	8/19/2014	8/18/2014	8/20/2014	8/21/2014	8/15/2014	8/18/2014	10/15/2014
Group	Chemical	Units	Fraction	Sample ID / MCL	OU4-MW31(082014)	DUP03(081814)	OU4-MW32(081814)	OU4-MW33(081914)	OU4-MW34(081814)	OU4-MW35(082014)	OU4-MW37(082114)	OU4-MW38(081514)	OU4-MW39(081814)	MW-119D(101514)
Anions	Sulfate	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
TOC	Total Organic Carbon	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
Metals	Aluminum	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	D	10	--	--	--	--	--	--	--	--	--	--
Metals	Arsenic	ug/l	T	10	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	D	4	--	--	--	--	--	--	--	--	--	--
Metals	Beryllium	ug/l	T	4	--	--	--	--	--	--	--	--	--	--
Metals	Cadmium	ug/l	T	5	--	--	--	--	--	--	--	--	--	--
Metals	Chromium	ug/l	T	100	--	--	--	--	--	--	--	--	--	--
Metals	Chromium VI	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	D	--	--	--	--	--	--	--	--	--	--	--
Metals	Cobalt	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
Metals	Copper	ug/l	T	1000	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	D	--	--	--	--	--	--	--	--	--	--	--
Metals	Iron	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
Metals	Lead	ug/l	T	15	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	D	--	--	--	--	--	--	--	--	--	--	--
Metals	Manganese	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
Metals	Nickel	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
Metals	Sodium	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
Metals	Zinc	ug/l	T	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,1,1,2-Tetrachloroethane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,1,1-Trichloroethane	ug/l	N	200	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2,2-Tetrachloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.3 J	< 0.5 U	0.6	< 0.5 U
VOCs	1,1,2-trichloro-1,2,2-trifluoroethane	ug/l	N	--	5.8	< 0.5 U	< 0.5 U	< 0.5 U	18	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1,2-Trichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloroethene	ug/l	N	7	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,1-Dichloropropene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,2,3-Trichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,3-Trichloropropane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,2,4-Trichlorobenzene	ug/l	N	70	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2,4-Trimethylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,2-Dibromo-3-chloropropane	ug/l	N	0.2	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dibromoethane	ug/l	N	0.05	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichlorobenzene	ug/l	N	600	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichloroethane	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,2-Dichloropropane	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,3,5-Trimethylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,3-Dichlorobenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	1,3-Dichloropropane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	1,4-Dichlorobenzene	ug/l	N	75	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	2,2-Dichloropropane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	2-Butanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	2-Chlorotoluene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	4-Chlorotoluene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	4-Methyl-2-Pentanone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Acetone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Benzene	ug/l	N	5	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromobenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	Bromodichloromethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromoform	ug/l	N	80	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Bromomethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Carbon Disulfide	ug/l	N	--	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VOCs	Carbon Tetrachloride	ug/l	N	5	6.5	40	33	74	6.2	< 0.5 U	< 0.5 U	0.6	< 0.5 U	< 0.5 U
VOCs	CFC-11	ug/l	N	--	0.4 J	< 0.5 U	< 0.5 U	< 0.5 U	1.1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	CFC-12	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chlorobenzene	ug/l	N	100	0.1 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chlorobromomethane	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	Chlorodibromomethane	ug/l	N	80	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chloroethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Chloroform	ug/l	N	80	1.3	2.2	2.2	2.4	1.4	0.8	0.5 J	0.7	0.7	6.3
VOCs	Chloromethane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	cis-1,2-Dichloroethene	ug/l	N	70	1.7	< 0.5 U	< 0.5 U	0.1 J	2.4	< 0.5 U	16	2.3	33	0.1 J
VOCs	cis-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Cyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Cymene	ug/l	N	--	--	--	--	--	--	--	--	--	--	
VOCs	Dibromomethane	ug/l	N	--	--	--	--	--	--	--	--	--	--	
VOCs	Dichloromethane	ug/l	N	3000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Ethylbenzene	ug/l	N	500000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Hexachloro-1,3-butadiene	ug/l	N	--	--	--	--	--	--	--	--	--	--	--
VOCs	Isopropylbenzene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	m,p-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Methyl Acetate	ug/l	N	--	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
VOCs	Methyl N-Butyl Ketone	ug/l	N	--	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U
VOCs	Methylcyclohexane	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Methyl-tert-butylether	ug/l	N	--	7.7	< 0.5 U	< 0.5 U	< 0.5 U	2.1	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Naphthalene	ug/l	N	--	--	--	--	--	--	--	--	--	--	
VOCs	N-Butylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	
VOCs	N-Propylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	
VOCs	o-Xylene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	sec-Butylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	
VOCs	Styrene (Monomer)	ug/l	N	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	tert-Butylbenzene	ug/l	N	--	--	--	--	--	--	--	--	--	--	
VOCs	Tetrachloroethene	ug/l	N	5	21	0.1 J	0.1 J	0.3 J	22	< 0.5 U	130	12	190	0.3 J
VOCs	Toluene	ug/l	N	1000	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.2 J	< 0.5 U	0.2 J
VOCs	Total Xylenes	ug/l	N	10000	--	--	--	--	--	--	--	--	--	
VOCs	trans-1,2-Dichloroethene	ug/l	N	100	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	0.2 J	< 0.5 U	0.7	< 0.5 U
VOCs	trans-1,3-Dichloropropene	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
VOCs	Trichloroethene	ug/l	N	5	29	0.2 J	0.2 J	0.3 J	24	< 0.5 U	7.6	0.6	12	0.3 J
VOCs	Vinyl chloride	ug/l	N	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Field Test Kit	Sodium Persulfate[1]	g/L	N	--	--	--	--	--	--	--	--	--	--	--

Notes:
[1]- Collected via field test kits
AOC - Area of Concern
< U - analyte not detected above method detection limit
-- Not analyzed
MCL - Maximum Contaminant Level
FD - field duplicate
N - normal
J - Estimated detection less than the practical quantation limit and greater than the method detection limit
ug/L - micrograms per liter
g/L - grams per liter
MCL exceedances are shaded
Baseline data collected prior to active remediation (February 2014)

Table 5
LPA Hydraulic Containment System Water Treatment Log - 2014
Operable Unit 4 / Lower Patapsco Aquifer Study Area
Fort George G. Meade, Maryland

Water Pumped From Extraction Wells (Flow Meters FQI-01 through 06)

Extraction Wells	Start	End
	10/1/2014	11/14/2014
EW-01 (FQI-01)	7,623,933	9,541,206
EW-02	7,846,073	9,687,822
EW-03	7,009,227	8,930,396
EW-04	7,101,363	8,960,776
EW-05	8,047,712	9,973,773
EW-06	8,020,281	9,941,853

Subtotal (gallons) during the Fourth Quarter of 2014	11,387,237
2014 Quarter 1 Total Volume (gallons)	2,408,775
2014 Quarter 2 Total Volume (gallons)	20,173,948
2014 Quarter 3 Total Volume (gallons)	22,645,866
Total Volume Extracted (gallons)	**56,615,826**

Water Injected Into Injection Wells (Flow Meters FQI-07 through 10)

Injection Wells	Start	End
	10/1/2014	11/14/2014
IW-01	7,846,073	9,687,822
IW-02	3,483,199	4,548,366
IW-03	15,974,829	19,931,907
IW-04	16,111,486	19,928,935

Subtotal (gallons) during the Fourth Quarter of 2014	10,681,443
2014 Quarter 1 Total Volume (gallons)	2,414,383
2014 Quarter 2 Total Volume (gallons)	19,608,672
2014 Quarter 3 Total Volume (gallons)	21,392,532
Total Volume Injected (gallons)	**54,097,030**

Water Pumped to Surface Water Discharge Pond (FIT-301)

	Start	End
	10/1/2014	11/14/2014
Pond (FIT-301)	0	0

Total Volume Pumped to Surface Water Discharge (gallons)	**0**

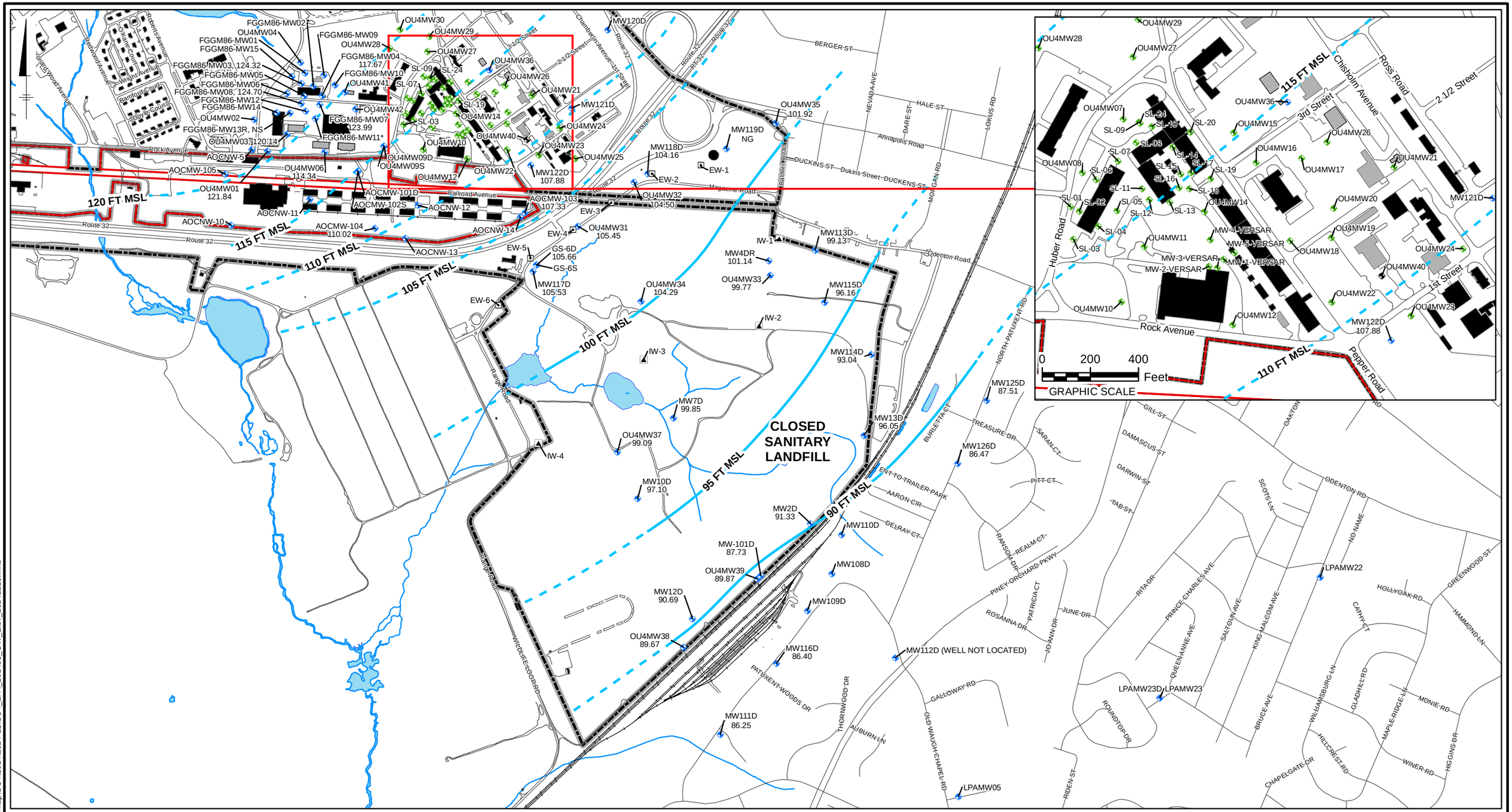
Note: Descrepanices between volumes of extracted and injected/discharged water reported during system operation are due to the inherent margin of error associated with flow meter totalizer accuracy. Data in these tables are subject to revision.

Table 6
LPA Hydraulic Containment Influent and Effluent Analytical Results
Operable Unit 4
Fort George G. Meade, Maryland

				Distribution	Influent			Effluent			
				Location	GWTSINF	LGAC201INF	LGAC401INF	GWTSEFF	GWTSEFF	LGAC201EFF	LGAC401EFF
				Sample Date	11/13/2014	11/13/2014	11/13/2014	10/3/2014	11/13/2014	11/13/2014	11/13/2014
Analyte	Aquatic Life Fresh Water (Acute)[1]	Human Health for Consumption of Organism Only [2]	MCL	Unit							
1,1,1,2-Tetrachloroethane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,1-Trichloroethane	--	--	200	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2,2-Tetrachloroethane	--	40	--	ug/l	1.6	0.48 J	0.51	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1,2-Trichloroethane	--	160	5	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-Dichloroethane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-Dichloroethene	--	7100	7	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,1-Dichloropropene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2,3-Trichlorobenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2,3-Trichloropropane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2,4-Trichlorobenzene	--	70	70	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2,4-Trimethylbenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-Dibromo-3-chloropropane	--	--	0.2	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-Dibromoethane	--	--	0.05	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-Dichlorobenzene	--	1300	600	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-Dichloroethane	--	370	5	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,2-Dichloropropane	--	150	5	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3,5-Trimethylbenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3-Dichlorobenzene	--	960	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,3-Dichloropropane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
1,4-Dichlorobenzene	--	190	75	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
2,2-Dichloropropane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
2-Butanone	--	--	--	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
2-Chlorotoluene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
4-Chlorotoluene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
4-Methyl-2-Pentanone	--	--	--	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Acetone	--	--	--	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Benzene	--	510	5	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Bromobenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Bromodichloromethane	--	170	80	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Bromoform	--	1400	80	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Bromomethane	--	1500	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Carbon Disulfide	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Carbon Tetrachloride	--	16	5	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CFC-11	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
CFC-12	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Chlorobenzene	--	1600	100	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Chlorobromomethane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Chlorodibromomethane	--	130	80	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Chloroethane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Chloroform	--	4700	80	ug/l	3	3.7	3.9	3.3	3.8	3.7	3.5
Chloromethane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
cis-1,2-Dichloroethene	--	--	70	ug/l	2.2	1.9	2	0.46 J	0.83	0.78	0.30 J
cis-1,3-Dichloropropene	--	210	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Cymene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Dibromomethane	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Dichloromethane	--	5900	3000	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Ethylbenzene	--	2100	500000	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Hexachloro-1,3-butadiene	--	180	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Isopropylbenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
m,p-Xylene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	0.38 J	< 0.50 U
Methyl N-Butyl Ketone	--	--	--	ug/l	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Methyl-tert-butylether	--	--	--	ug/l	0.12 J	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Naphthalene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
N-Butylbenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
N-Propylbenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
o-Xylene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	0.30 J	< 0.50 U
sec-Butylbenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Styrene (Monomer)	--	--	100	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
tert-Butylbenzene	--	--	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Tetrachloroethene	--	33	5	ug/l	14	0.45 J	0.61	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Toluene	--	15000	1000	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Total Xylenes	--	--	10000	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	0.69	< 0.50 U
trans-1,2-Dichloroethene	--	10000	100	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
trans-1,3-Dichloropropene	--	210	--	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Trichloroethene	--	300	5	ug/l	1.3	0.15 J	0.21 J	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U
Vinyl chloride	--	24	2	ug/l	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U	< 0.50 U

Notes:
-- No standard established
< U - analyte not detected above method detection limit
MCL - Maximum Contaminant Level
ug/L - micrograms per liter
MCL exceedances are shaded
[1] - Effluent surface water discharge criteria is Aquatic Life Fresh Water (acute)
[2] - Effluent surface water discharge criteria is Human Health for Consumption of Organism Only as the surface discharge waters have been designated non-drinking supply.
GWTSINF - groundwater treatment system influent
GWTSEFF - groundwater treatment system effluent
LGAC201 - liquid granular activated carbon vessel 201 (lag vessel)
LGAC401 - liquid granular activated carbon vessel 401 (lag vessel)

Figures



LEGEND:

- UPPER PATAPSCO AQUIFER WELL
- MIDDLE PATAPSCO AQUIFER WELL
- LOWER PATAPSCO AQUIFER WELL
- EXTRACTION WELL
- INJECTION WELL
- ROADS
- RAILROAD
- STREAM
- DEMOLISHED STRUCTURES
- EXISTING STRUCTURES
- LPA GROUNDWATER ELEVATION CONTOUR DASHED WHERE INFERRED, WATER LEVEL CONTOUR DATA COLLECTED 8/2014
- SURFACE WATER
- ARCHITECT OF THE CAPITOL PROPERTY BOUNDARY
- INSTALLATION BOUNDARY

0 1,000 2,000 Feet
GRAPHIC SCALE

NOTES:
GROUNDWATER ELEVATIONS - FT MSL
FEET MEAN SEA LEVEL (FT MSL)
NG - NOT GAUGED
NS - NOT SURVEYED BECAUSE OF ONGOING CONSTRUCTION
* - WELL IS DAMAGED AND NO DEPTH TO WATER WAS RECORDED

OPERABLE UNIT 4
FORT MEADE, MARYLAND

OPERABLE UNIT 4 / LOWER PATAPSCO AQUIFER GROUNDWATER ELEVATIONS - AUGUST 2014

ARCADIS

FIGURE
1

CITY: MPLS DIV/GROUP: IM DB: MG LD: KS
FORT MEADE
Path: Z:\GISPROJECTS_ENV\Fort_Meade\ArcMap\OU4\2014\2014-12\OU4_LPA_201408_GW_Elev_20141218.mxd

Parsons Road
Buck Road
Morrison Street
Wilson Street
Rock Avenue
4217
4203
4201
2286
2283
2282
2276
2275
2271
2266
38
36
Indoor Firing Range
FGGM86-MW03
FGGM86-MW02
FGGM86-MW10
FGGM86-MW06
FGGM86-MW05 (Not Located)
FGGM86-MW04
OU4MW41
OU4MW42
Fire Hydrant
Water Line to the Injection System
OU4IW03
OU4IW02
OU4IW06
FGGM86-MW08
FGGM86-MW07
OU4IW05
OU4IW09
OU4IW04
OU4IW08
Injection Manifold
OU4IW01
OU4IW07
OU4IW12
FGGM86-MW12
Temporary Central Mixing/Injection System
FGGM86-MW13R
FGGM86-MW11
OU4MW02
FGGM86-MW14R
Injection Solution to Manifold
Injection Manifold
OU4IW10
OU4MW03
OU4IW13
OU4IW14
OU4IW11
OU4MW44
OU4IW15
OU4IW16
OU4MW45
AOCNW-5
OU4MW01
OU4MW06

LEGEND:

- INJECTION WELL INCLUDED IN MAY-JUNE 2014 INJECTION EVENT
- INJECTION WELL NOT INCLUDED
- MONITORING WELL
- ROADS
- ARCHITECT OF THE CAPITOL PROPERTY BOUNDARY
- DEMOLISHED STRUCTURES
- EXISTING STRUCTURES

0 80 160 Feet
GRAPHIC SCALE

NOTES:
1) THE LOCATION AND EXTENT OF SITE FEATURES PRESENTED HEREON ARE APPROXIMATE.
2) FGGM86-MW13R AND FGGM86-MW14R LOCATIONS ARE APPROXIMATE.
3) HIGHLIGHTED WELLS ARE INCLUDED IN THE MONITORING PROGRAM.

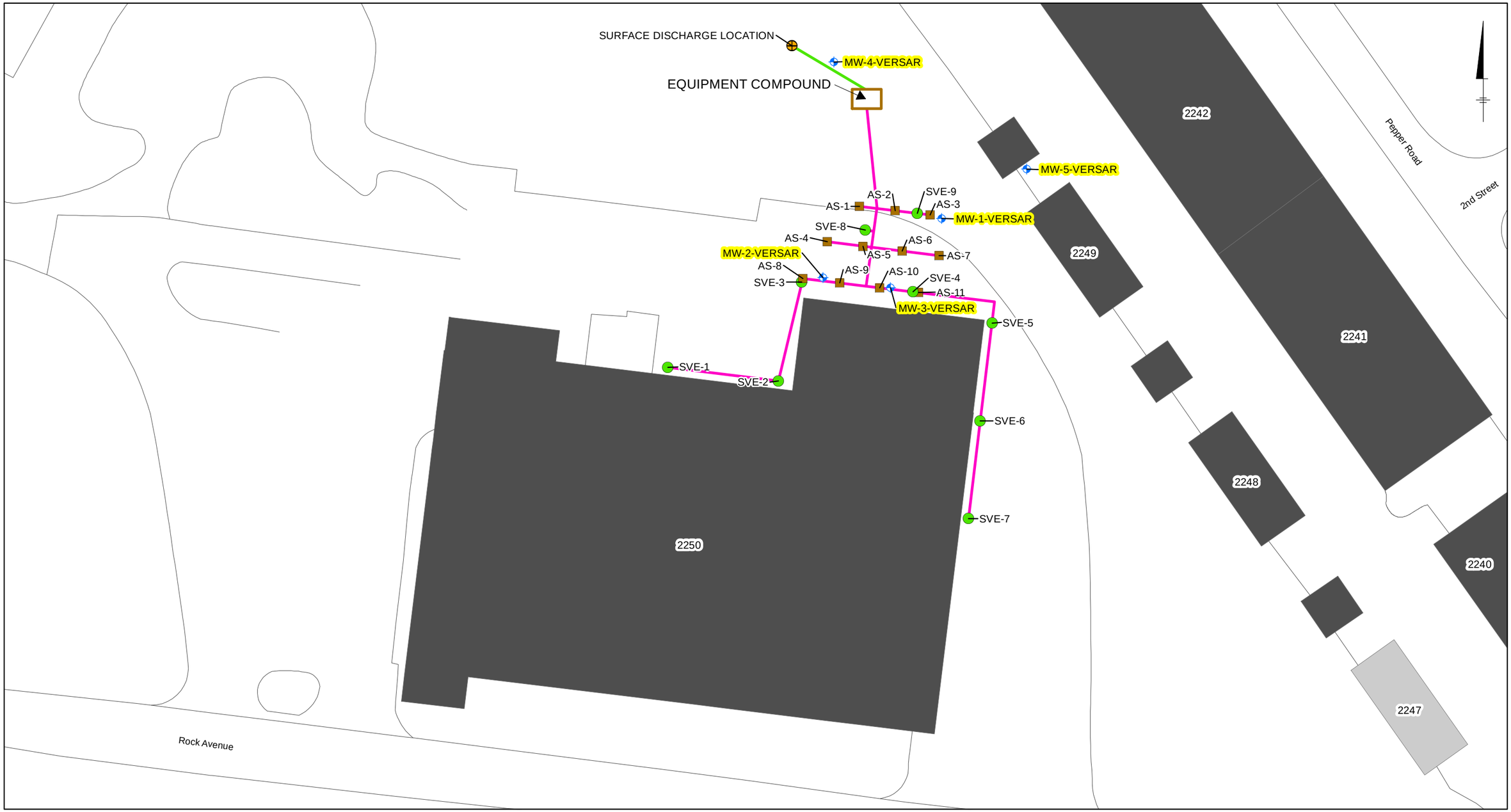
OPERABLE UNIT 4, LOWER PATAPSCO STUDY AREA
FORT MEADE, MARYLAND

BUILDING 2276/2286 SITE PLAN

ARCADIS

FIGURE 2

CITY: MPLS DIV/GROUP: 40 DB: MG LD: BE PM: TL
FT. MEADE (GP09MEAD.C000)
Path: Z:\GISPROJECTS_ENV\Fort_Meade\ArcMap\OU4\2014\2014-10\OU4_2286_Site_Plan_20141006.mxd



LEGEND:

- SOIL VAPOR EXTRACTION (SVE) WELL
- AIR SPARGE (AS) WELL
- MONITORING WELL (MW)
- SURFACE DISCHARGE LOCATION
- SUBSURFACE PIPING
- ABOVE SURFACE PIPING
- ROAD/CURB
- DEMOLISHED STRUCTURES
- EXISTING STRUCTURES
- 2250 - BUILDING NUMBER

0 50 100 Feet

GRAPHIC SCALE

NOTE:

1. THE LOCATION AND EXTENT OF SITE FEATURES PRESENTED HEREON ARE APPROXIMATE.
2. HIGHLIGHTED WELLS ARE INCLUDED IN THE MONITORING PROGRAM

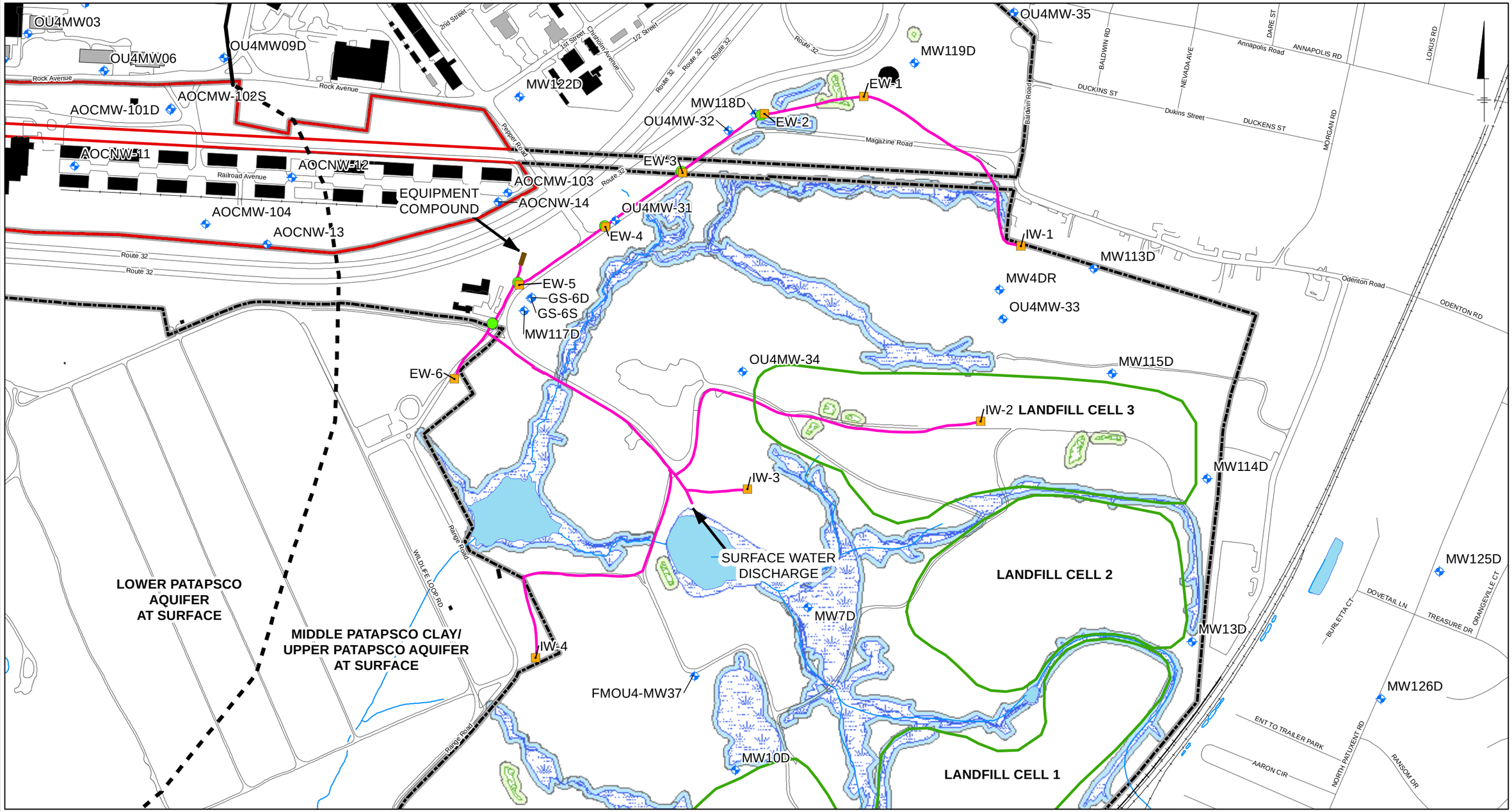
OPERABLE UNIT 4, LOWER PATAPSCO AQUIFER STUDY AREA
FORT MEADE, MARYLAND

BUILDING 2250 AIR SPARGE/SOIL VAPOR EXTRACTION SYSTEM LAYOUT

ARCADIS

FIGURE
3

CITY: MPLS DIV/GROUP: 40 DB: MG LD: BE PM: TL
FT. MEADE (GP09MEAD.C000)
Path: Z:\GISPROJECTS_ENV\Fort_Meade\ArcMap\OU4\2014\2014-10\OU4_Bldg2250_SVE_AS_Layout_20141006.mxd



LEGEND

- FINAL LPA WELL LOCATION
- LOWER PATAPSCO AQUIFER WELL
- PIPE CLEANOUT LOCATION
- SUBSURFACE PIPING
- MID-PATAPSCO CLAY CONTACT DASHED WHERE INFERRED
- ROADS
- RAILROAD
- STREAM
- LANDFILL CELL BOUNDARY
- DEMOLISHED STRUCTURES
- EXISTING STRUCTURES
- SURFACE WATER
- ARCHITECT OF THE CAPITOL PROPERTY BOUNDARY
- INSTALLATION BOUNDARY
- ISOLATED WETLAND (MDE)
- ISOLATED WETLAND BOUNDARY (25 FT MDE)
- JURISDICTIONAL WETLANDS & WATERS OF THE UNITED STATES
- CZM RIPARIAN & WETLAND BUFFER (25 FT)

0 500 1,000 Feet
GRAPHIC SCALE

OPERABLE UNIT 4, LOWER PATAPSCO AQUIFER STUDY AREA
FORT MEADE, MARYLAND

INTERIM REMOVAL ACTION REPORT

LOWER PATAPSCO AQUIFER STUDY AREA HYDRAULIC CONTAINMENT SYSTEM LAYOUT

ARCADIS

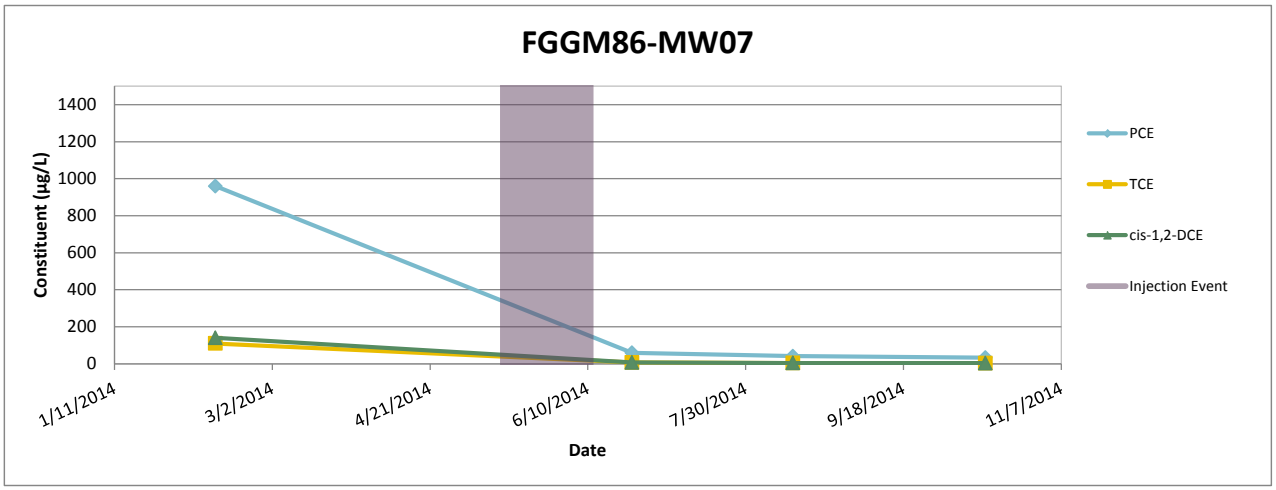
FIGURE
4

CITY: MPLS DIV/GROUP: IM DB: MG LD: KS
FORT MEADE
Path: Z:\GISPROJECTS_ENV\Fort_Meade\ArcMap\OU4\2014\2014-10\LPA_Hyd_Sys_Layout_20141006.mxd

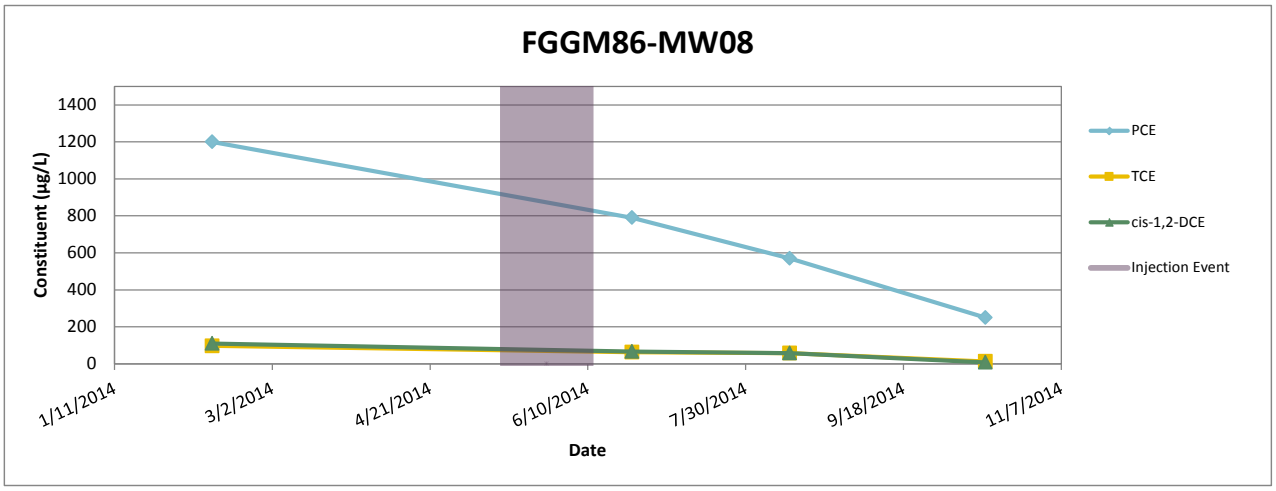
Attachment 4

VOC Trend Plots

Attachment 4
AOC 1 VOC Trend Plots - Building 2286/2276
Operable Unit 4
Fort George G. Meade, Maryland

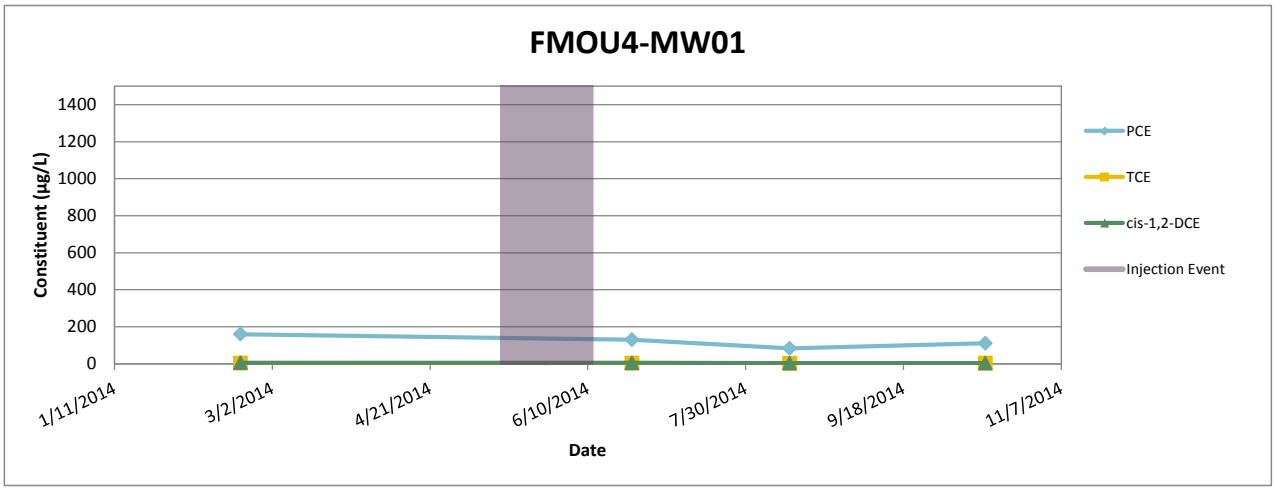


Analyte	SCL	2/12/2014	6/24/2014	8/14/2014	10/14/2014
PCE	5	**960**	**59**	**41**	**33**
TCE	5	**110**	**6.7**	4.5	3.3
cis-DCE	70	**140**	6.6	4.4	3

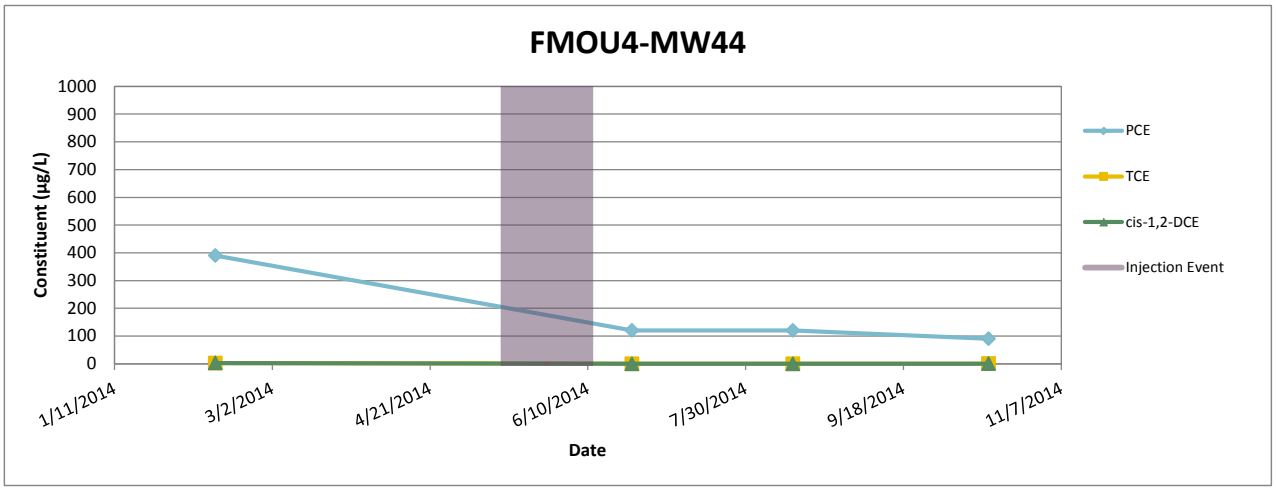


Analyte	SCL	10/29/2009	11/24/2009	2/18/2013	2/11/2014	6/24/2014	8/13/2014	10/14/2014
PCE	5	**1140**	**2330**	**1200**	**1200**	**790**	**570**	**250 J**
TCE	5	**264**	**216**	**100**	**97**	**63**	**58**	**13 J**
cis-DCE	70	**366**	**269**	**120**	**110**	67	58	8.3 J

Attachment 4
AOC 1 VOC Trend Plots - Building 2286/2276
Operable Unit 4
Fort George G. Meade, Maryland

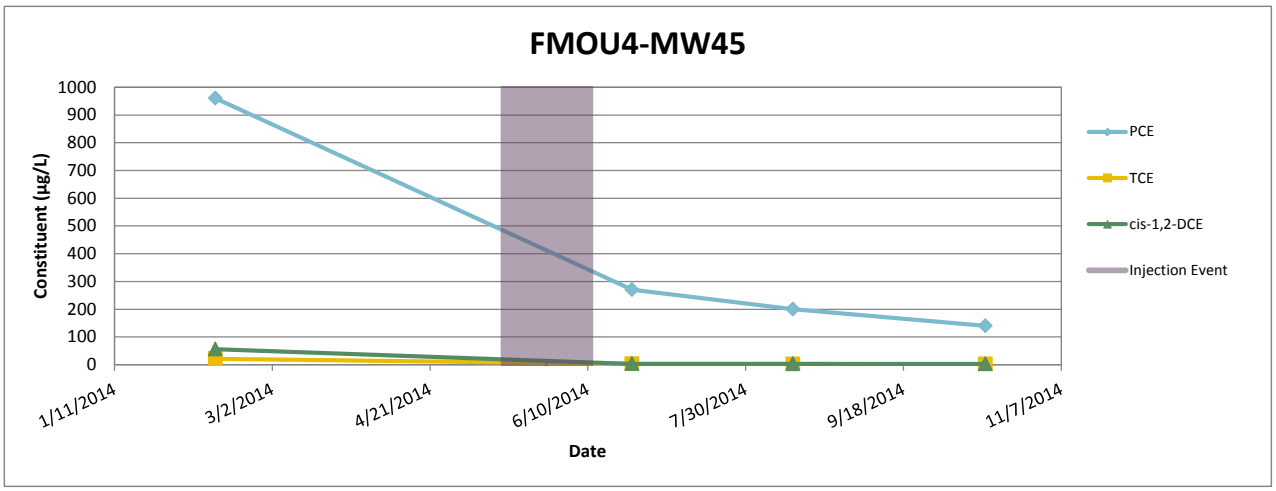


Analyte	SCL	10/29/2009	2/5/2010	2/14/2013	2/20/2014	6/24/2014	8/13/2014	10/14/2014
PCE	5	**93.1**	**197**	**200**	**160**	**130**	**83**	**110**
TCE	5	**5.98**	**5.46**	4.8	3.6 J	3.3	2.3	2.9
cis-DCE	70	13.1	10.2	8.4	5.6	5.1	3.1	3.9



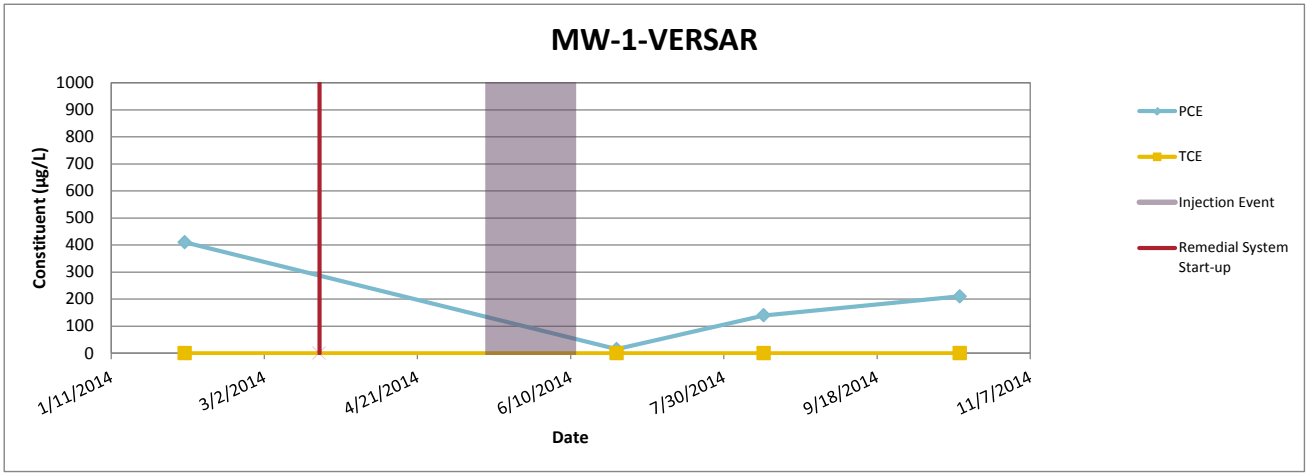
Analyte	SCL	2/12/2014	6/24/2014	8/14/2014	10/15/2014
PCE	5	**390**	**120**	**120**	**90 J**
TCE	5	2.3 J	< 0.5 U	< 1.0 UJ	0.3 J
cis-DCE	70	2.7 J	< 0.5 U	< 1.0 UJ	0.5 J

Attachment 4
AOC 1 VOC Trend Plots - Building 2286/2276
Operable Unit 4
Fort George G. Meade, Maryland

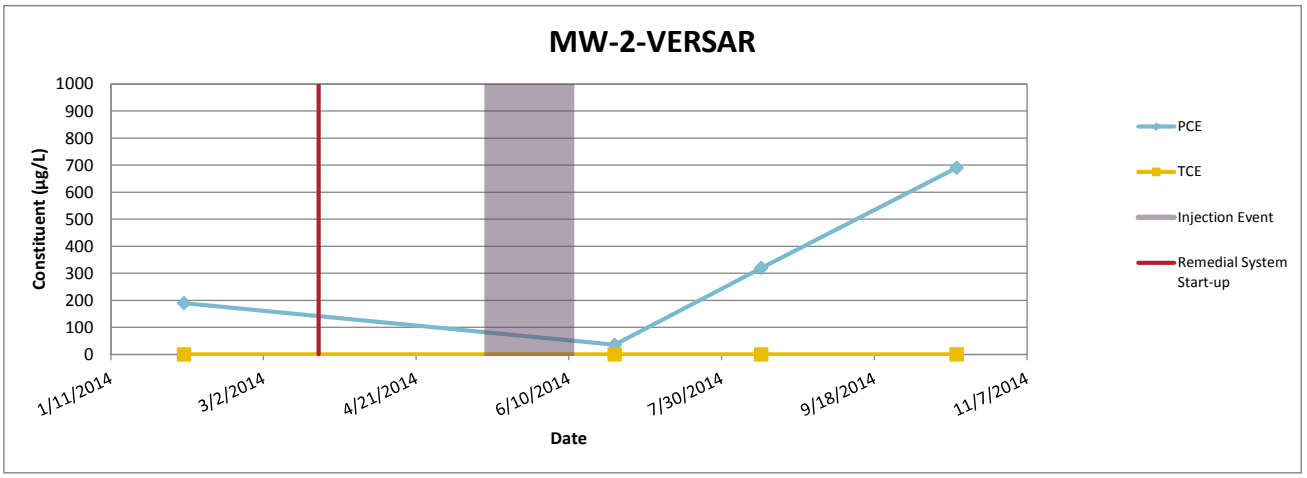


Analyte	SCL	2/12/2014	6/24/2014	8/14/2014	10/14/2014
PCE	5	**960**	**270**	**200**	**140 J**
TCE	5	**22 J**	3	2.6 J	2.0 J
cis-DCE	70	56	3.5	3.5 J	3.0 J

Attachment 4
AOC 2 VOC Trend Plots - Building 2250
Operable Unit 4
Fort George G. Meade, Maryland

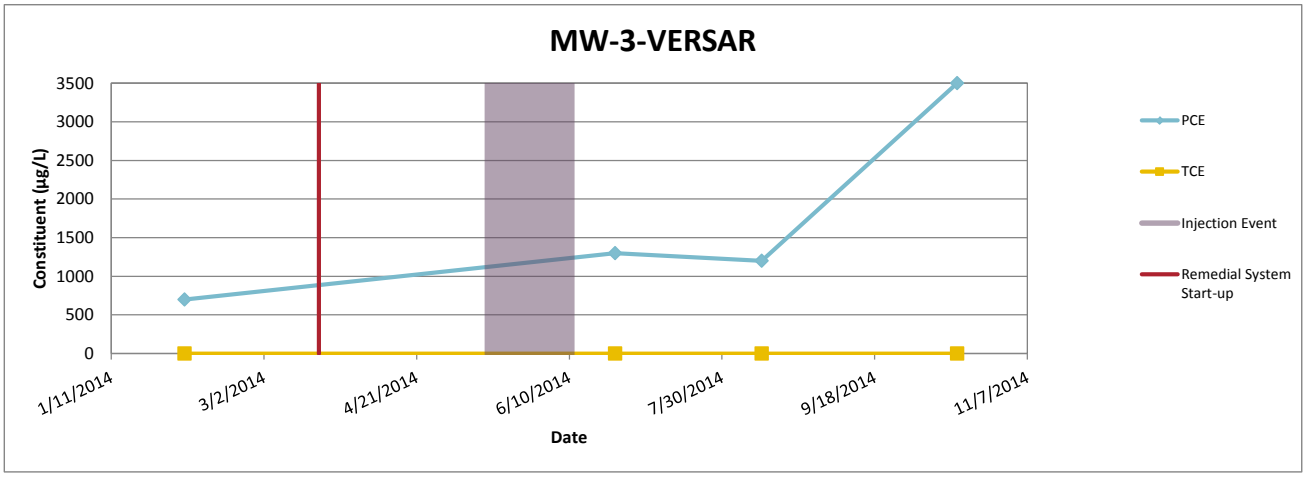


Analyte	SCL	2/6/2013	2/4/2014	6/25/2014	8/12/2014	10/15/2014
PCE	5	**410**	**410 J**	**15**	**140**	**210**
TCE	5	1.4	< 2.5 U	< 0.5 U	0.1 J	0.2 J

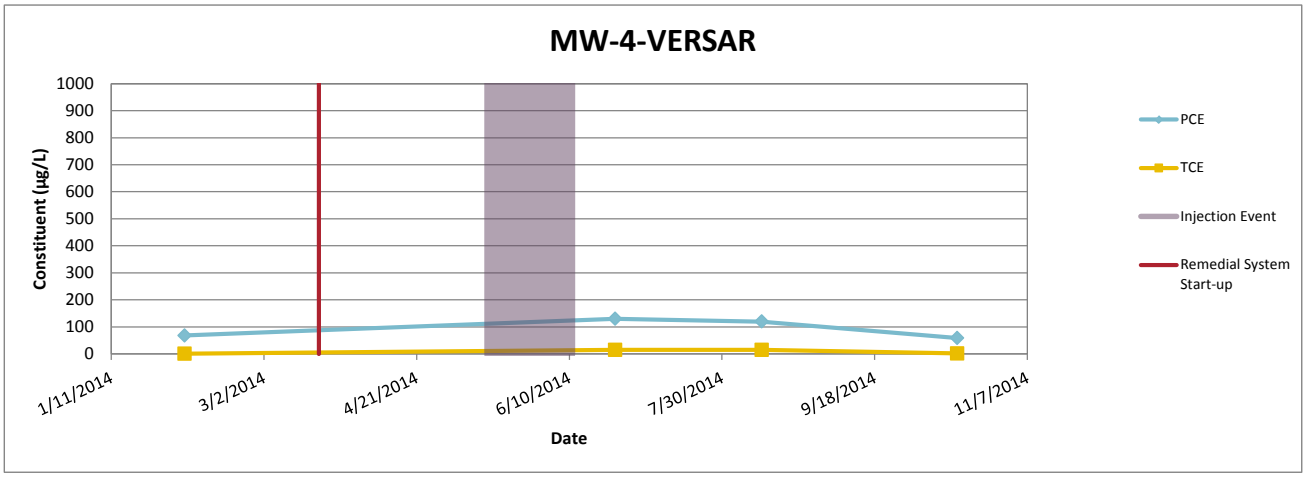


Analyte	SCL	2/6/2013	2/4/2014	6/25/2014	8/12/2014	10/15/2014
PCE	5	**140**	**190**	**36**	**320**	**690**
TCE	5	< 5.0 U	< 5.0 U	< 0.5 U	< 2.5 U	< 2.5 UJ

Attachment 4
AOC 2 VOC Trend Plots - Building 2250
Operable Unit 4
Fort George G. Meade, Maryland

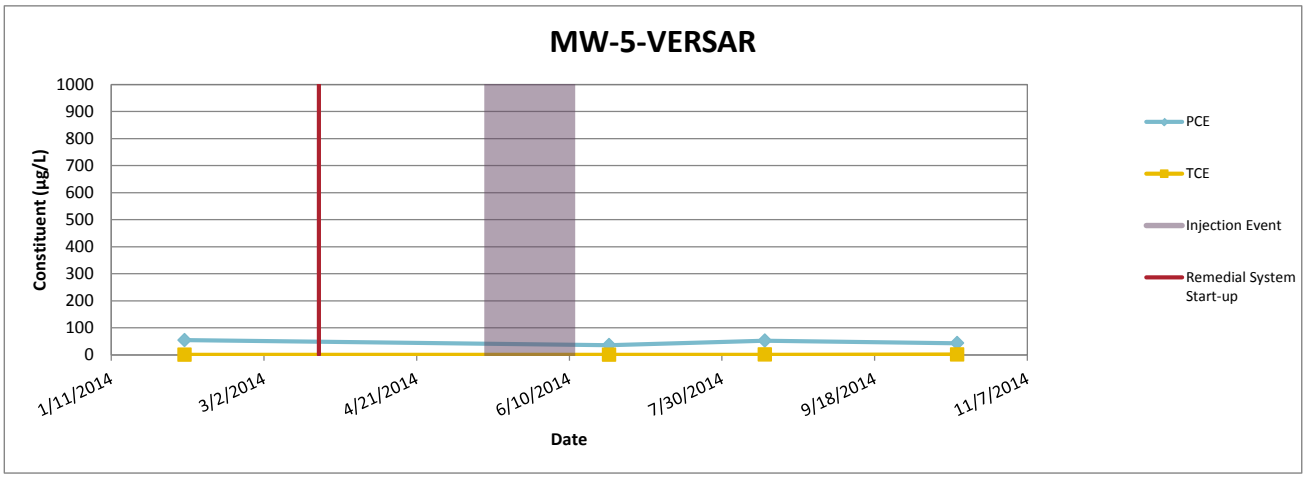


Analyte	SCL	10/29/2009	11/24/2009	2/11/2013	2/4/2014	6/25/2014	8/12/2014	10/15/2014
PCE	5	**685**	**952**	**1300**	**700**	**1300**	**1200**	**3500**
TCE	5	0.338 J	< 100 U	< 10 U	< 5.0 U	< 5.0 U	< 5.0 U	< 5.0 U



Analyte	SCL	10/29/2009	2/6/2013	2/4/2014	6/25/2014	8/12/2014	10/15/2014
PCE	5	**31**	**130**	**68**	**130**	**120**	**59**
TCE	5	1.22 J	1.7 J	1.3 J	**15**	**15**	2.1

Attachment 4
AOC 2 VOC Trend Plots - Building 2250
Operable Unit 4
Fort George G. Meade, Maryland



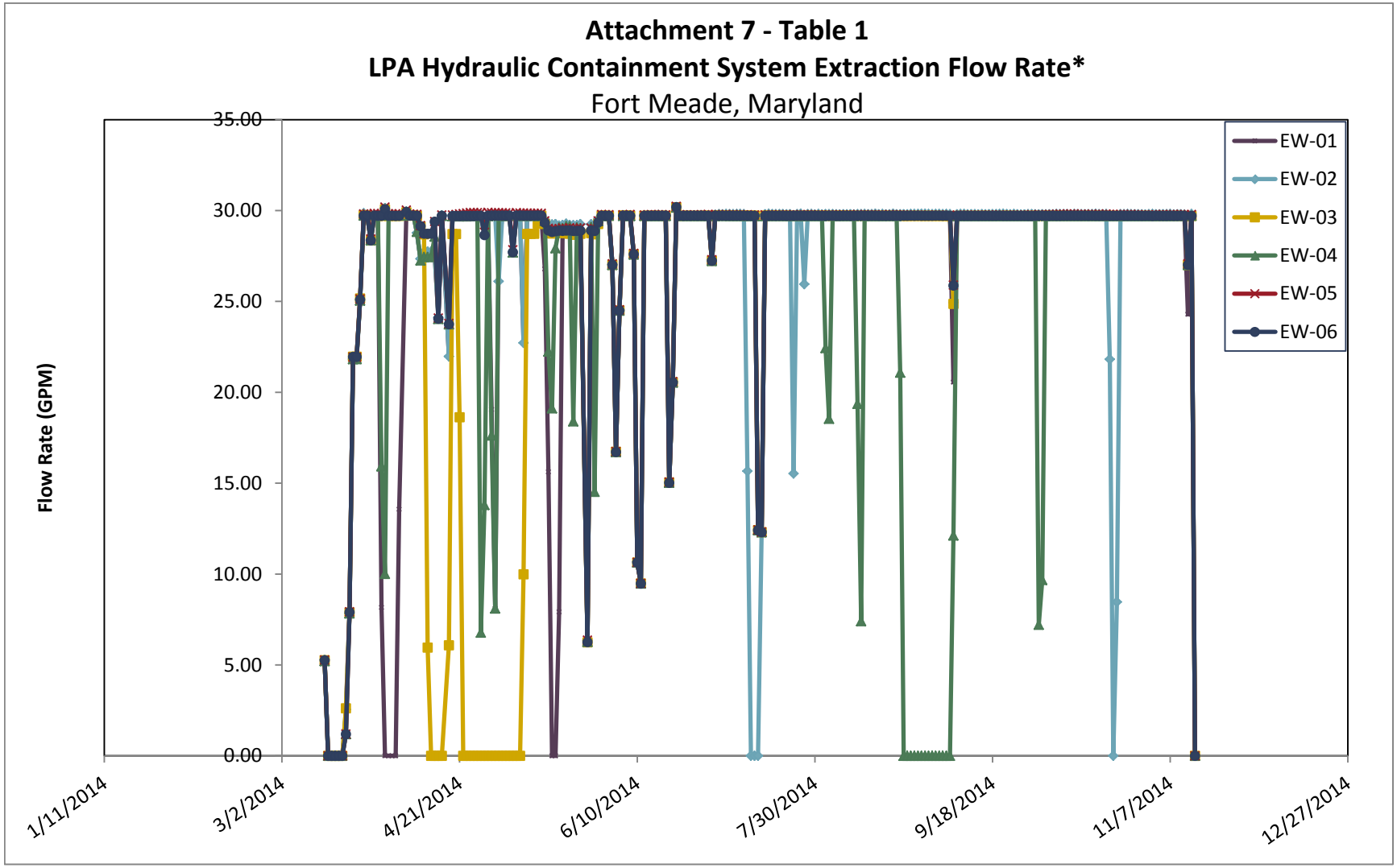
Analyte	SCL	2/6/2013	2/4/2014	6/23/2014	8/13/2014	10/15/2014
PCE	5	**46**	**54**	**36**	**52**	**43**
TCE	5	0.39 J	0.44 J	0.4 J	0.6	0.9

Attachment 4
VOC Trend Plots
Operable Unit 4
Fort George G. Meade, Maryland

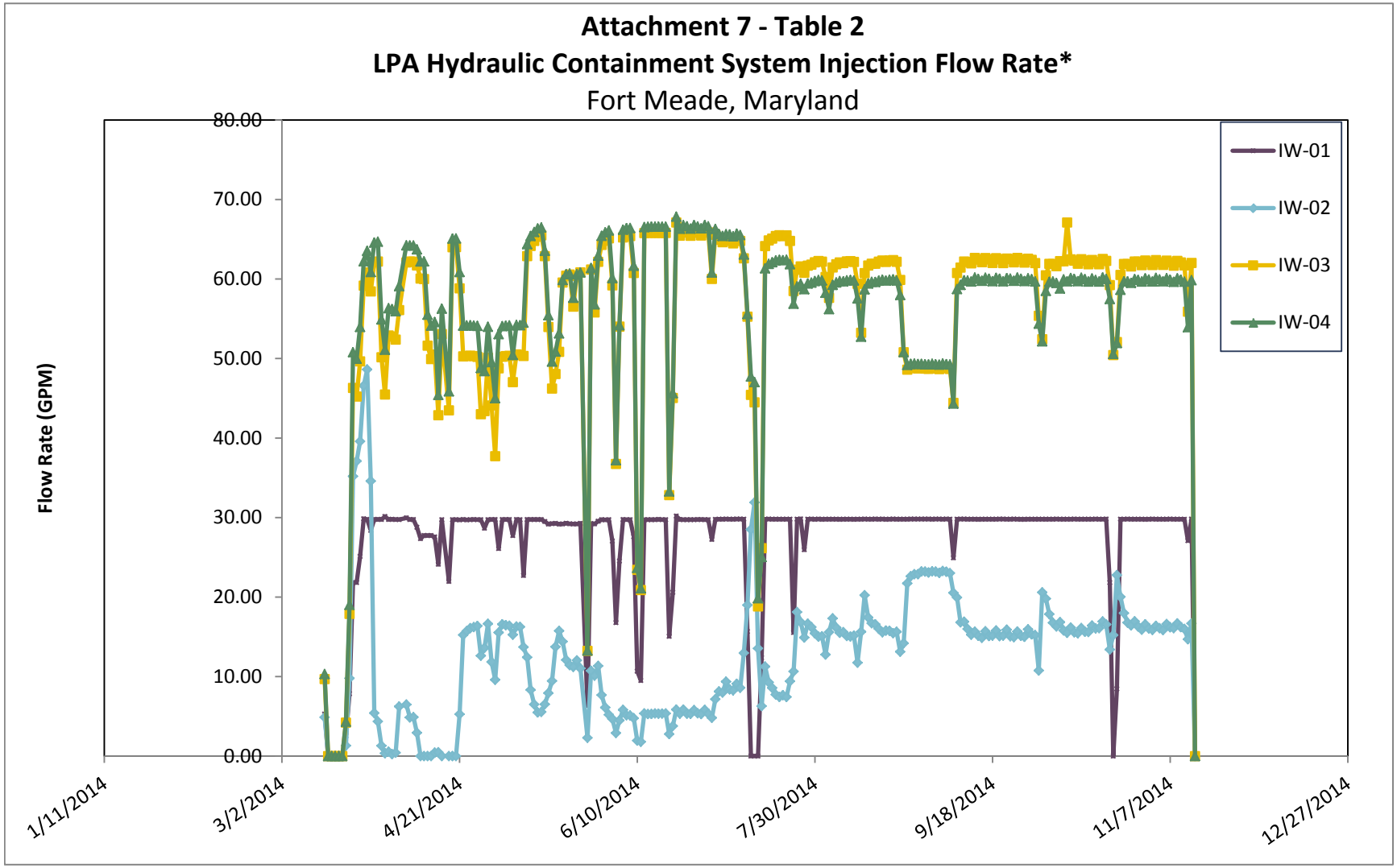
Notes:
Concentrations exceeding the applicable screening criterion are boldfaced and shaded.
Concentrations below the detection limit are represented graphically as zero.
All concentrations are presented in microgram per liter.
cis-1,2-DCE - cis-1,2,-Dichloroethene
PCE - Tetrachlorethene
TCE - Trichlorethene
J - Indicates an estimated result. Result is less than laboratory reporting limits.
U - Analyte was not detected above reporting limits.

Attachment 7

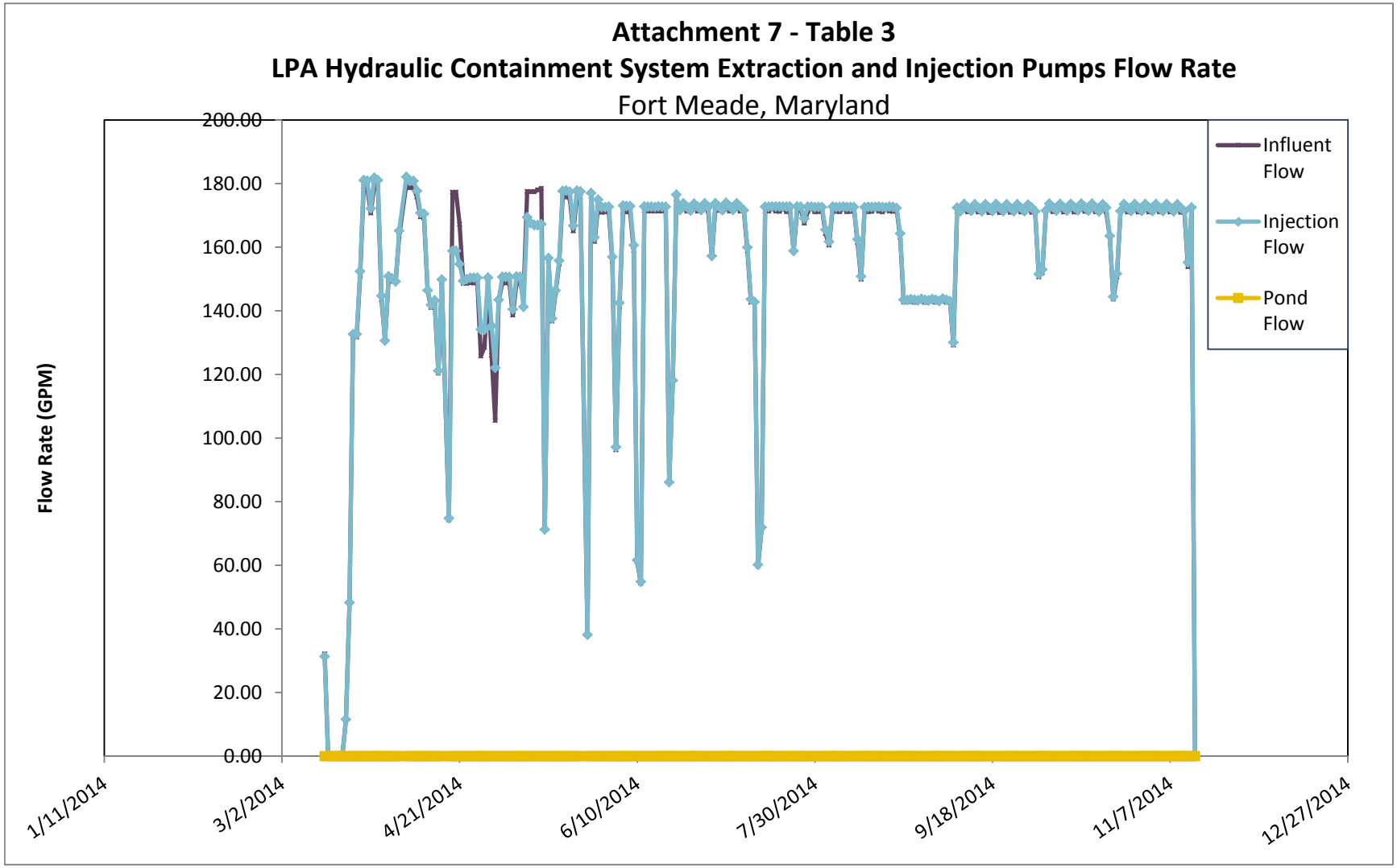
HC Groundwater Treatment
System Operational Summary



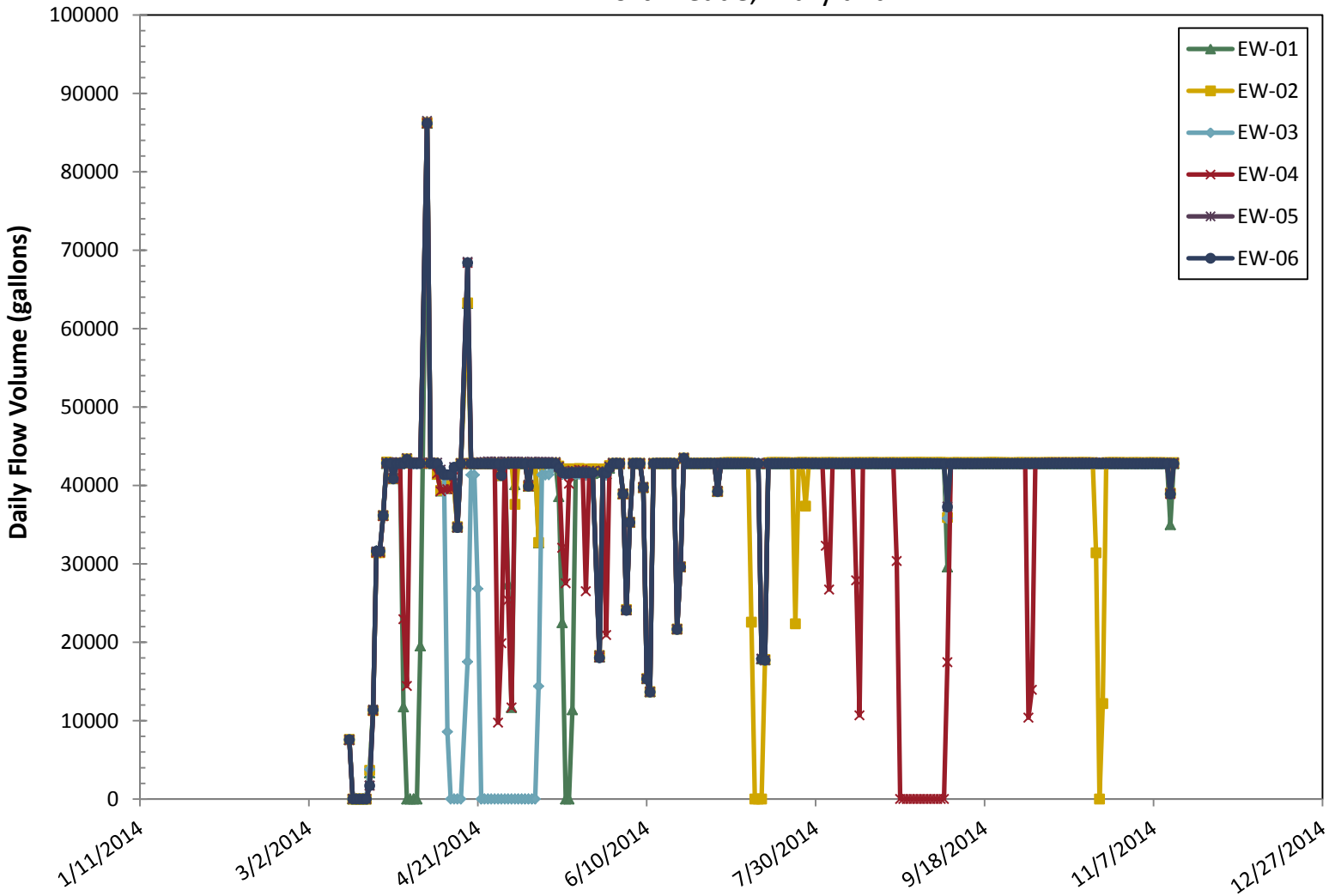
* As measured by flow meter

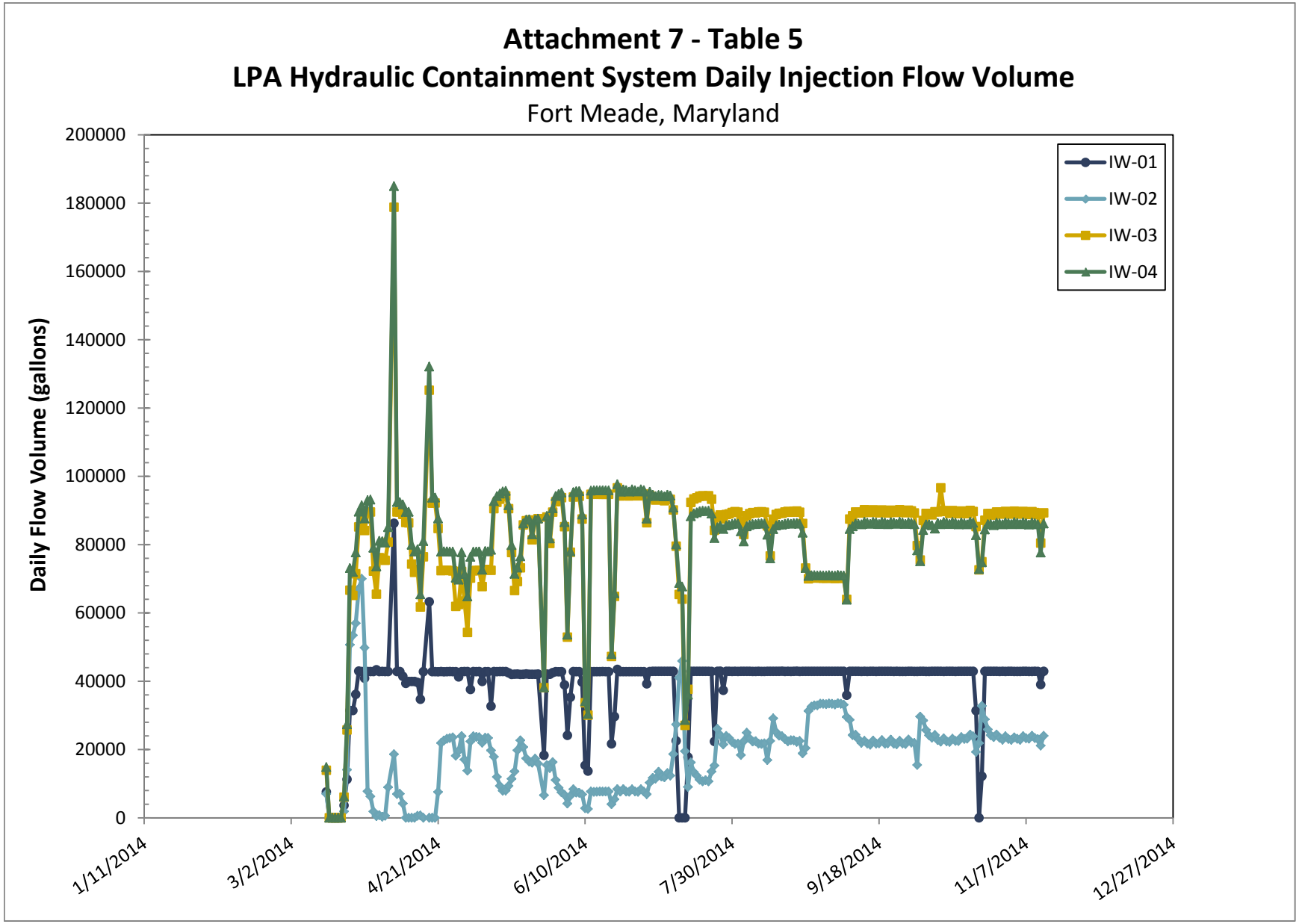


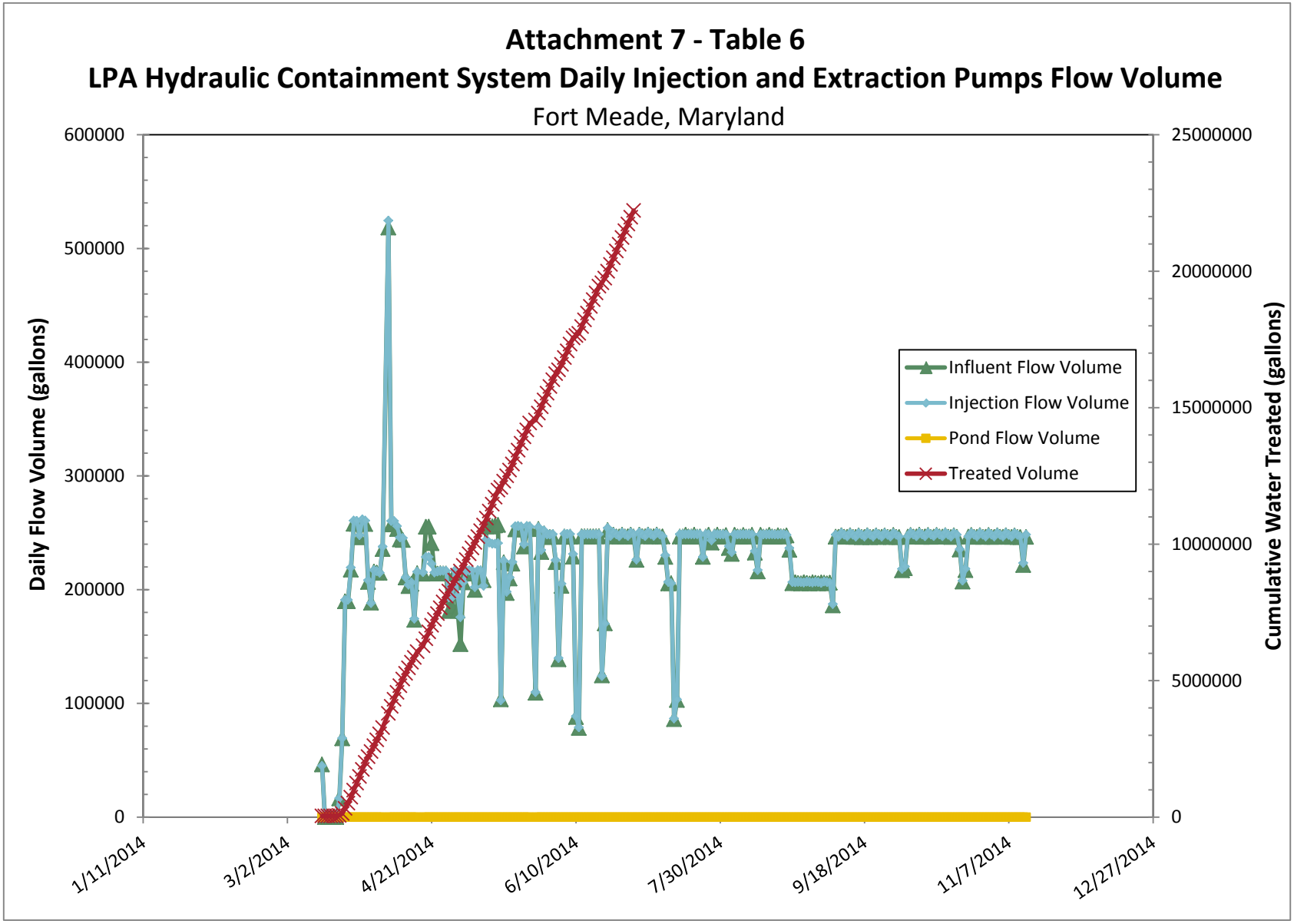
* As measured by flow meter

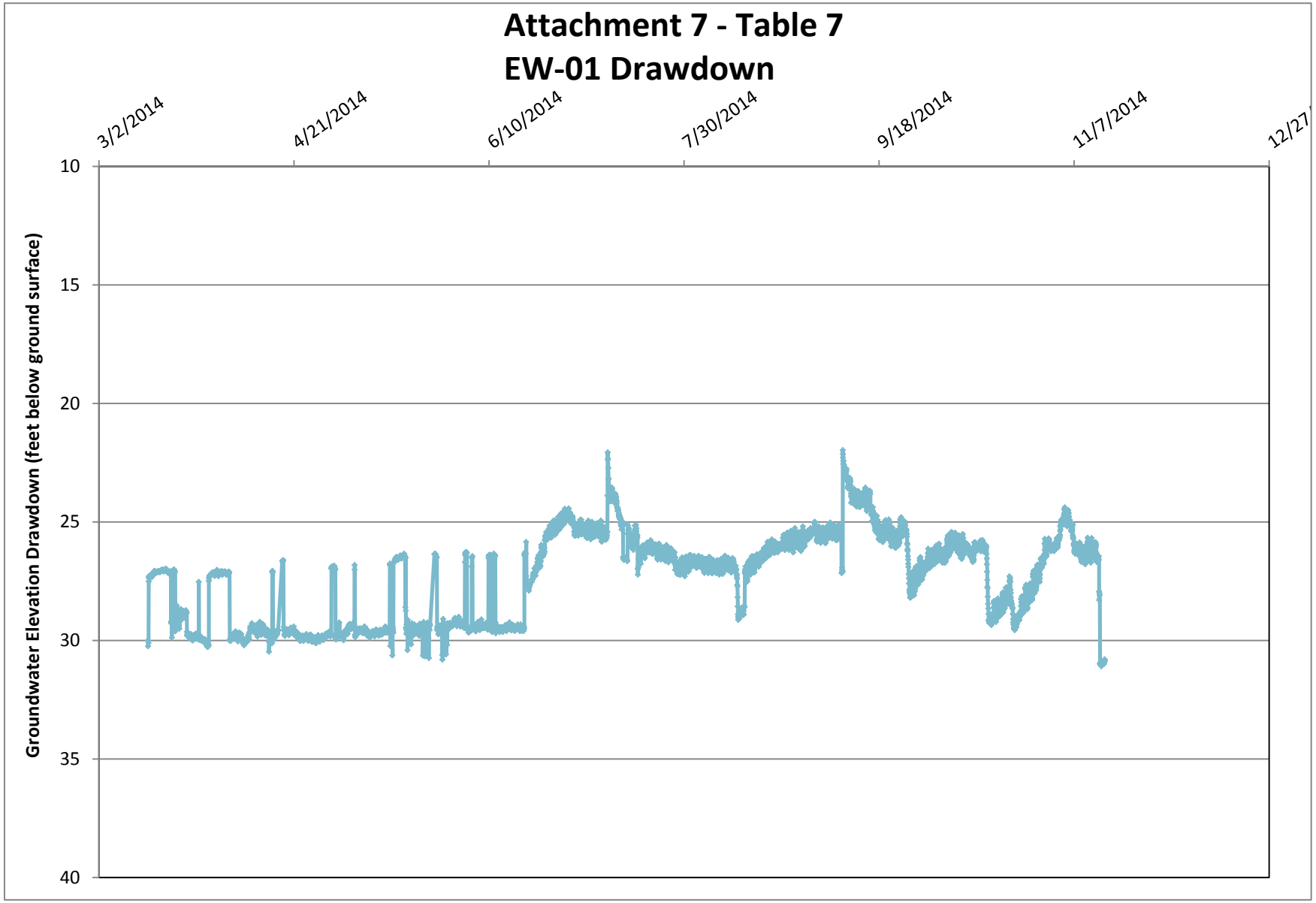

Attachment 7 - Table 3
LPA Hydraulic Containment System Extraction and Injection Pumps Flow Rate
Fort Meade, Maryland
Flow Rate (GPM)
200.00
180.00
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
1/11/2014
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27/2014
Influent Flow
Injection Flow
Pond Flow

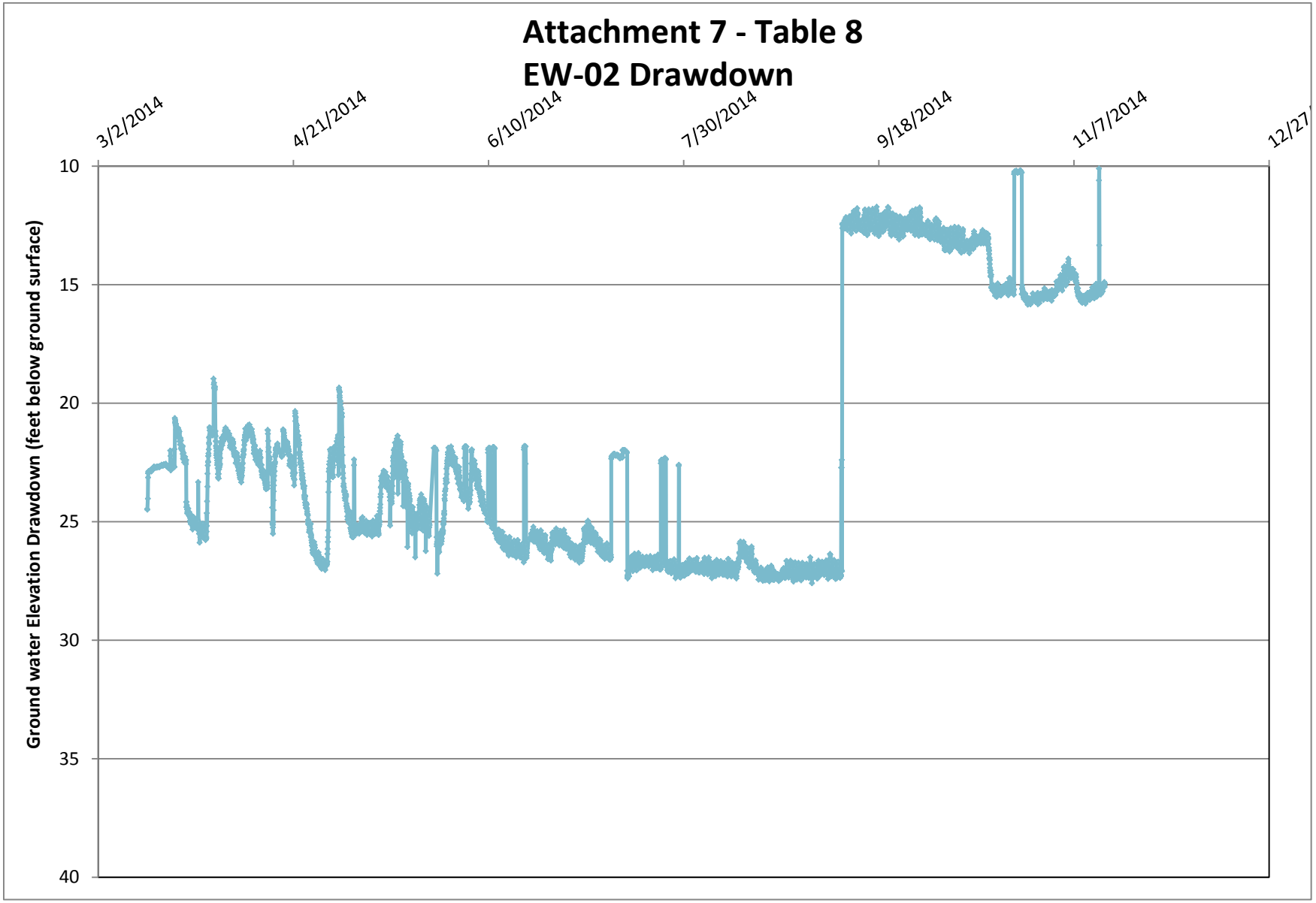
Attachment 7 - Table 4
LPA Hydraulic Containment System Daily Extraction Flow Volume
Fort Meade, Maryland

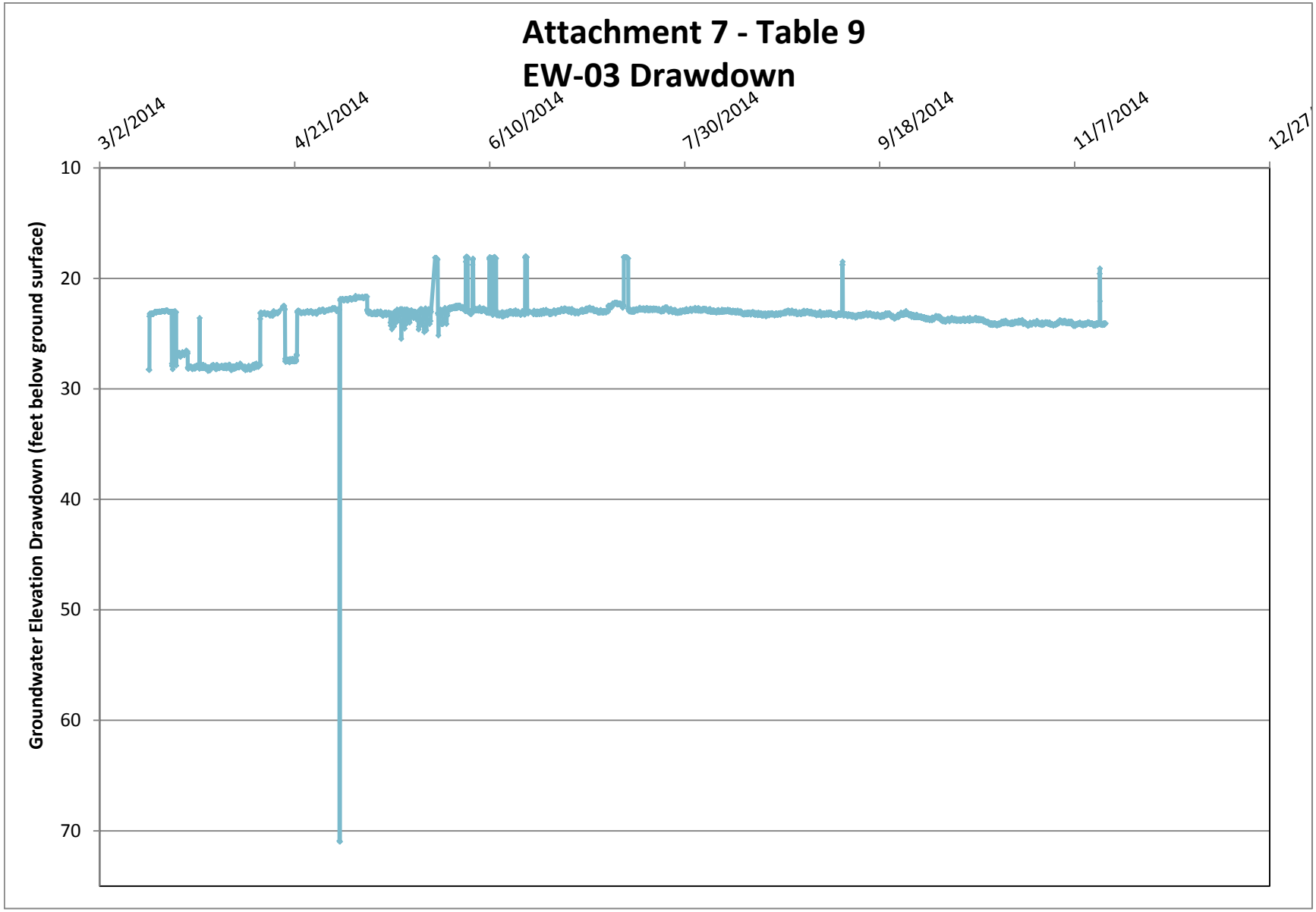


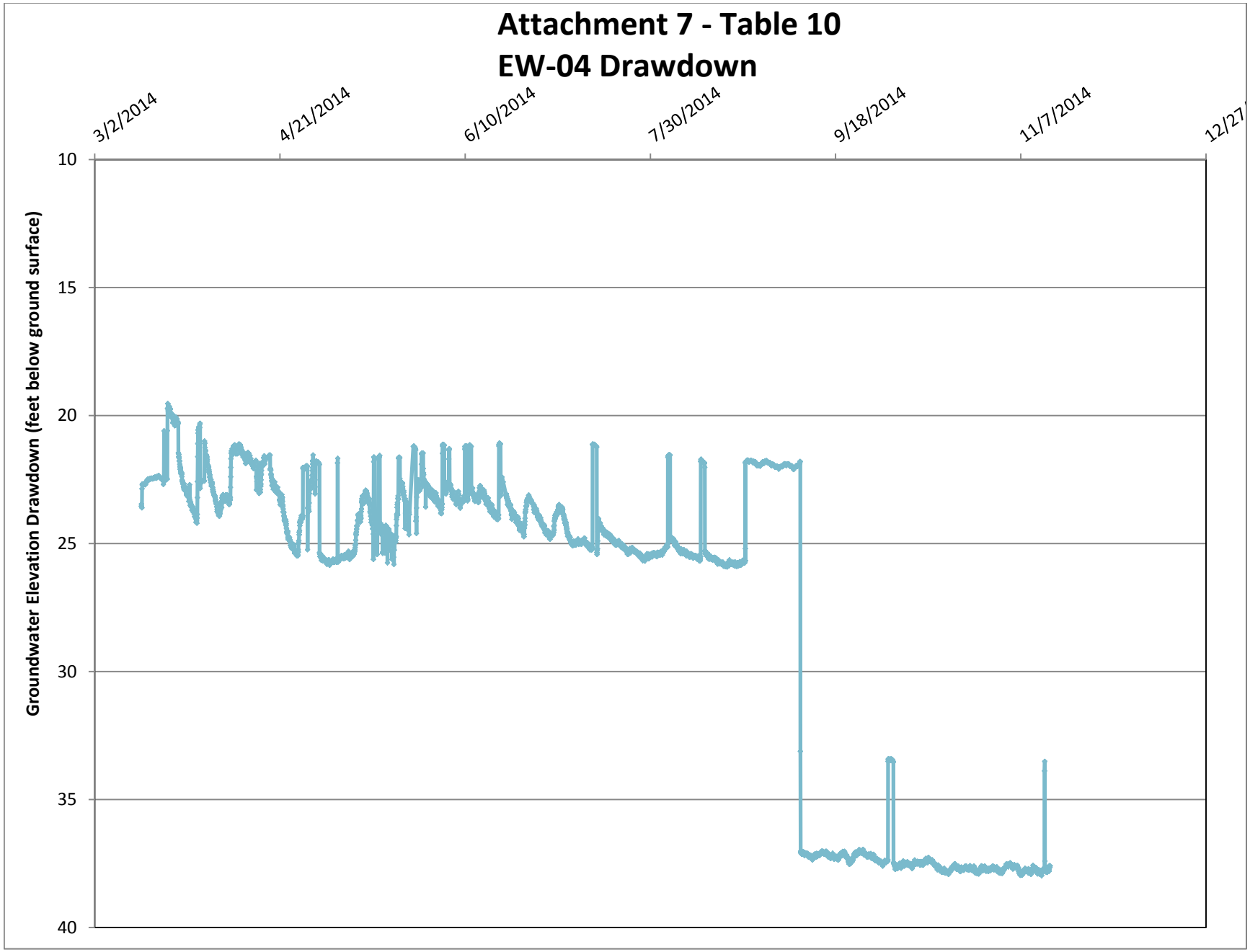

Attachment 7 - Table 5
LPA Hydraulic Containment System Daily Injection Flow Volume
Fort Meade, Maryland
Daily Flow Volume (gallons)
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
1/11/2014
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27/2014
IW-01
IW-02
IW-03
IW-04

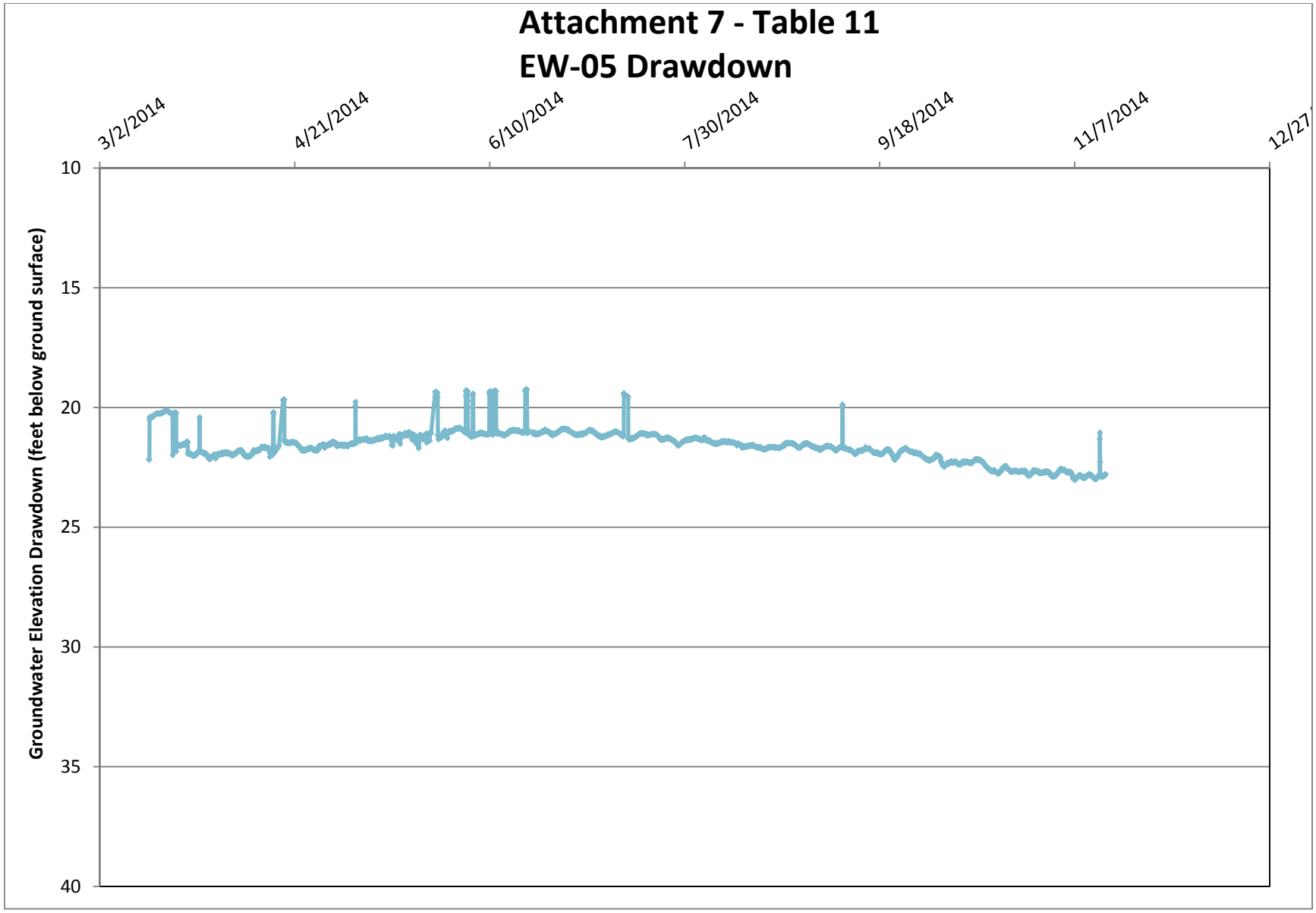

Attachment 7 - Table 6
LPA Hydraulic Containment System Daily Injection and Extraction Pumps Flow Volume
Fort Meade, Maryland
Daily Flow Volume (gallons)
Cumulative Water Treated (gallons)
600000
500000
400000
300000
200000
100000
0
25000000
20000000
15000000
10000000
5000000
0
1/11/2014
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27/2014
Influent Flow Volume
Injection Flow Volume
Pond Flow Volume
Treated Volume

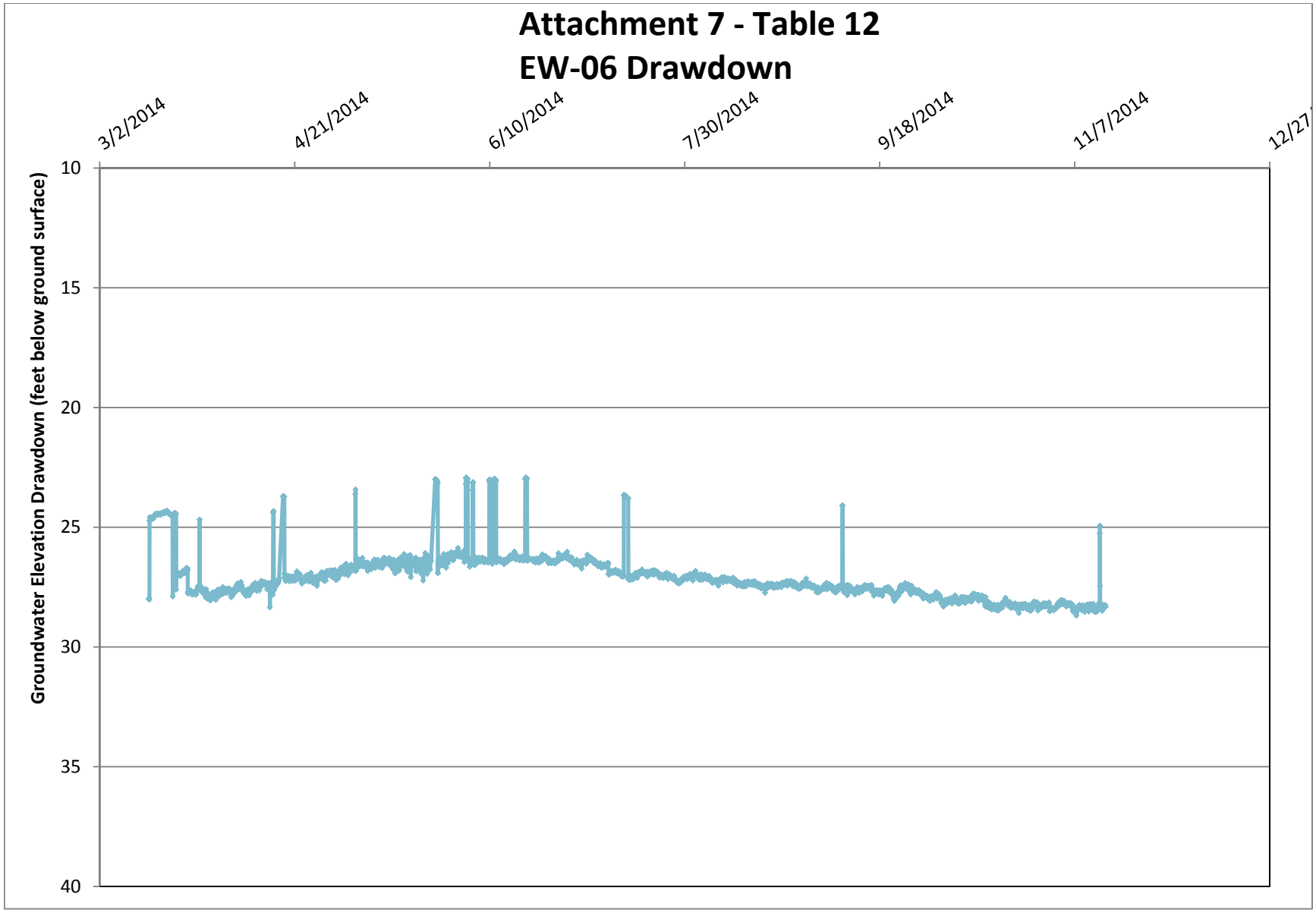

Attachment 7 - Table 7
EW-01 Drawdown
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27
10
15
20
25
30
35
40
Groundwater Elevation Drawdown (feet below ground surface)

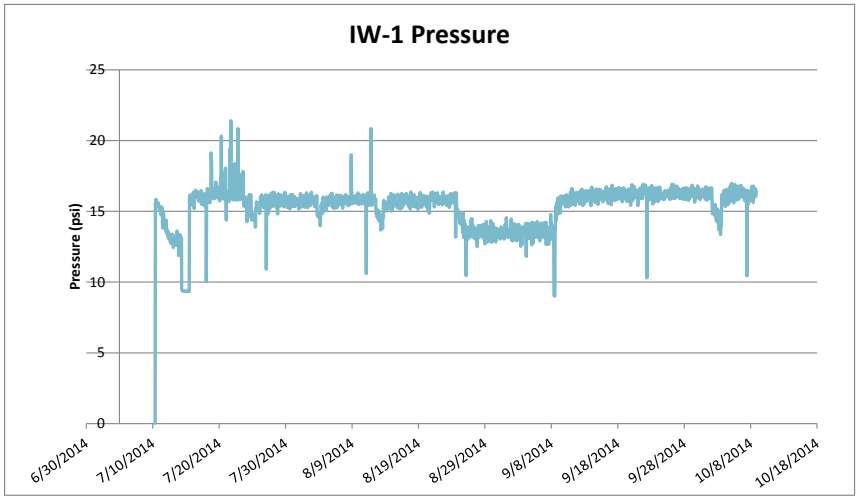

Attachment 7 - Table 8
EW-02 Drawdown
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27
10
15
20
25
30
35
40
Ground water Elevation Drawdown (feet below ground surface)

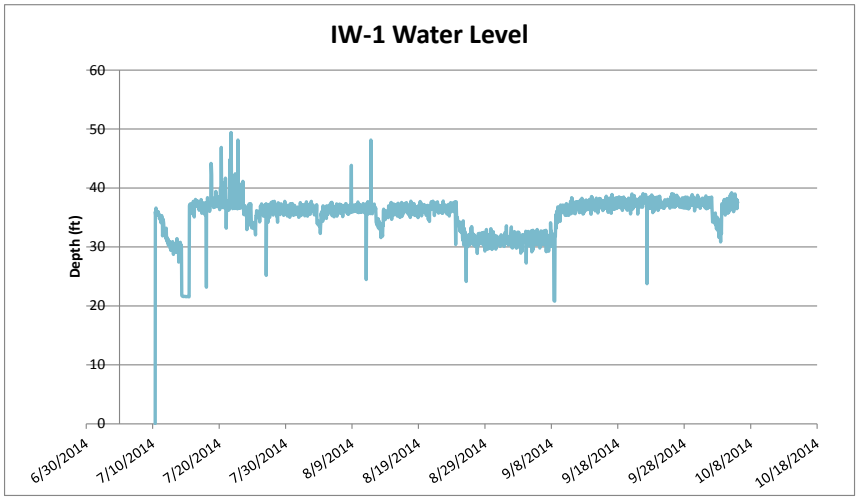

Attachment 7 - Table 9
EW-03 Drawdown
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27
10
20
30
40
50
60
70
Groundwater Elevation Drawdown (feet below ground surface)

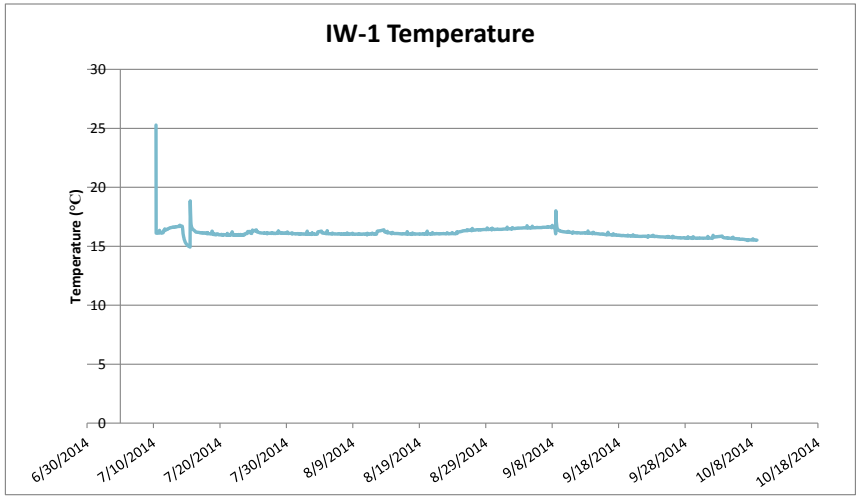

Attachment 7 - Table 10
EW-04 Drawdown
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27
10
15
20
25
30
35
40
Groundwater Elevation Drawdown (feet below ground surface)


Attachment 7 - Table 11
EW-05 Drawdown
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27
10
15
20
25
30
35
40
Groundwater Elevation Drawdown (feet below ground surface)

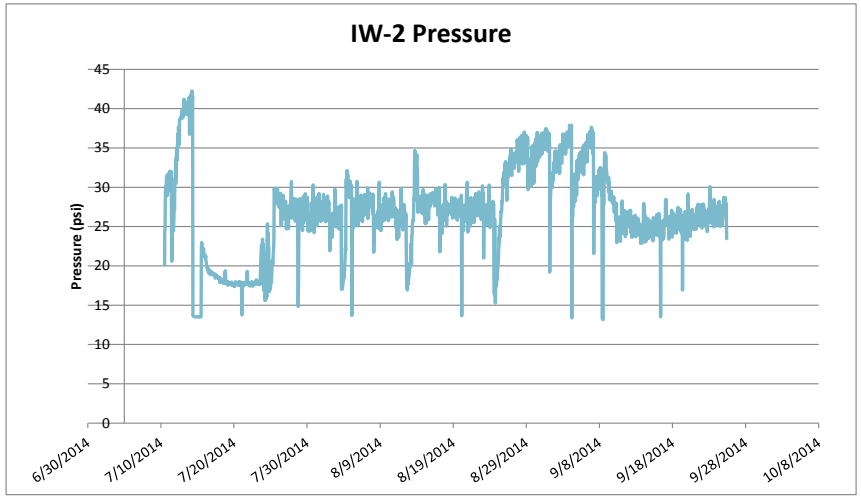

Attachment 7 - Table 12
EW-06 Drawdown
3/2/2014
4/21/2014
6/10/2014
7/30/2014
9/18/2014
11/7/2014
12/27
Groundwater Elevation Drawdown (feet below ground surface)
10
15
20
25
30
35
40

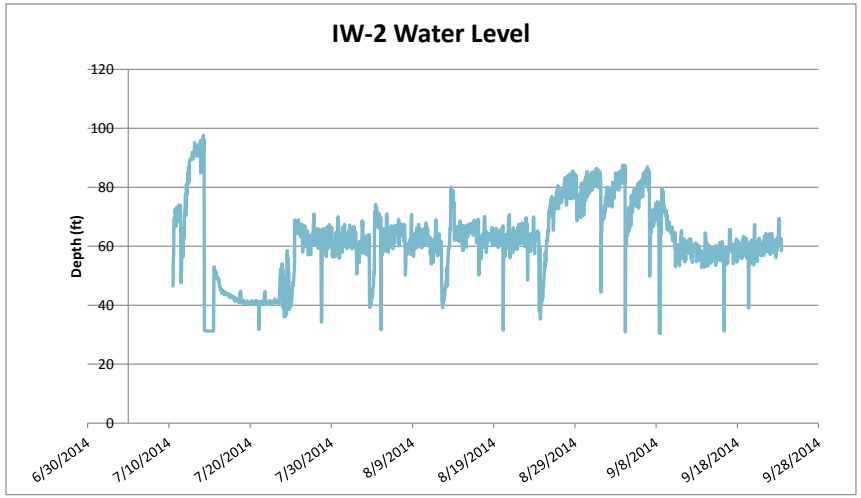


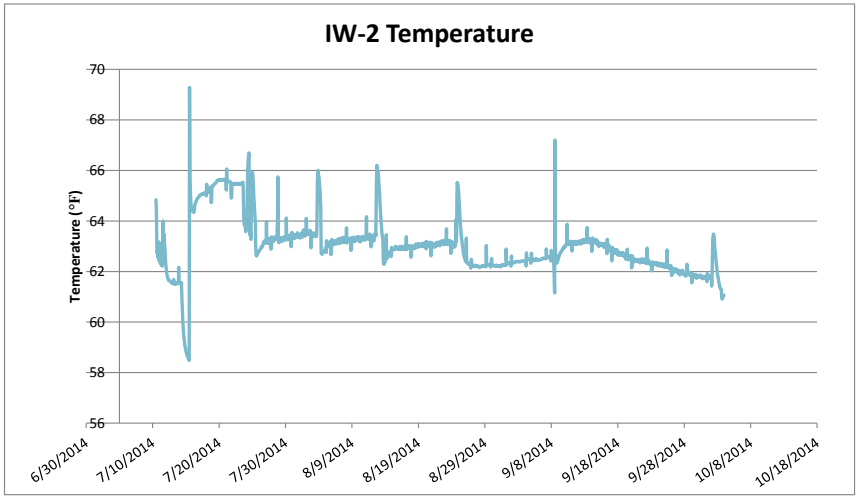




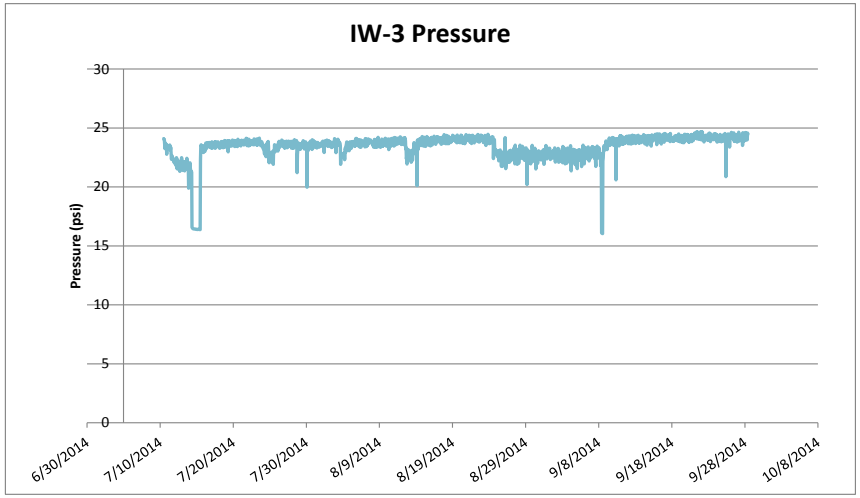
Attachment 7 - Table 13
IW-1

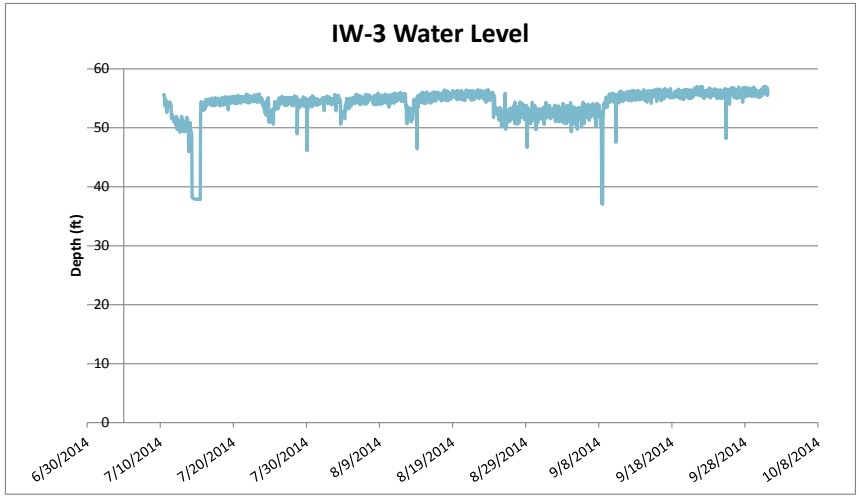


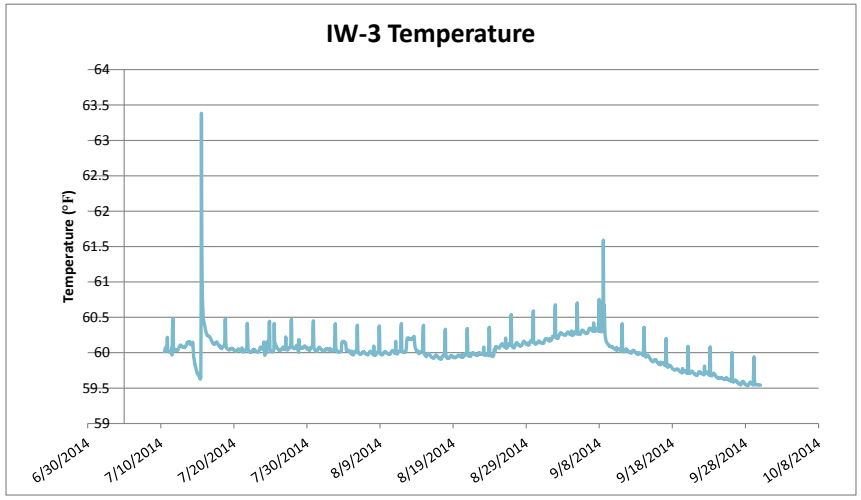




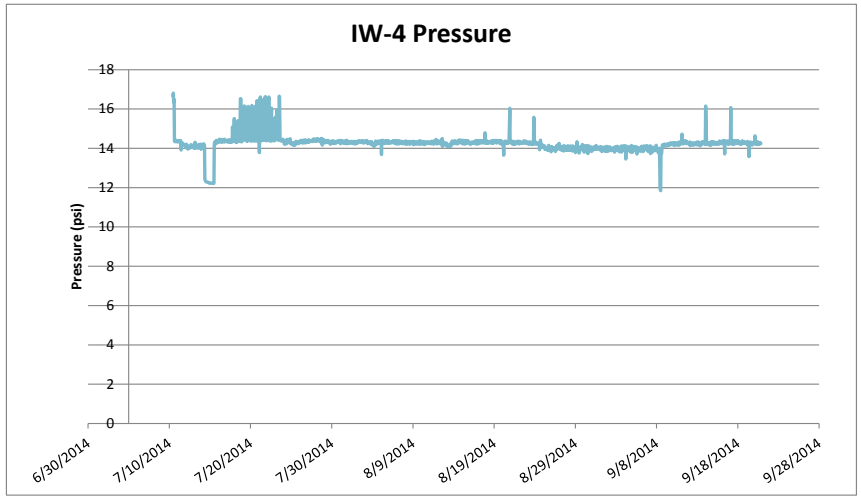
Attachment 7 - Table 14
IW-2

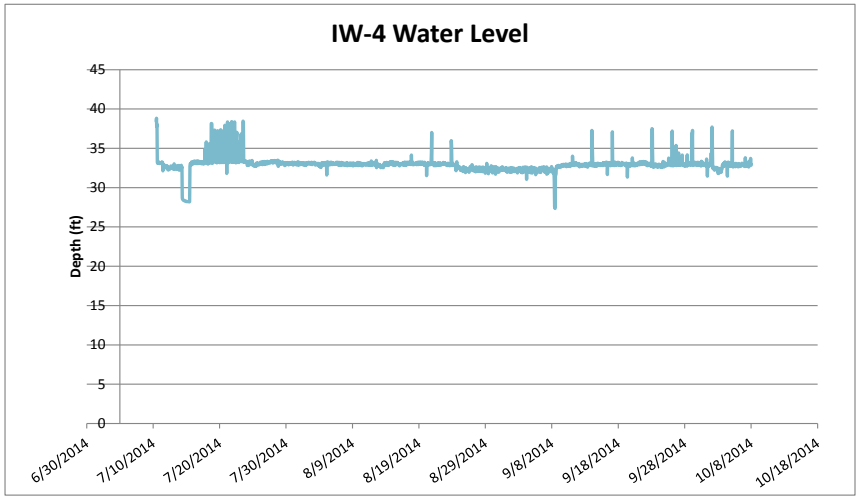


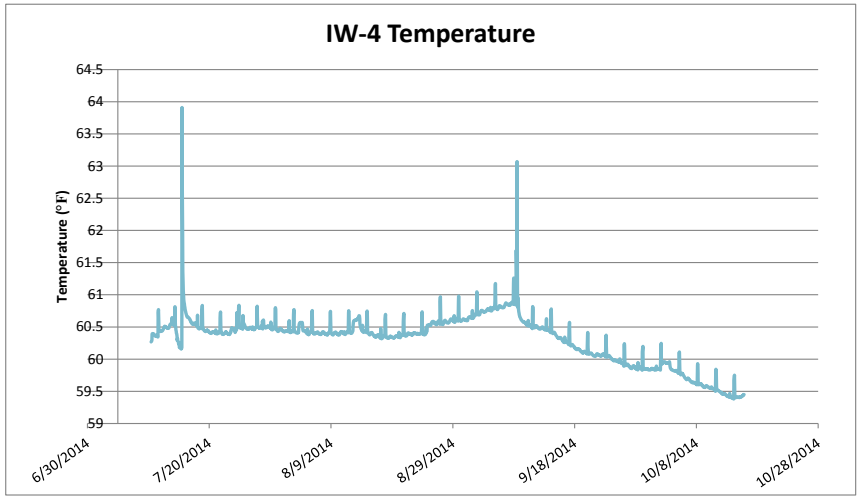




Attachment 7 - Table 15
IW-3







Attachment 7 - Table 16
IW-4