Richard Gates
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VIA ELECTRONIC MAIL

July 27, 2015

Erich Weissbart, P.G.
EPA Region 3
Land and Chemicals Division
701 Mapes Road
Fort Meade, MD 20755

Subject: **Semi-Annual Project Progress Report: January-June 2015**
RCRA Corrective Action Permit MDD046279311
Former Appliance Park East Facility
Columbia, Maryland

Dear Mr. Weissbart:

Please find attached the Semi-Annual Project Progress Report for the former Appliance Park East facility in Columbia, Maryland. This report covers the period from January 1 to June 30, 2015, and is submitted by the General Electric Company (GE) pursuant to Condition II.H.1 of the above-referenced permit, as modified by the United States Environmental Protection Agency (EPA).

As required by Condition I.B.7 of the above-referenced permit, I certify under penalty of law that the enclosed report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact me or Belssi Chang of Tetra Tech at (410) 990-4607 if you have any questions regarding the attached report.

Sincerely,

Richard Gates
Senior Project Manager – Remediation

Attachment

cc: Belssi Chang, Tetra Tech (via email)
Ed Hammerberg, MDE (via email)
Curt Lebak, RREEF (via email)
Bob Jenkins, Howard Hughes Corporation (via email)

SEMI-ANNUAL PROJECT PROGRESS REPORT

RCRA CORRECTIVE ACTION PERMIT (PERMIT)

Permittee:	General Electric Company (GE)
Permit Number:	MDD046279311
Prepared for	GE Global Operations – Environmental Remediation 159 Plastics Avenue Pittsfield, Massachusetts 01201
Prepared By:	Tetra Tech, Inc. (Tetra Tech) 51 Franklin Street, Suite 400 Annapolis, Maryland 21401
Date:	July 27, 2015
Report Period:	1 January 2015 through 30 June 2015
Copies:	Maryland Department of the Environment (MDE) RREEF Engineering The Howard Hughes Corporation

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1. Part II.H.1.a: Progress Made This Period

Underground Storage Tank (UST) No. 9 - CMS Unit 4

The final groundwater sampling event under the 18 September 2003 Post-Termination Groundwater Sampling and Analysis Plan for UST No. 9, which was approved by the United States Environmental Protection Agency (EPA) on 29 September 2003, was performed on 23 October 2012. The Plan included a 10-year monitoring period, which terminated with the October 2012 sampling event. The October 2012 groundwater monitoring results were presented in a summary report that was previously submitted to EPA.

The first and most recent biennial groundwater sampling event under the 2 April 2013 Post-Termination Ground Water Sampling and Analysis Plan for UST No. 9, which was approved by the EPA on 2 May 2013, was performed on 22 October 2014. The groundwater monitoring results were presented in a summary report that was previously submitted to EPA. Attachment 1 includes a summary of the groundwater monitoring results. The next biennial groundwater monitoring event is scheduled for October/November 2016.

Volatile Organic Compounds (VOCs) in Soil and Groundwater Beneath and Around the Former Manufacturing Building - RCRA Facility Investigation (RFI) Unit 2

GE completed RFI activities to address volatile organic compounds (VOCs) in soil and groundwater at RFI Unit 2. GE submitted the combined RFI Report for RFI Units 2 and 7 to EPA on 10 January 1995. EPA approved the RFI Report for RFI Units 2 and 7 in its letter dated 30 December 1999.

By its letter dated 30 January 2007, GE provided EPA with the Corrective Measures Study (CMS) Work Plan for Units 2 and 7. The CMS Work Plan was subsequently revised to address comments provided by EPA. By its letter dated 30 January 2008, EPA approved the revised CMS Work Plan for CMS Units 2 and 7.

GE submitted the CMS Report to EPA on 14 August 2008. By its 4 August 2010 letter, EPA approved the CMS Report for Units 2 and 7, and selected Corrective Measures Alternative No. 3A. Under Alternative 3A, the existing Parcel A-10 pump-and–treat system was to continue operating and be expanded with the addition of a new pumping well. GE originally constructed and operated the pump-and-treat system as an interim corrective action pursuant to the stabilization measure under the former Permit. The system first began operating on 10 November 1998.

GE submitted its design to EPA for the new pumping well, designated as B-6, by its letter dated 19 October 2010. EPA approved the design by email to GE dated 27 October 2010. Figure 1 in Attachment 2 is a site plan that shows the location of the pump-and-treat system.

The new pumping well, B-6, was installed in November 2010, and began operating on 11 February 2011. By letter dated 28 February 2011, GE provided EPA with the Engineering Certification Report for the expansion of the pump-and-treat system. GE received a new Water Appropriation and Use Permit No. HO1997G014(04) issued by MDE on 9 June 2011. GE also provided EPA, by letter dated 24 May 2011, the revised Operation and Maintenance (O&M) Plan for the pump-and-treat system. The revised O&M Plan reflects the addition of new pumping well B-6.

The pump-and-treat system was fully operational over the last six months except as noted in the monthly monitoring reports prepared by Tetra Tech for this reporting period (i.e., January, February, March, April, May, and June 2015). The reports were previously submitted by Tetra Tech to EPA. Attachment 2 includes performance monitoring results for the pump-and-treat system and a brief discussion is in Section 2 (Part II.H.1.b: Findings) of this report.

Alternative 3A also included expanding the current groundwater sampling program for Units 2 and 7. On 4 May 2011, GE submitted a new Ground Water Sampling and Analysis Plan (SAP) for Units 2 and 7 to EPA for approval. The SAP was originally submitted to EPA on 24 November 2010, and conditionally approved by EPA by letter dated 10 January 2010. However, as requested by EPA, the monitoring program was optimized, as described in Environmental Resources, Inc. (ERM) letter to EPA dated 6 April 2011, which was approved

by EPA in an email from Mr. Erich Weissbart of EPA to GE dated 19 April 2011. The SAP dated 4 May 2011 incorporated the optimized monitoring program approved by EPA, and was formally approved by EPA in a 20 July 2011 letter.

In accordance with the 4 May 2011 SAP, a groundwater monitoring event occurred in May 2015. The groundwater monitoring results were presented in a summary report that was previously submitted to EPA. Attachment 2 includes a summary of the groundwater monitoring results and a brief discussion is in Section 2 (Part II.H.1.b: Findings) of this report. The next sampling event is scheduled for November 2015.

Under Alternative 3A, the existing soil vapor extraction (SVE) system for the Exterior Trichloroethene (TCE) Tank (ETT) area was to continue operating, and be extended under the western wing of the Press Pit. The Phase II SVE system was originally constructed and operated as an Interim Corrective Measures (ICM) under the former Permit. The Phase II system commenced operation on 13 September 1999.

By its letter dated 15 November 2010, GE submitted to EPA its proposed pilot test work plan and design for the expanded SVE system. EPA approved the pilot test by its email to GE dated 6 December 2010.

Tetra Tech completed the SVE pilot test in the western wing of the Press Pit in March 2011. As an attachment to GE's letter dated 4 April 2011, the results of the SVE pilot test in the Press Pit were provided to EPA. The report was approved by EPA in an email from Mr. Weissbart of EPA to GE dated 6 April 2011.

The expansion of the SVE system into the western wing of the Press Pit was completed in May 2011. GE provided EPA, by letters dated 7 June 2011 and 16 June 2011, the Engineering Certification Report and the revised O&M Plan, respectively, for the expanded SVE system. The last of the ten Press Pit SVE wells was brought on line in November 2012.

Performance monitoring for the Phase II SVE system was performed following the procedures specified in the revised O&M Plan. The inspection logs for this reporting period (i.e., for January, February, March, April, May, and June 2015) were previously provided to EPA. Attachment 3 includes a site plan for the Phase II SVE system and a plot showing the cumulative VOC mass removed by the Phase II system through time. Attachment 3 includes the flow chart (from the updated O&M Plan submitted in June 2011) that shows how the system is progressing through the termination criteria.

Warehouse Building Oil/Water Separator and Acid Neutralization Units - RFI Unit 6

GE completed RFI activities to address groundwater impacts from RFI Unit 6 and submitted the RFI Report to EPA on 3 March 1995. By its letter dated 2 July 2002, EPA conditionally approved the RFI Report for RFI Unit 6. In this letter, EPA requested that GE perform long-term groundwater monitoring at RFI Unit 6 to verify that groundwater quality is improving over time. In response, GE submitted a Sampling and Analysis Plan to EPA by letter dated 23

August 2002. By its letter dated 6 January 2003, EPA approved the 19 August 2002 Sampling and Analysis Plan.

The most recent monitoring event was performed this period on 29 November 2012. The groundwater monitoring results were presented in a summary report that was previously submitted to EPA. The next sampling event will be conducted in November 2017. Attachment 4 includes a summary of the groundwater monitoring results.

Boiler House Tank Farm (BHTF) Groundwater Investigation - RFI Unit 5

GE completed RFI activities to address groundwater impacts from the BHTF and submitted the RFI Report for RFI Unit 5 to EPA on 6 March 1995. The final round of water levels associated with the RFI was collected on 10 April 1995 in accordance with the RFI/CMS Plan. These data were submitted to EPA, on behalf of GE, in a 5 May 1995 letter from ERM.

EPA approved the RFI Report for RFI Unit 5 in a 21 June 1995 letter to GE. In this letter, EPA also deferred corrective action to remediate free-phase petroleum hydrocarbons at RFI Unit 5 to MDE. As such, all correspondence and reports pertaining to the free-phase hydrocarbon recovery activities were submitted to MDE, and details of the corrective action activities are not discussed herein. However, as directed in EPA's letter, GE has provided EPA with copies of all related correspondence and reports submitted to MDE.

As reported in a prior Project Progress Report, GE submitted its Site Closure Report dated 21 May 2007 to MDE. Subsequently, in its letter dated 10 July 2007 to GE, MDE approved case closure pending proper abandonment of the monitoring wells at the BHTF, except those wells that were to be retained to support work being performed by GE under the Permit. Accordingly, the following wells and piezometers were abandoned on 18 September 2007 by a Maryland-licensed driller: 5-BTF-MW-3; ERM-10R; ERM-11R; ERM-12R; ERM-13R; OBG-52; OBG-54; OBG-55; P-1; P-4; P-6; P-7; and P-8. EPA concurred with this list of wells as documented in its email to GE dated 16 August 2007. The product recovery system at the BHTF was decommissioned and removed from the site in September 2007.

Other Activities Conducted Pursuant to the Permit

The new RCRA Corrective Action Permit was issued by EPA for the facility with an effective date of 3 November 2012. In accordance with Part II.B.3 of the Permit, GE submitted an Institutional Control Plan (IC Plan) dated 24 January 2013 to EPA. By its email to GE, EPA approved the IC Plan on 5 February 2013. EPA approved the environmental covenants (ECs) for each of the properties subject to the IC Plan during the previous reporting period. Following submittal of the signed ECs for parcels A-8, A-10 and A-15, MDE and EPA revised the EC template. Updated ECs will be prepared using this new template.

2. Part II.H.1.b: Findings

UST No. 9 - CMS Unit 4

In accordance with the EPA-approved 22 April 2013 SAP, the most recent post-termination groundwater monitoring event was performed in October 2014, the results for which were previously submitted to EPA. Attachment 1 includes a summary of the groundwater monitoring results. The next biennial sampling event is scheduled for October/November 2016.

Table 1 of Attachment 1 summarizes the October 2014 groundwater levels measured at each monitoring well and the respective groundwater elevations. Table 2 of Attachment 1 summarizes the analytical results. Figure 2 of Attachment 1 depicts the generalized groundwater flow direction and the approximate extent of 5 µg/L of BTEX in groundwater.

BTEX and MTBE were not detected in nine of the ten groundwater monitoring wells (ERM-4, ERM-7, ERM-18, TP-6, TP-7, TP-8, TP-11, OBG-17, and OBG-18) that were sampled in October 2014. ERM-6 was the only well that had some detections: 4.6 µg/L toluene, 167 µg/L ethylbenzene, and 368 µg/L xylenes. Benzene was not detected (<1.0 µg/L) in the ERM-6 sample. The results indicate that the plume is shrinking since BTEX compounds and/or MTBE were detected during the previous 2012 groundwater sampling event in wells ERM-4, ERM-6, ERM-7, TP-7, and TP-8.

VOCs in Soil and Groundwater Beneath and Around the Former Manufacturing Building - RFI Unit 2

The Parcel A-10 pump-and-treat system was fully operational over the last six months except as noted in the monthly monitoring reports prepared by Tetra Tech for this reporting period (i.e., January, February, March, April, May, and June 2015). The reports were previously submitted by Tetra Tech to EPA. As approved by EPA in its email dated 26 March 2014, the pump in recovery well B-3 was turned off on 4 April 2014 and was turned back on for about one hour to sample on 5 June 2014 and 4 September 2014. The June and September 2014 sampling did not indicate an increase in VOC concentrations compared to those measured before B-3 was turned off. B-3 will be sampled again in September 2015 as approved by EPA in its email dated 23 October 2014 to monitor for any rebound in VOC concentrations to determine if B-3 should be returned to operation. Attachment 2 includes summary tables and figures showing the site plan and performance monitoring results for the pump-and-treat system.

In accordance with the 4 May 2011 SAP, a groundwater monitoring event occurred in May 2015. Tetra Tech collected groundwater levels on May 8, 2015 from all of the wells shown on Figure 5 of Attachment 2 and listed in Table 1 of Attachment 2 prior to the sampling event. Tetra Tech collected the groundwater samples using passive diffusion bags (PDBs). The PDBs were deployed on May 8, 2015 and retrieved on May 22, 2015. The samples were analyzed for VOCs by EPA Method 8260. QA/QC samples included a field blank, trip blank,

Matrix Spike/Matrix Spike Duplicate (MS/MSD from well 2MW-4), and a blind duplicate of 2MW-8S (labeled 2MW-8).

The groundwater elevation data are summarized in Table 1 of Attachment 2 for May 8, 2015. Figures 6 and 7 of Attachment 2 are groundwater elevation contour maps for the saprolite and bedrock units, respectively. The groundwater analytical results for the May 2015 sampling event are summarized in Table 2 of Attachment 2 and Table 3 presents TCE results since June 2007. Figures 9 and 10 of Attachment 2 illustrate the change in TCE concentrations since June 2000 at wells located within the plume core and at wells located at the plume toe and cross-gradient of the plume, respectively. As shown in Table 2 and consistent with the results from prior groundwater sampling events at Units 2 and 7, cis-1,2-dichloroethene (cDCE) and trans-1,2-dichloroethene (tDCE) and a few other VOCs were also detected in a subset of the monitoring wells sampled.

The groundwater elevation and sample results from the May 2015 sampling event show that the hydraulic containment system continues to operate as intended. Specifically, VOC-impacted groundwater continues to be contained on Parcel A-10.

Performance monitoring for the Phase II SVE system was performed following the procedures specified in the revised O&M Plan. The inspection logs for this reporting period (i.e., for January, February, March, April, May, and June 2015) were previously provided to EPA. Attachment 3 includes a site plan for the Phase II SVE system and a plot showing the cumulative VOC mass removed by the Phase II system through time. Attachment 3 includes the flow chart (from the updated O&M Plan submitted in June 2011) that shows how the system is progressing through the termination criteria.

Warehouse Building Oil/Water Separator and Acid Neutralization Units - RFI Unit 6

In accordance with the EPA-approved 19 August 2002 SAP, the most recent groundwater monitoring event occurred in November 2012, the results for which were previously submitted to EPA. The next scheduled monitoring event under the April 2013 Plan is October/November 2017. Attachment 4 consists of summary tables and a figure showing the groundwater monitoring results for RFI Unit 6.

ERM collected groundwater samples from monitoring wells 6MW-1, 6MW-2, 6MW-3, and OBG-65 on 29 November 2012 (Figure 1 of Attachment 4). QA/QC samples consisted of a blind duplicate of 6MW-2, designated as 6MW-5, and a trip blank. The samples were submitted to Eurofins for analyses of VOCs. The purge water was treated in the Parcel A-10 groundwater treatment system.

Table 1 of Attachment 4 summarizes the groundwater levels measured at each monitoring well and the respective groundwater elevations. Table 2 of Attachment 4 summarizes the analytical results. Figure 1 of Attachment 4 shows that the groundwater flow direction is to the east from the source area(s) under the building. The groundwater flow is consistent with the historical data previously presented to EPA for RFI Unit 6.

The groundwater quality data collected in November 2012 are consistent with the historical data collected for RFI Unit 6. VOCs were not detected in any of the groundwater samples except for 6MW-2, which is located at the former oil/water separator under the building. The groundwater elevation data and sample results show that the extent of VOC-affected groundwater remains within the footprint of the Warehouse Building.

3. Part II.H.1.c: Identification of Additional Solid Waste Management Units (SWMUs)

No additional SWMUs were identified during this reporting period.

4. Part II.H.1.d: Changes in Investigations, Workplans and Interim Corrective Measures

None.

5. Part II.H.1.e: Problems Encountered During This Period

The pump-and-treat system was fully operational over the last six months except as noted in the inspection logs attached to the monthly performance monitoring reports prepared by Tetra Tech for this reporting period. These reports were previously provided to EPA.

The Phase II SVE system was fully operational over the last six months except as noted in the inspection logs for this reporting period; these logs were previously provided to EPA.

6. Part II.H.1.f: Projected Work for the Next Reporting Period

UST No. 9 - CMS Unit 4

This next scheduled monitoring event is October/November 2016.

VOCs in Soil and Groundwater Beneath and Around the Former Manufacturing Building - RFI Unit 2

During the next reporting period, GE expects that the Parcel A-10 pump-and-treat system will operate full-scale, with the exception of the operation of recovery well B-3, which was turned off on 4 April 2014. B-3 will be sampled again in September 2015 to monitor for any rebound in VOC concentrations to determine if B-3 should be returned to operation. GE also expects to conduct the next groundwater monitoring event in October/November 2015 in accordance with the SAP. Groundwater monitoring will include the monitoring wells on a semi-annual sampling frequency (wells on a biennial sampling frequency will be sampled in May/June 2016).

The Phase II SVE system is expected to operate at full-scale through the next reporting period. Currently, there are no plans to shut down the SVE system in 2015.

Warehouse Building Oil/Water Separator and Acid Neutralization Units - RFI Unit 6

The next monitoring event under the EPA-approved 19 August 2002 SAP is scheduled for October/November 2017.

Other Activities Conducted Pursuant to the Permit

The new RCRA Corrective Action Permit was issued by EPA for the facility with an effective date of 3 November 2012. In accordance with Part II.B.3 of the Permit, GE submitted an Institutional Control Plan (IC Plan) dated 24 January 2013 to EPA. By its email to GE, EPA approved the IC Plan on 5 February 2013. EPA approved the ECs for each of the properties subject to the IC Plan in the previous reporting period. Once the ECs have been executed by all appropriate parties, the ECs will be recorded with the Howard County Land Records.

7. Part II.H.1.g: Copies of Analytical Data

UST No. 9 - CMS Unit 4

The results for the October 2014 monitoring event were presented in a report that was previously submitted to EPA.

VOCs in Soil and Groundwater Beneath and Around the Former Manufacturing Building - RFI Unit # 2

The results for the May 2015 monitoring event were presented in a report that was previously submitted to EPA.

The monthly performance monitoring reports for the pump-and-treat system during this reporting period were previously submitted to EPA.

The field logs for the Phase II SVE system during this reporting period were previously submitted to EPA.

Warehouse Building Oil/Water Separator and Acid Neutralization Units - RFI Unit 6

The results for the 29 November 2012 monitoring event were presented in a report that was previously submitted to EPA.

8. Part II.H.1.h: Changes in Personnel

Effective March 1, 2015 the GE project manager for this project is Mr. Richard Gates.

9. Part II.H.1.i: Summary of Contacts Made Concerning Releases

There were no contacts made during this reporting period.

10. Part II.H.1.j: Copies of Correspondence Concerning Releases

There has been no correspondence with representatives of the local community, public interest groups, or local, state, or federal governments concerning releases or corrective action for releases during the reporting period with the exception of correspondence relating to releases already being addressed and required under the Permit.

ATTACHMENT 1

To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

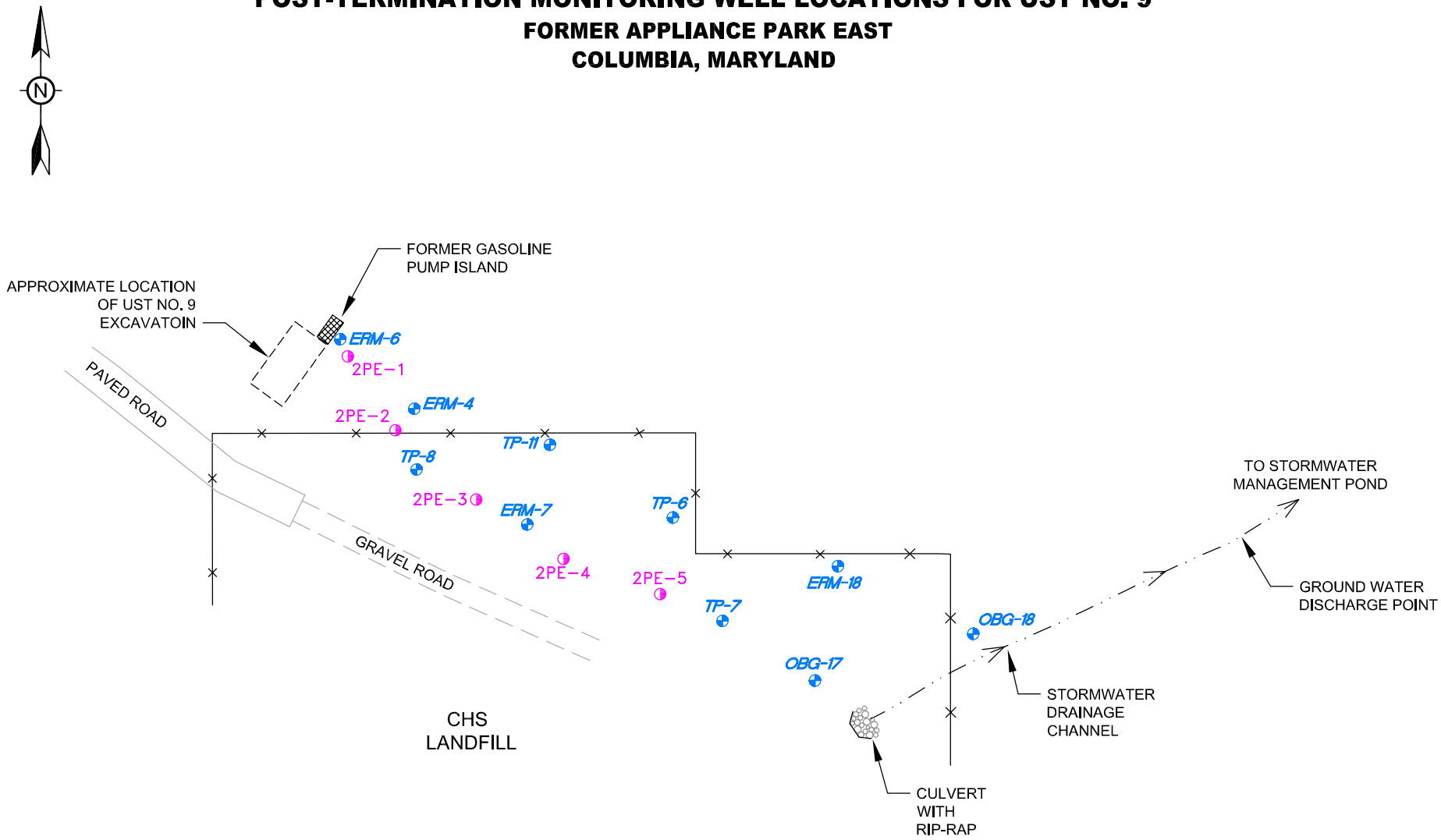
General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period 1 January 2015 to 30 June 2015

Findings Summary for Underground Storage Tank (UST) No. 9 - CMS Unit 4

2204275006A.DWG

FIGURE 1
POST-TERMINATION MONITORING WELL LOCATIONS FOR UST NO. 9
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

2PE-1	2-PHASE WELL LOCATION
ERM-4	POST-TERMINATION MONITORING WELL LOCATION
	FENCE

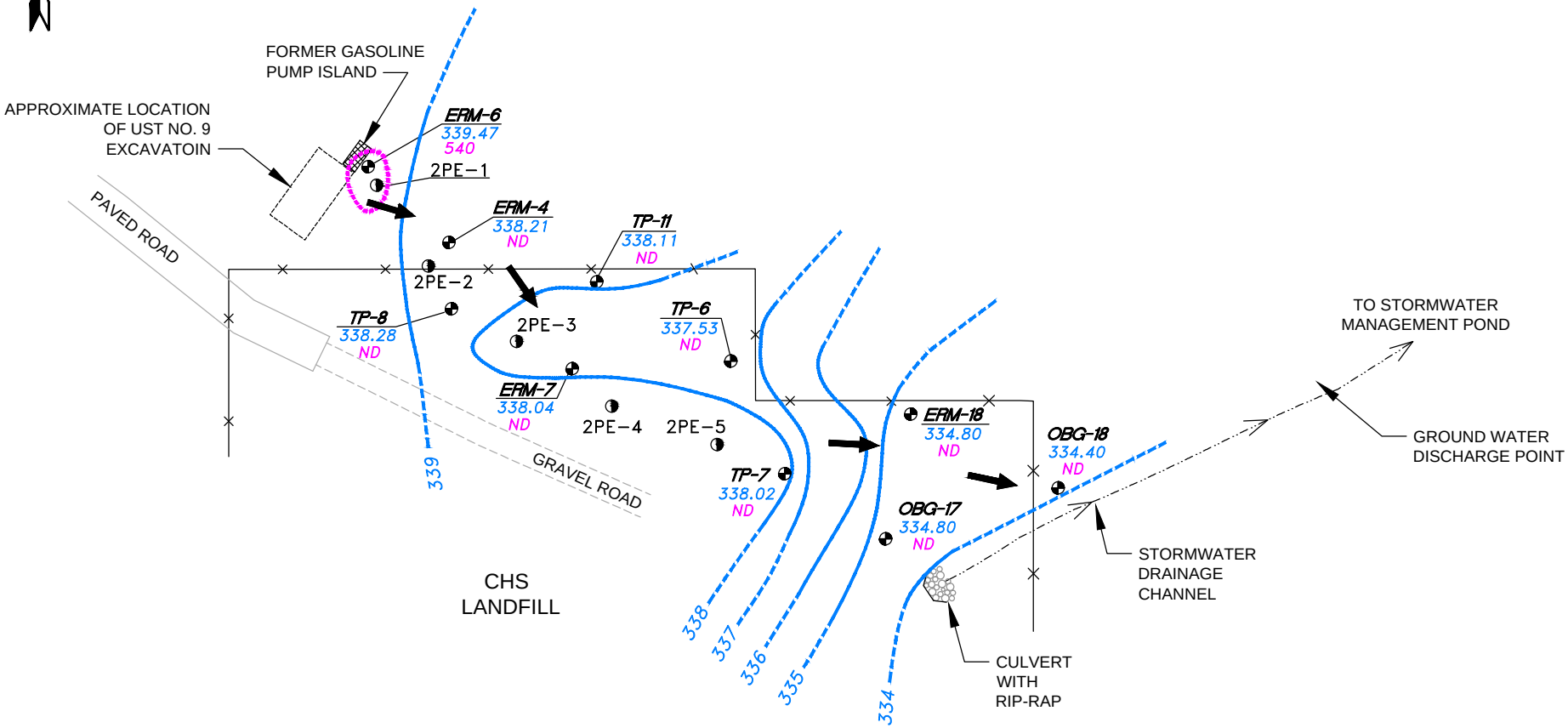
0 100 200
SCALE IN FEET

BASE MAP SOURCE:
ERM, INC., DECEMBER 2012 REPORT

TETRA TECH

2204275015A.DWG

FIGURE 2
GROUNDWATER CONDITIONS
OCTOBER 2014
UST NO. 9
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

2PE-1	2-PHASE WELL LOCATION
ERM-4	POST-TERMINATION MONITORING WELL LOCATION
	FENCE
338.07	GROUNDWATER ELEVATION (FEET)
338	GROUNDWATER ELEVATION CONTOUR (FEET) (DASHED WHERE INFERRED)
	GROUNDWATER FLOW DIRECTION
540	TOTAL BTEXT CONCENTRATION (ug/L) 0CTOBER 2014
	APPROXIMATE TOTAL BTEX 5.0 ug/L
ND	NON-DETECT

0 100 200

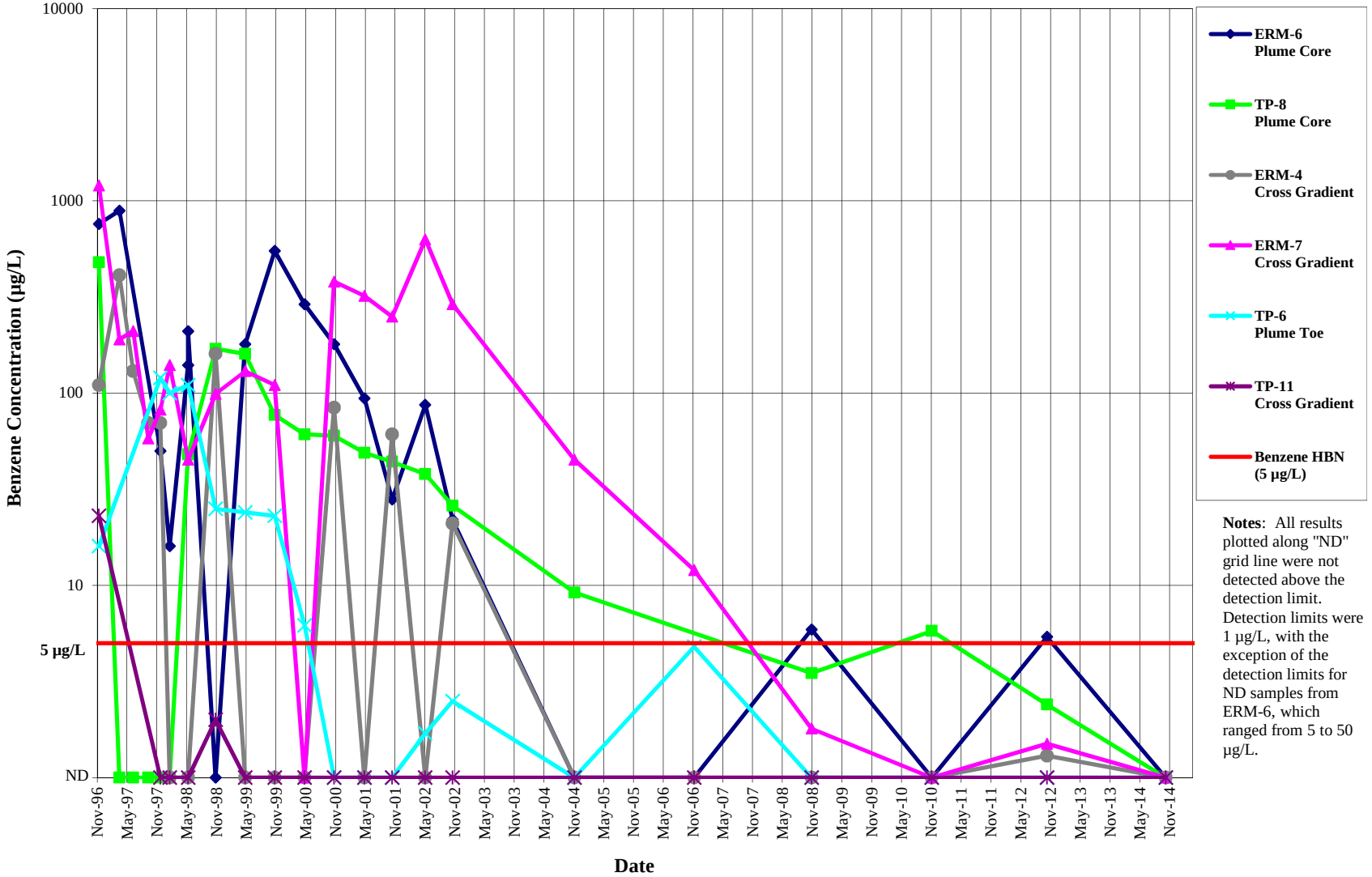
SCALE IN FEET

BASE MAP SOURCE:

ERM, INC., DECEMBER 2012 REPORT

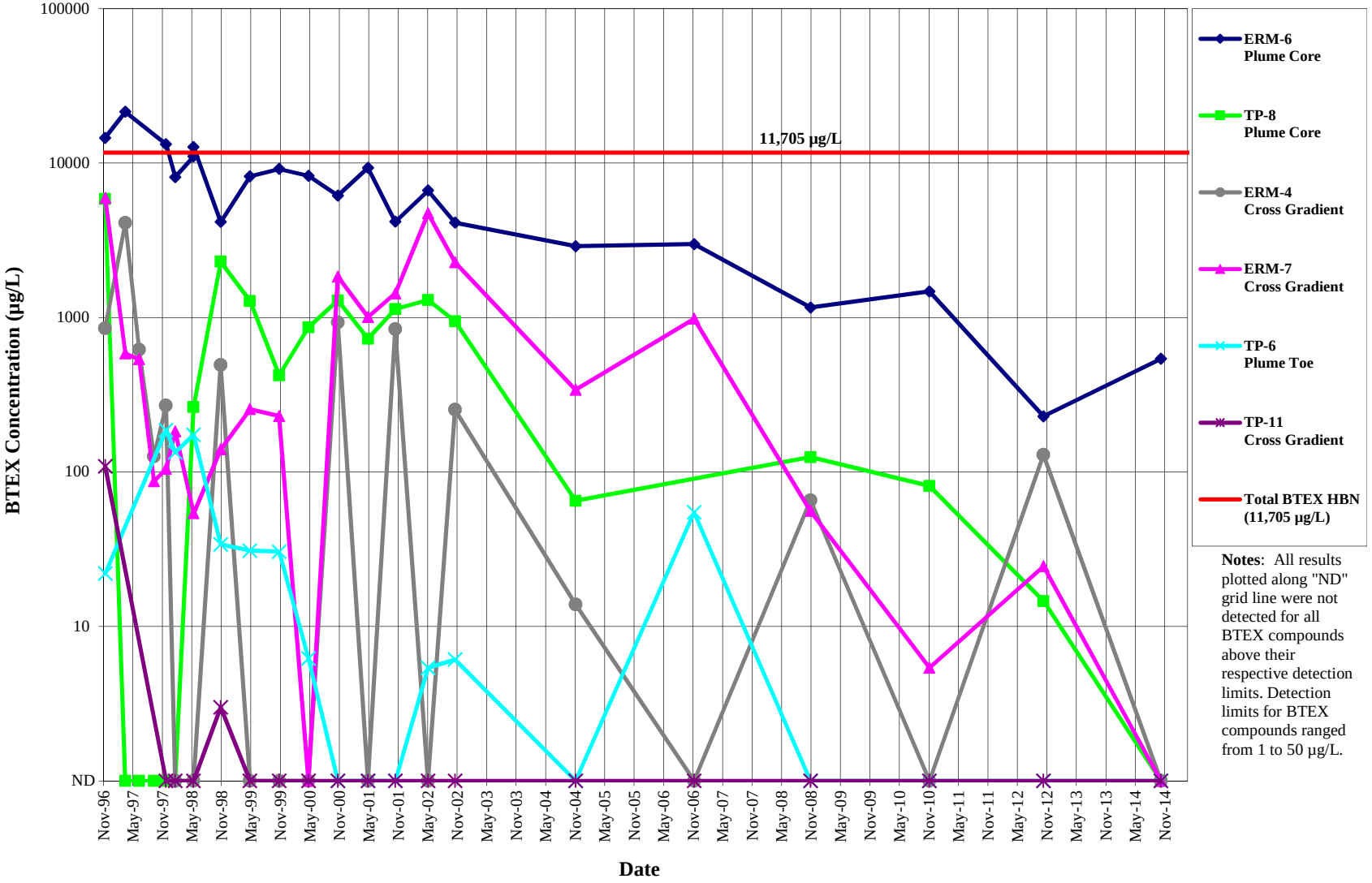
TETRA TECH

Figure 3
Benzene Concentrations
UST No. 9
Former Appliance Park East Facility
Columbia, Maryland



Notes: All results plotted along "ND" grid line were not detected above the detection limit. Detection limits were 1 µg/L, with the exception of the detection limits for ND samples from ERM-6, which ranged from 5 to 50 µg/L.

Figure 4
BTEX Concentrations
UST No. 9
Former Appliance Park East Facility
Columbia, Maryland



Notes: All results plotted along "ND" grid line were not detected for all BTEX compounds above their respective detection limits. Detection limits for BTEX compounds ranged from 1 to 50 µg/L.

Table 1
Summary of Ground Water Elevations in Monitoring Wells at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	Reference Elevation (feet)	Re-Survey Reference Elevation (a), (b) (feet)	1/20/1998		5/14/1998		10/29/1998		4/29/1999		10/28/1999		4/27/2000		10/26/2000	
			Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)
ERM-4	359.96	--	22.00	337.96	18.29	341.67	21.57	338.39	21.53	338.43	21.37	338.59	20.15	339.81	21.51	338.45
ERM-6	360.62	--	22.39	338.23	18.67	341.95	21.92	338.70	21.9	338.72	21.68	338.94	20.64	339.98	21.85	338.77
ERM-7	366.30	--	28.54	337.76	24.95	341.35	28.21	338.09	28.1	338.20	27.93	338.37	26.70	339.60	28.18	338.12
ERM-18	351.10	--	16.75	334.35	13.78	337.32	16.72	334.38	16.24	334.86	16.02	335.08	14.72	336.38	16.54	334.56
TP-6	359.18	--	21.93	337.25	18.42	340.76	21.53	337.65	21.44	337.74	21.27	337.91	20.05	339.13	21.44	337.74
TP-7	360.60	360.83	23.60	337.00	20.02	340.58	27.71	332.89	23.04	337.56	22.8	337.80	21.59	339.01	23.16	337.67
TP-8	362.14	361.82	24.27	337.87	20.64	341.50	23.8	338.34	23.81	338.33	23.65	338.49	22.44	339.70	23.75	338.39
TP-11	364.51	--	26.72	337.79	23.09	341.42	26.33	338.18	26.25	338.26	26.03	338.48	24.88	339.63	26.27	338.24
OBG-17	351.96	--	17.76	334.20	14.20	337.76	17.50	334.46	17.20	334.76	17.13	334.83	15.57	336.39	17.40	334.56
OBG-18	349.14	--	12.27	336.87	11.29	337.85	15.45	333.69	12.25	336.89	12.25	336.89	11.14	338.00	14.30	334.84

(a) The stickup for TP-7 was damaged during site maintenance. It has been repaired and re-surveyed. The correct survey elevation is 360.83 feet as of October 2000.
(b) The stickup for TP-8 was damaged during site maintenance in October 2006. It was been repaired and re-surveyed in February 2007. Elevation is 361.82.
(c) ERM-4 could not be gauged on 10/22/2014 as the manhole cover was under 6 inches of rainwater. The well was gauged on 10/30/2014.
NM - Not Measured

Table 1
Summary of Ground Water Elevations in Monitoring Wells at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	Reference Elevation (feet)	Re-Survey Reference Elevation (a), (b) (feet)	5/1/2001		10/18/2001		5/9/2002		10/24/2002		11/10/2004		10/30/2006		11/7/2008	
			Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)
ERM-4	359.96	--	21.24	338.72	22.34	337.62	22.76	337.20	23.25	336.71	21.02	338.94	NM	--	22.65	337.31
ERM-6	360.62	--	21.66	338.96	22.73	337.89	23.15	337.47	23.45	337.17	21.37	339.25	22.03	338.59	23.05	337.57
ERM-7	366.30	--	27.76	338.54	28.90	337.40	29.33	336.97	29.81	336.49	27.53	338.77	28.23	338.07	29.15	337.15
ERM-18	351.10	--	15.91	335.19	17.33	333.77	17.30	333.80	17.98	333.12	15.98	335.12	16.41	334.69	17.37	333.73
TP-6	359.18	--	21.10	338.08	22.29	336.89	22.63	336.55	23.16	336.02	21.02	338.16	21.58	337.60	22.53	336.65
TP-7	360.60	360.83	22.82	338.01	24.10	336.73	24.44	336.39	24.99	335.84	22.81	338.02	23.29	337.54	24.32	336.51
TP-8	362.14	361.82	23.48	338.66	24.61	337.53	25.00	337.14	25.53	336.61	23.25	338.89	23.94	338.20	24.50	337.32
TP-11	364.51	--	29.99	334.52	27.16	337.35	27.57	336.94	27.82	336.69	25.90	338.61	26.42	338.09	27.28	337.23
OBG-17	351.96	--	16.77	335.19	18.25	333.71	18.14	333.82	18.77	333.19	16.63	335.33	17.15	334.81	18.18	333.78
OBG-18	349.14	--	12.32	336.82	15.39	333.75	12.99	336.15	14.59	334.55	14.33	334.81	13.12	336.02	15.42	333.72

Table 1
Summary of Ground Water Elevations in Monitoring Wells at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	Reference Elevation (feet)	Re-Survey Reference Elevation (a), (b) (feet)	11/15/2010		10/23/2012		10/22/2014 (c)	
			Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)	Depth to Ground Water (feet)	Ground Water Elevation (feet)
ERM-4	359.96	--	21.68	338.28	22.67	337.29	21.75	338.21
ERM-6	360.62	--	22.12	338.50	23.06	337.56	21.15	339.47
ERM-7	366.30	--	28.21	338.09	29.17	337.13	28.26	338.04
ERM-18	351.10	--	16.30	334.80	17.40	333.70	16.30	334.80
TP-6	359.18	--	21.67	337.51	22.56	336.62	21.65	337.53
TP-7	360.60	360.83	23.45	337.38	23.47	337.36	22.81	338.02
TP-8	362.14	361.82	23.55	338.27	24.48	337.34	23.54	338.28
TP-11	364.51	--	26.43	338.08	27.31	337.20	26.40	338.11
OBG-17	351.96	--	17.15	334.81	18.23	333.73	17.16	334.80
OBG-18	349.14	--	13.58	335.56	15.96	333.18	14.74	334.40

Table 2
Summary of Analytical Results for Ground Water Samples at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	ERM-4																						
Analytes (ug/L)	**11/11/96**	**3/17/97**	**6/10/97**	**9/10/97**	**11/24/97**	**1/20/98**	**5/14/98**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/30/14**
Benzene	**110**	**410**	**130**	**70**	**70**	< 1	< 1	**160**	<1	<1	<1	**84**	<1	**61**	<1	**21**	**<1**	<1	<1	<1	**1.3**	<1
Toluene	**510**	**1,800**	**170**	**4**	**67**	< 1	< 1	**100**	<1	<1	<1	**370**	<1	**300**	<1	**94**	**6.2**	<1	**6.7**	<1	**2.9**	<1
Ethylbenzene	**42**	**400**	**71**	**23**	**23**	< 1	< 1	**74**	<1	<1	<1	**96**	<1	**130**	<1	**46**	**1.9**	<1	**13**	<1	**42**	<1
Xylene	**190**	**1,500**	**250**	**29**	**110**	< 3	< 3	**160**	<3	<3	<3	**380**	<3	**350**	<3	**92**	**5.8**	<3	**46**	<3	**83**	<3
MTBE	**7**	**30**	**18**	**3**	**7**	< 1	< 1	<5	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	**4.0**	<1
Field Measurements																							
pH (standard units)	---	---	---	---	---	5.29	5.39	5.2	5.45	5.62	5.39	5.34	5.30	5.40	6.29	5.54	6.36	5.71	6.44	5.41	5.86	5.08
Conductivity*	---	---	---	---	---	116	90	218	105	114	122	187	115	251	137	280	188	162	203	183	210	200
Temperature (Celsius)	---	---	---	---	---	11.9	14.2	15.8	16.2	17.4	12.0	15.4	14.3	13.7	16.3	12.9	15.0	16.8	17.9	15.2	16.3	14.28

Well ID	ERM-6																						
Analytes (ug/L)	**11/11/96**	**3/17/97**	**6/10/97**	**9/10/97**	**11/24/97**	**1/20/98**	**5/14/98**	**5/14/98 PE**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	**760**	**890**	NS	NS	**50**	**16**	**140**	**210**	<50	**180**	**550**	**290**	**180**	**94**	**28**	**87**	**22**	<10	<10	**5.9**	<5	**5.4**	<1
Toluene	**6,600**	**17,000**	NS	NS	**4,300**	**1,600**	**2,100**	**2,800**	**260**	**820**	**720**	**690**	**590**	**550**	**390**	**460**	**220**	**360**	**210**	**65**	**38**	**6**	**4.6**
Ethylbenzene	**1,400**	**2,300**	NS	NS	**1,300**	**1,000**	**1,500**	**1,500**	**1,200**	**1,600**	**1,700**	**1,600**	**1,200**	**1,700**	**960**	**1,500**	**870**	**640**	**680**	**260**	**340**	**48**	**167**
Xylene	**5,800**	**1,300**	NS	NS	**7,600**	**5,500**	**7,300**	**8,200**	**2,700**	**5,600**	**6,200**	**5,700**	**4,200**	**7,000**	**2,800**	**4,600**	**3,000**	**1,900**	**2,100**	**830**	**1,100**	**170**	**368**
MTBE	**1,100**	**80**	NS	NS	**9**	**7**	< 50	< 50	<10	<50	<50	<50	<50	<50	<5	**90**	<5	15	<20	**12**	<20	**6**	<1
Field Measurements																							
pH (standard units)	---	---	---	---	---	5.89	6.50	---	6.45	6.51	6.56	6.38	6.54	6.37	7.70	6.97	5.91	7.22	6.46	6.33	5.97	6.11	6.44
Conductivity*	---	---	---	---	---	315	300	---	333	466	528	563	445	505	520	433	617	471	511	462	360	435	312
Temperature (Celsius)	---	---	---	---	---	12.9	14.8	---	16.4	14.7	16.5	13.1	16.2	15.2	15.2	16.1	14	15.5	17.1	18.2	15.8	17.4	15.36

Well ID	ERM-7																						
Analytes (ug/L)	**11/12/96**	**3/17/97**	**6/10/97**	**9/10/97**	**11/24/97**	**1/20/98**	**5/14/98**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	**1,200**	**190**	**210**	**58**	**82**	**140**	**45**	**99**	**130**	**110**	<1	**380**	**320**	**250**	**630**	**290**	**45**	**12**	**1.8**	<1	**1.5**	<1
Toluene	**2,300**	**110**	**110**	**5**	**3**	**7**	**1**	**4**	**17**	**13**	<1	**440**	**68**	**320**	**1,300**	**330**	**37**	**300**	**1.1**	<1	<1	<1
Ethylbenzene	**540**	**76**	**68**	**13**	**15**	**36**	**8**	**26**	**89**	**85**	<1	**490**	**360**	**350**	**1,000**	**870**	**160**	**270**	**53**	**5**	**23**	<1
Xylene	**1,900**	**210**	**150**	**11**	**5**	< 20	< 3	**11**	**19**	**22**	<3	**530**	**260**	**510**	**1,800**	**790**	**98**	**400**	<3.0	<3.0	<3.0	<3
MTBE	**70**	**11**	**17**	**10**	**15**	**23**	**8**	<20	**22**	<20	<1	<50	<50	<1	**32**	<5	<2.0	<20.0	**1.6**	**1.1**	**1.7**	<1
Field Measurements																							
pH (standard units)	---	---	---	---	---	5.85	5.26	5.38	5.95	5.79	5.09	5.94	5.71	6.00	6.26	5.91	5.74	5.91	5.79	5.00	6.06	5.11
Conductivity*	---	---	---	---	---	363	190	374	353	327	39	217	279	229	306	419	168	156	129	168	169	128
Temperature (Celsius)	---	---	---	---	---	11.7	14.3	13.6	14.2	13.6	12.3	14.0	14.9	15.2	13.9	12.27	13.4	14.9	16.6	14.8	15.03	13.64

Well ID	ERM-18																			
Analytes (ug/L)	**11/12/96**	**11/24/97**	**1/20/98**	**5/14/98**	**5/14/98 PE**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	**2**	< 1	**6**	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	< 1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	< 1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	<3	< 3	< 3	< 3	< 3	< 3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	**3**	**2**	**7**	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																				
pH (standard units)	---	---	5.65	5.88	---	5.58	5.75	5.79	5.77	5.58	5.92	5.20	5.64	5.5	5.36	5.73	5.45	5.57	5.48	5.46
Conductivity*	---	---	145	105	---	112	175	196	191	159	24.4	145	168	231	111	164.1	190	236	200	193
Temperature (Celsius)	---	---	11.4	13.9	---	15.8	12.8	16	11.1	15.4	12.4	16.4	13.7	13.2	12.4	15.9	17.7	15.8	17.1	15.69

Notes:

ug/L - micrograms per liter
MTBE - Methyl tertiary-butyl ether
* micromhos per second

< signifies not detected at the detection limit.
BMQL - Below Method Quantitation Limit

MCLs - Benzene 5 ug/L; Ethylbenzene 700 ug/L; Toluene 1,000 ug/L; Xylenes 10,000 ug/L.
(a) TP-170 is a blind field duplicate of TP-7

Analyses performed by Pace Analytical Services, Inc. by EPA Method SW 846-8260 starting in 2014. Analyses prior to 2014 performed by Lancaster Laboratories, Inc. using EPA Method SW 846-8021B.
ERM-4 sampled on 10/30/14 and not on10/22/14 when the other UST-9 monitoring wells were sampled due to its manhole cover being under 6 inches of rainwater on 10/22/14.

Table 2
Summary of Analytical Results for Ground Water Samples at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	TP-6																		
Analytes (ug/L)	**11/12/96**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	**16**	**120**	**100**	**110**	**25**	**24**	**23**	**6.2**	<1	<1	<1	**1.7**	**2.5**	<1	**4.8**	<1	<1	<1	<1
Toluene	**2**	**19**	**6**	**9**	**1**	BMQL	**1.1**	<1	<1	<1	<1	<1	**1.1**	<1	**3.0**	<1	<1	<1	<1
Ethylbenzene	**4**	**30**	**25**	**31**	**8**	**7**	**6.4**	<1	<1	<1	<1	**3.7**	**2.5**	<1	**33**	<1	<1	<1	<1
Xylene	<3	**18**	**3**	**24**	<3	BMQL	<3	<3	<3	<3	<3	<3	<3	<3	**14**	<3	<3	<3	<3
MTBE	**11**	**36**	**37**	**29**	**7**	**6**	**9.4**	**3.4**	**1.5**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																			
pH (standard units)	---	---	5.19	5.28	5.32	5.7	5.27	5.03	5.17	4.81	5.60	5.78	4.98	5.17	5.20	5.41	4.99	5.05	4.91
Conductivity*	---	---	207	130	122	169	179	163	131	249	202	324	385	179	218	184	173	338	284
Temperature (Celsius)	---	---	10.8	13.4	13	13.5	12.4	11.3	13.2	14.2	12.2	13.3	10.33	11.4	14.9	16.4	15.3	15.7	13.15

Well ID	TP-7 (a)																						
Analytes (ug/L)	**11/12/96**	**03/17/97**	**06/10/97**	**09/10/97**	**11/24/97**	**01/20/98**	**05/14/98**	**5/14/98 PE**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	**550**	**520**	**380**	**190**	**150**	**170/170**	**35/38**	< 1	**26/30**	**13/13**	**4.6/4.7**	**8.9/8.0**	**6.1/5.7**	**13/12**	**15/15**	**24/23**	**24/27**	**1.8/1.8**	**10/9.8**	**2.3/2.4**	<1/<1	<1<1	<1<1
Toluene	**150**	**32**	<1	**10**	**8**	**8/8**	**1/1**	< 1	BMQL/<1	BMQL/<1	<1/<1	<1/<1	<1/<1	<1/<1	<1/<1	**1.1/<1**	**1.1/1.1**	<1/<1	**3.1/3.0**	<1/<1	<1/<1	<1/<1	<1/<1
Ethylbenzene	**110**	**120**	**88**	**49**	**41**	**42/43**	**6/6**	< 1	**3/3**	BMQL/<1	<1/<1	**22/19**	**1.4/1.4**	**9.2/8.5**	**6.9/6.2**	**10/9.9**	**8/8.1**	<1/<1	**99/95**	**14/14**	<1/<1	**2.2/2.2**	<1/<1
Xylene	**130**	**70**	**15**	**5**	< 5	<10/<10	<3/<3	< 3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	**29/28**	<3/<3	<3/<3	<3/<3	<3/<3
MTBE	**77**	**48**	**35**	**21**	**20**	**21/22**	**4/<5**	< 1	**5/6**	**2/3**	**1.9/1.5**	**<1/1.8**	**2.1/2.1**	<5/<5	**1.6/1.5**	**3.4/3.7**	<5/<5	<1/<1	**<5/1.6**	<1/<1	<1/<1	<1/<1	<1/<1
Field Measurements																							
pH (standard units)	---	---	---	---	---	5.49	5.68	---	5.39	5.42	4.98	4.93	5.40	4.75	6.10	5.29	5.55	5.78	5.45	5.34	4.13	5.2	4.96
Conductivity*	---	---	---	---	---	120	120	---	108	149	94	98	125	118	117	166	226	112	89	106	73	78	77
Temperature (Celsius)	---	---	---	---	---	12.3	13.4	---	17.4	14.5	14.3	11.9	14.3	14	12.9	13.8	11.11	13.4	15.6	17.5	15.2	15.46	14.12

Well ID	TP-8																					
Analytes (ug/L)	**11/11/96**	**03/17/97**	**06/10/97**	**09/10/97**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	**480**	<1	<1	<1	< 1	< 1	**48**	**170**	**160**	**77**	**61**	**60**	**49**	**44**	**38**	**26**	**9.2**	NS	**3.5**	**5.8**	**2.4**	<1
Toluene	**2,500**	<1	<1	<1	< 1	< 1	**44**	**500**	**230**	**26**	**85**	**200**	**21**	**71**	**320**	**150**	**1.9**	NS	**2.2**	**2.5**	**1.3**	<1
Ethylbenzene	**570**	<1	<1	<1	< 1	< 1	**31**	**230**	**240**	**130**	**190**	**310**	**320**	**320**	**240**	**240**	**43**	NS	**47**	**31**	**4.5**	<1
Xylene	**2,300**	<3	<3	<3	< 3	< 3	**140**	**1,400**	**650**	**190**	**530**	**720**	**340**	**700**	**700**	**530**	**11**	NS	**72**	**42**	**6.4**	<3
MTBE	<200	<1	<1	<1	< 1	< 1	< 5	<50	<20	<10	<10	<10	<20	<1	<5	<1	<1	NS	**2.8**	**8.3**	**2.8**	<1
Field Measurements																						
pH (standard units)	---	---	---	---	---	5.28	5.09	4.97	5.36	5.07	5.13	5.21	5.16	5.90	5.76	5.59	5.92	--	5.58	5.66	6.11	5.54
Conductivity*	---	---	---	---	---	104	140	416	249	210	280	264	244	251	226	259	170	--	188	208	291	226
Temperature (Celsius)	---	---	---	---	---	12.6	14.5	14.6	14.4	14.1	12.9	14.3	18	14.5	14.5	11.83	13.6	--	17.0	15.0	17.2	13.83

Well ID	TP-11																		
Analytes (ug/L)	**11/12/96**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	**23**	< 1	< 1	< 1	**2**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	**51**	< 1	< 1	< 1	BMQL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	**6**	< 1	< 1	< 1	**1**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	**29**	< 3	< 3	< 3	BMQL	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	<1	< 1	< 1	< 1	BMQL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																			
pH (standard units)	---	---	5.02	5.58	4.97	5.36	3.94	5.05	4.93	4.87	5.70	5.42	4.91	5.62	5.17	5.06	4.85	5.05	5.18
Conductivity*	---	---	103	60	205	87	155	116	118	78	108	109	112	98	115	96	202	211	255
Temperature (Celsius)	---	---	12.6	13.4	13.6	13.6	13.9	10.9	14.4	13.7	12.3	13.7	11.5	12.8	15.6	17.4	14.7	16	13.0

Notes:

ug/L - micrograms per liter
MTBE - Methyl tertiary-butyl ether
BMQL - Below Method Quantitation Limit

< signifies not detected at the detection limit.
* micromhos per second.
(a) TP-170 is a blind field duplicate of TP-7.

MCLs - Benzene 5 ug/L; Ethylbenzene 700 ug/L; Toluene 1,000 ug/L; Xylenes 10,000 ug/L.
NS - TP-8 casing was damaged and not sampled on 11/16/06.

Analyses performed by Pace Analytical Services, Inc. by EPA Method SW 846-8260 starting in 2014. Analyses prior to 2014 performed by Lancaster Laboratories, Inc. using EPA Method SW 846-8021B.

Table 2
Summary of Analytical Results for Ground Water Samples at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	OBG-17																		
Analytes (ug/L)	**11/11/96**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	<3	< 3	< 3	< 3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																			
pH (standard units)	---	---	5.21	5.34	5.02	5.56	5.70	5.21	5.18	5.37	6.00	5.60	5.28	5.92	5.12	5.51	5.66	6.19	6.09
Conductivity*	---	---	291	440	542	336	321	654	440	355	217	208	214	588	638	655	741	649	839
Temperature (Celsius)	---	---	12.2	13.1	17.9	13.0	15.7	10.6	15.6	15.1	14.1	14.7	13.83	15.2	15.8	18.6	15.5	16.3	14.99

Well ID	OBG-18																			
Analytes (ug/L)	**11/12/96**	**11/24/97**	**01/20/98**	**05/14/98**	**5/14/98 PE**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	<3	< 3	< 3	< 3	< 3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																				
pH (standard units)	---	---	5.42	5.22	---	4.95	5.38	5.35	5.41	5.61	5.60	6.00	5.93	5.4	6.71	6.05	5.93	5.67	6.13	6.33
Conductivity*	---	---	223	240	---	287	317	293	199	190	222	153	149	168	260	161	221	287	300	284
Temperature (Celsius)	---	---	9.2	15.1	---	17	14.3	17.1	10.8	16.7	12.3	17.4	13.5	14.2	12.8	16.8	18.8	16.9	18.32	16.56

Purge Water Sample	Drum S-1											
Analytes (ug/L)	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**
Benzene	87	48	79	13	8.3	13.4	7.2	6.5	1.3	1.9	1.8	<1
Toluene	200	160	150	150	76	69	220	280	35	16	3.1	3.2
Ethylbenzene	410	330	270	320	270	272	320	370	180	130	38	111
Xylene	1,600	1,200	900	970	940	917	920	890	460	350	130	258
MTBE	---	---	---	---	---	---	---	<10	---	---	---	---

Notes:

ug/L - micrograms per liter
MTBE - Methyl tertiary-butyl ether
BMQL - Below Method Quantitation Limit

< signifies not detected at the detection limit.
* micromhos per second.
(a) TP-170 is a blind field duplicate of TP-7.

MCLs - Benzene 5 ug/L; Ethylbenzene 700 ug/L; Toluene 1,000 ug/L; Xylenes 10,000 ug/L.
NS - TP-8 casing was damaged and not sampled on 11/16/06.

Analyses performed by Pace Analytical Services, Inc. by EPA Method SW 846-8260 starting in 2014. Analyses prior to 2014 performed by Lancaster Laboratories, Inc. using EPA Method SW 846-8021B.

ATTACHMENT 2

To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

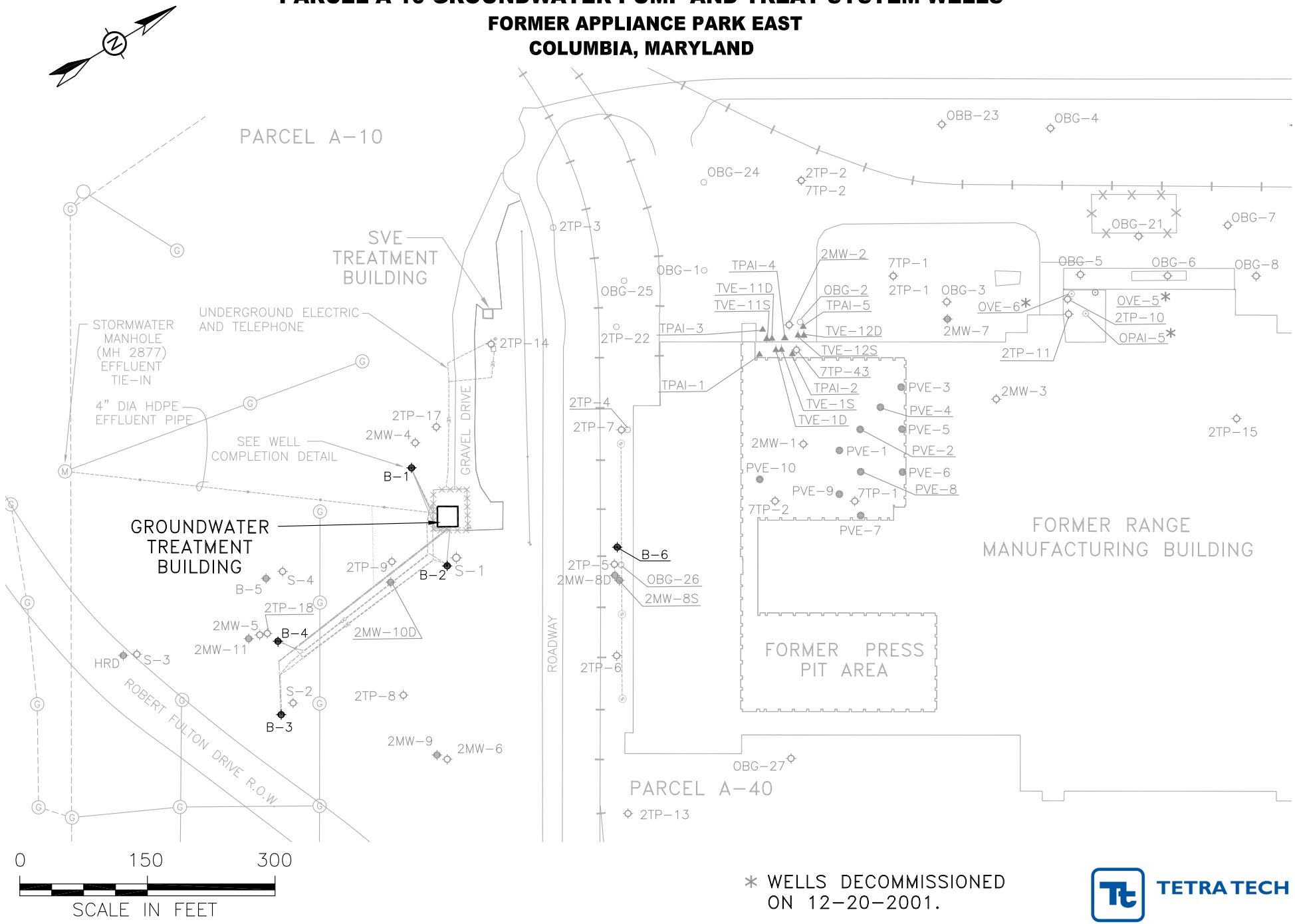
General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period 1 January 2015 to 30 June 2015

Findings Summary for Groundwater for RFI Units 2 and 7

2204275008A.DWG

FIGURE 1
PARCEL A-10 GROUNDWATER PUMP AND TREAT SYSTEM WELLS
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



* WELLS DECOMMISSIONED ON 12-20-2001.

TETRA TECH

Figure 2
Groundwater Pump-and-Treat System Recovery
Former Appliance Park East Facility, Columbia, Maryland

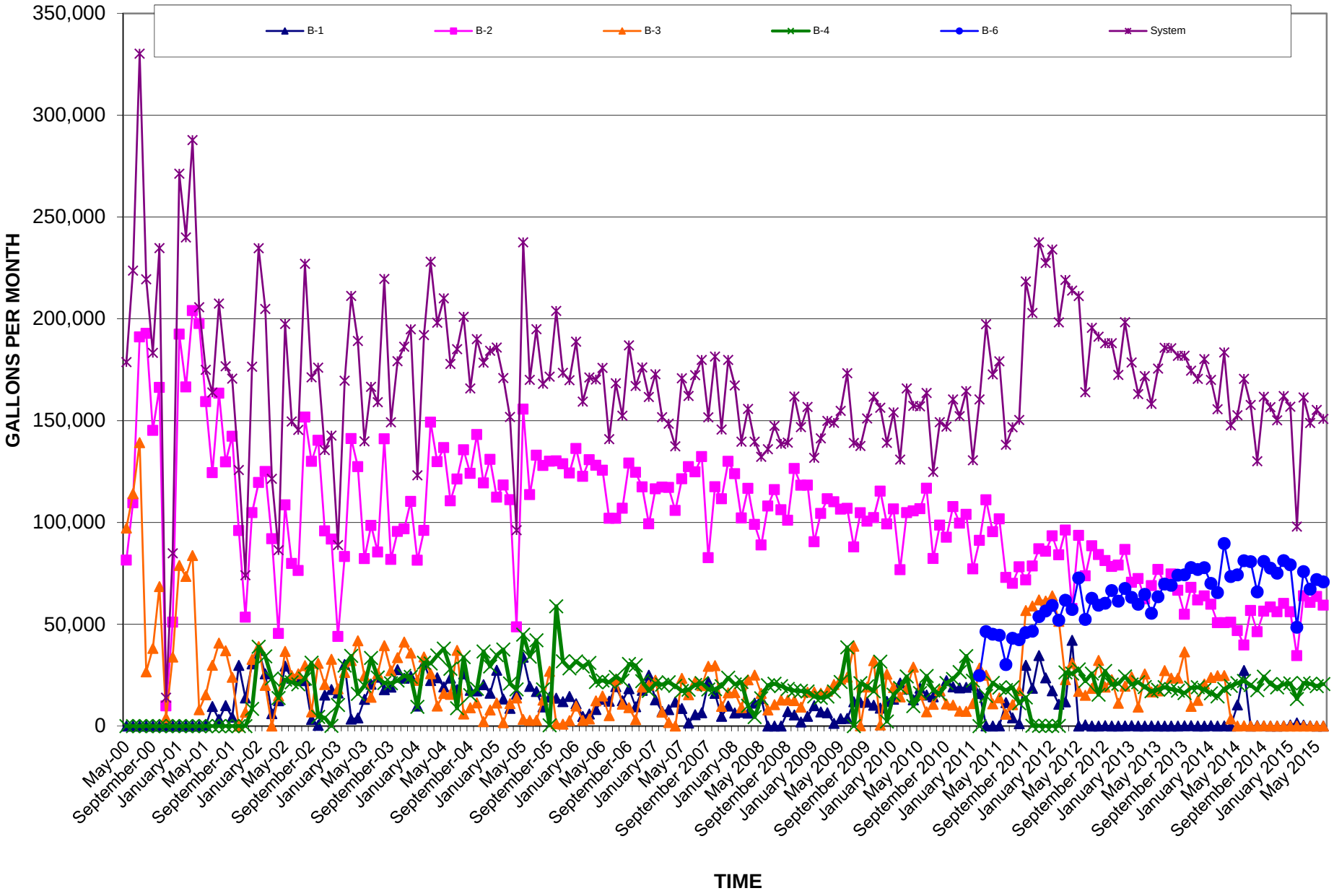


Figure 3
Groundwater Pump-and-Treat System Recovery - Trailing 12-Month Total Gallons
Former Appliance Park East Facility, Columbia, Maryland

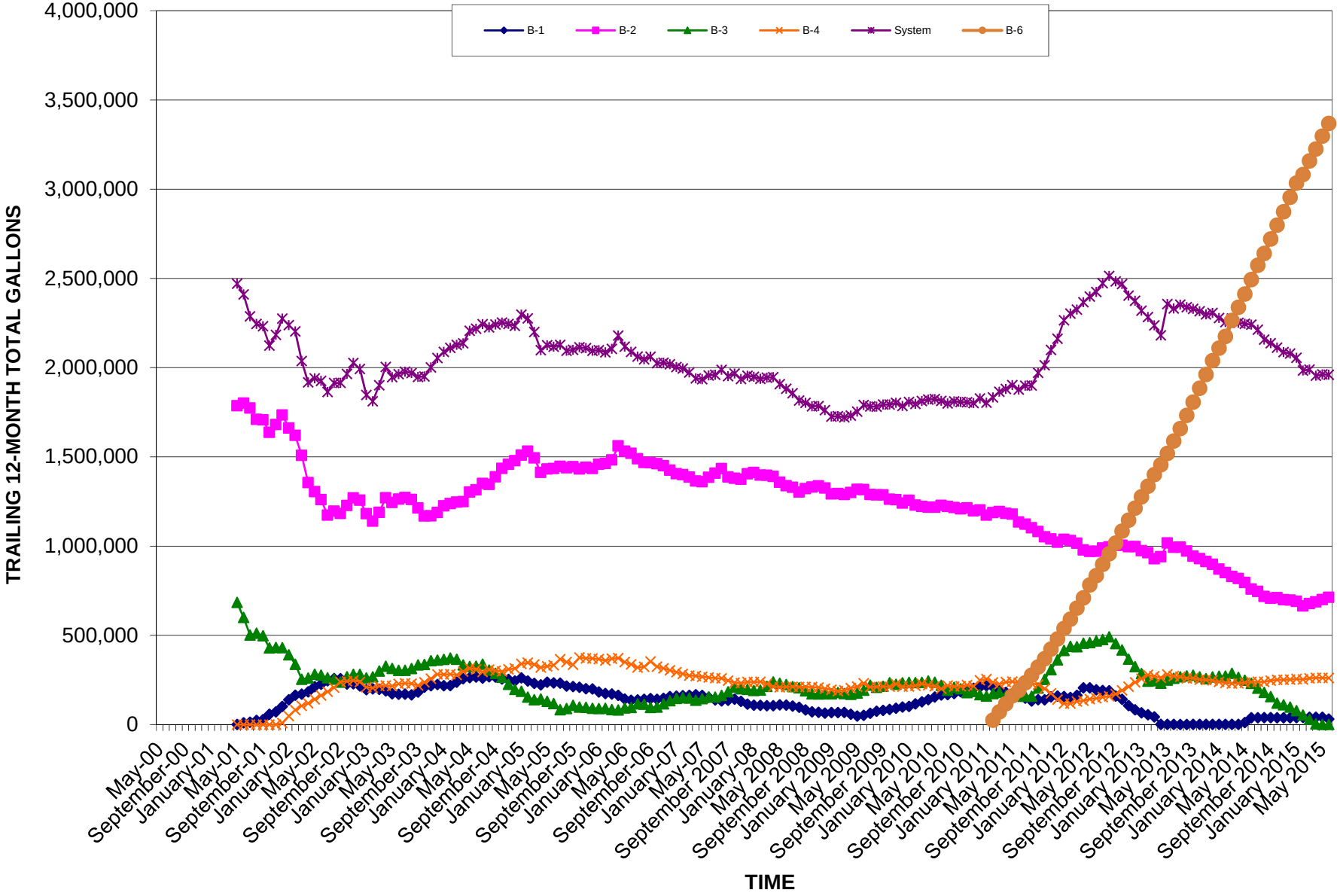
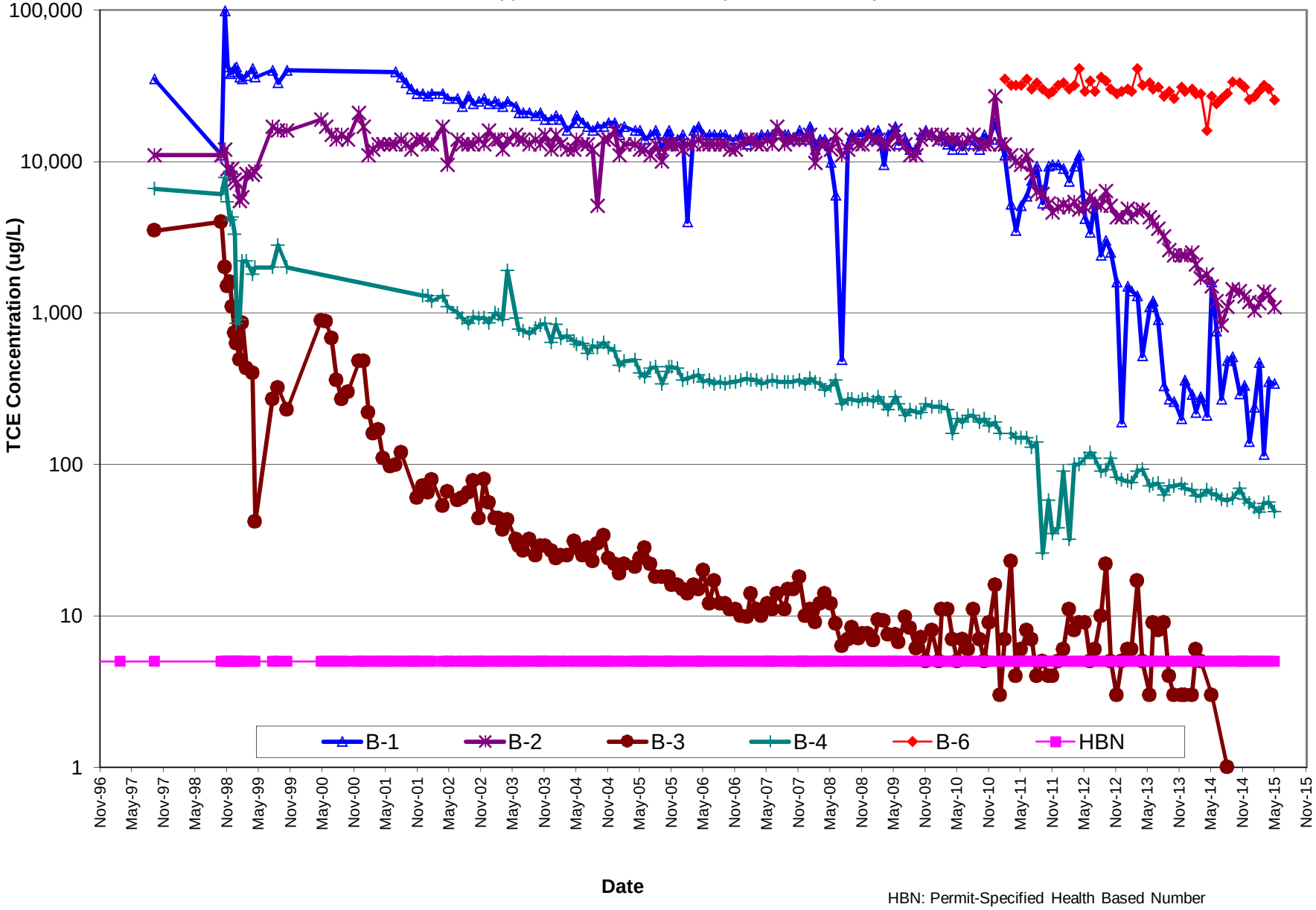
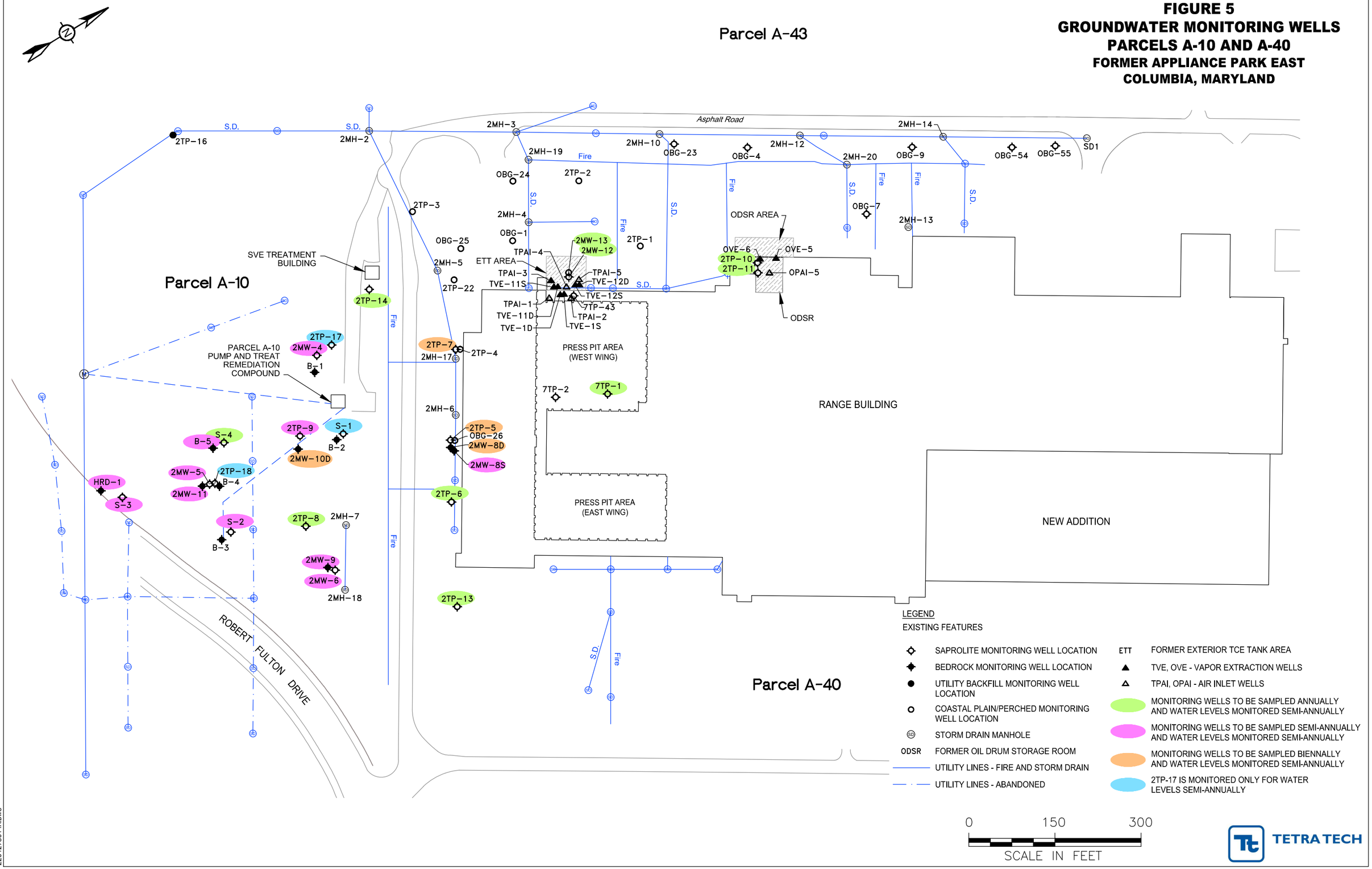


Figure 4
TCE Concentrations in Groundwater Recovery Wells
Former Appliance Park East Facility, Columbia, Maryland



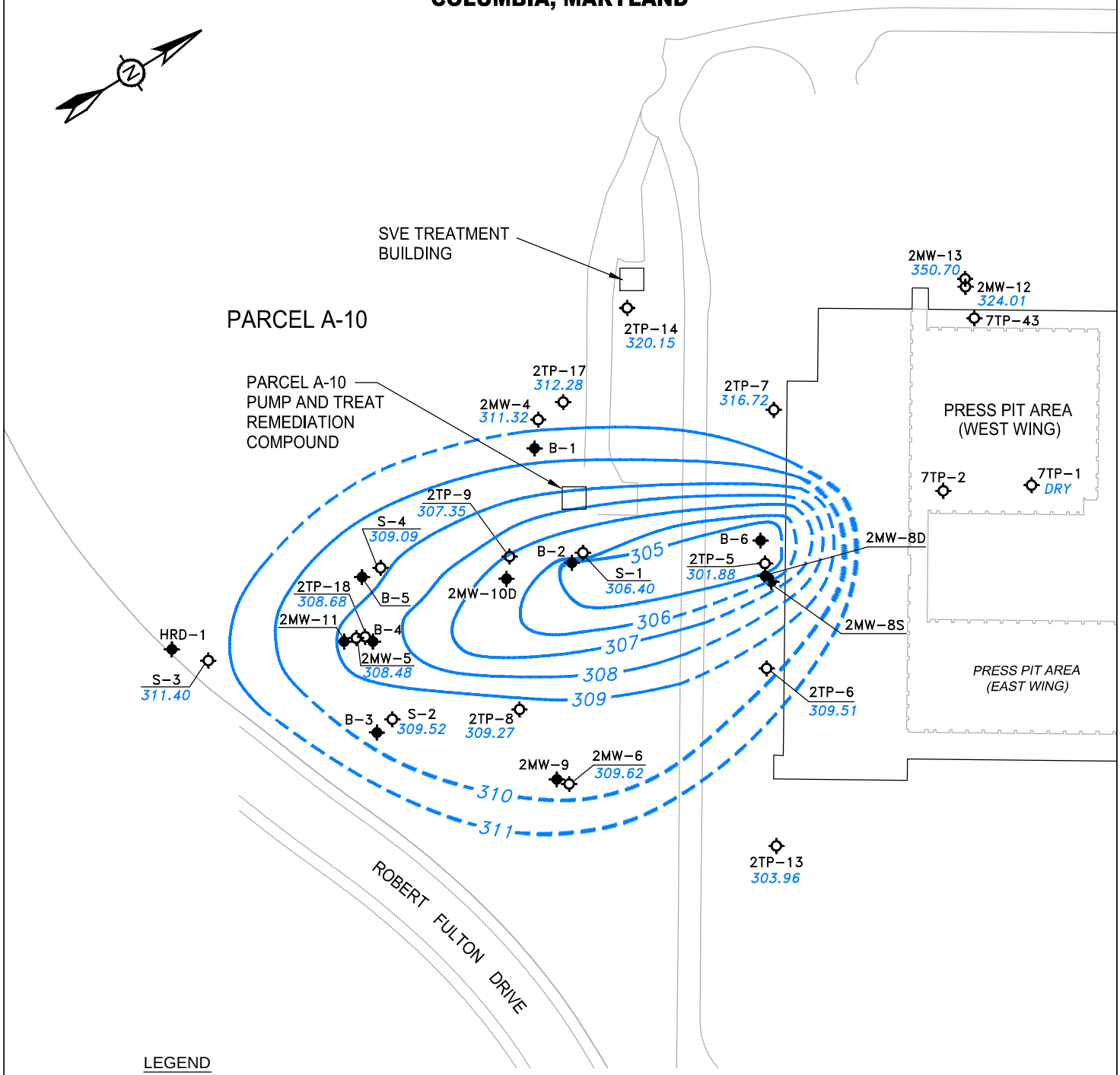
HBN: Permit-Specified Health Based Number

FIGURE 5
GROUNDWATER MONITORING WELLS
PARCELS A-10 AND A-40
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



2204275014A.DWG

FIGURE 6
HYDRAULIC HEADS FOR PARCEL A-10 SAPROLITE WELLS
MAY 8, 2015
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

- SAPROLITE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- 305.32 GROUNDWATER ELEVATION (FEET)
- 309 GROUNDWATER ELEVATION CONTOUR (FEET) (DASHED WHERE INFERRED)

NOTES:

1. 2MW-13 IS A COASTAL PLAIN/PERCHED GROUNDWATER MONITORING WELL.
2. GROUNDWATER ELEVATIONS FOR 2MW-5 AND 2TP-13 WERE NOT USED TO DEVELOP GROUNDWATER ELEVATION CONTOURS.

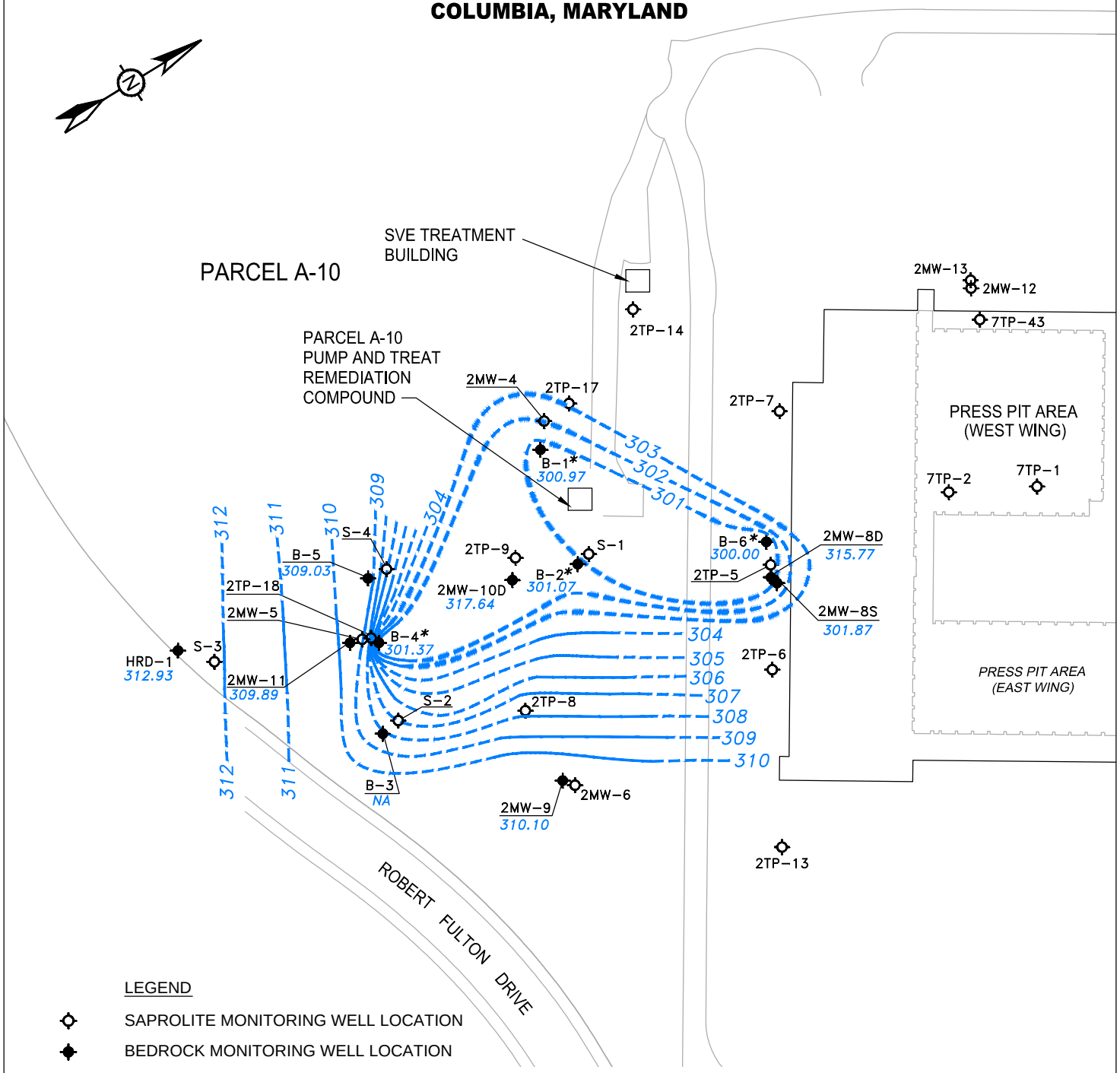
0 150 300

SCALE IN FEET

TETRA TECH

2204275017A.DWG

FIGURE 7
HYDRAULIC HEADS FOR PARCEL A-10 BEDROCK WELLS
MAY 8, 2015
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

- SAPROLITE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- 309.86 — GROUNDWATER ELEVATION (FEET)
- 309 — GROUNDWATER ELEVATION CONTOUR (FEET) (DASHED WHERE INFERRED)
- * — HYDRAULIC HEAD IS THE LOWER SET POINT FOR THE EXTRACTION WELLS
- NA — GROUNDWATER ELEVATION NOT AVAILABLE; SEE NOTE 3

NOTES:

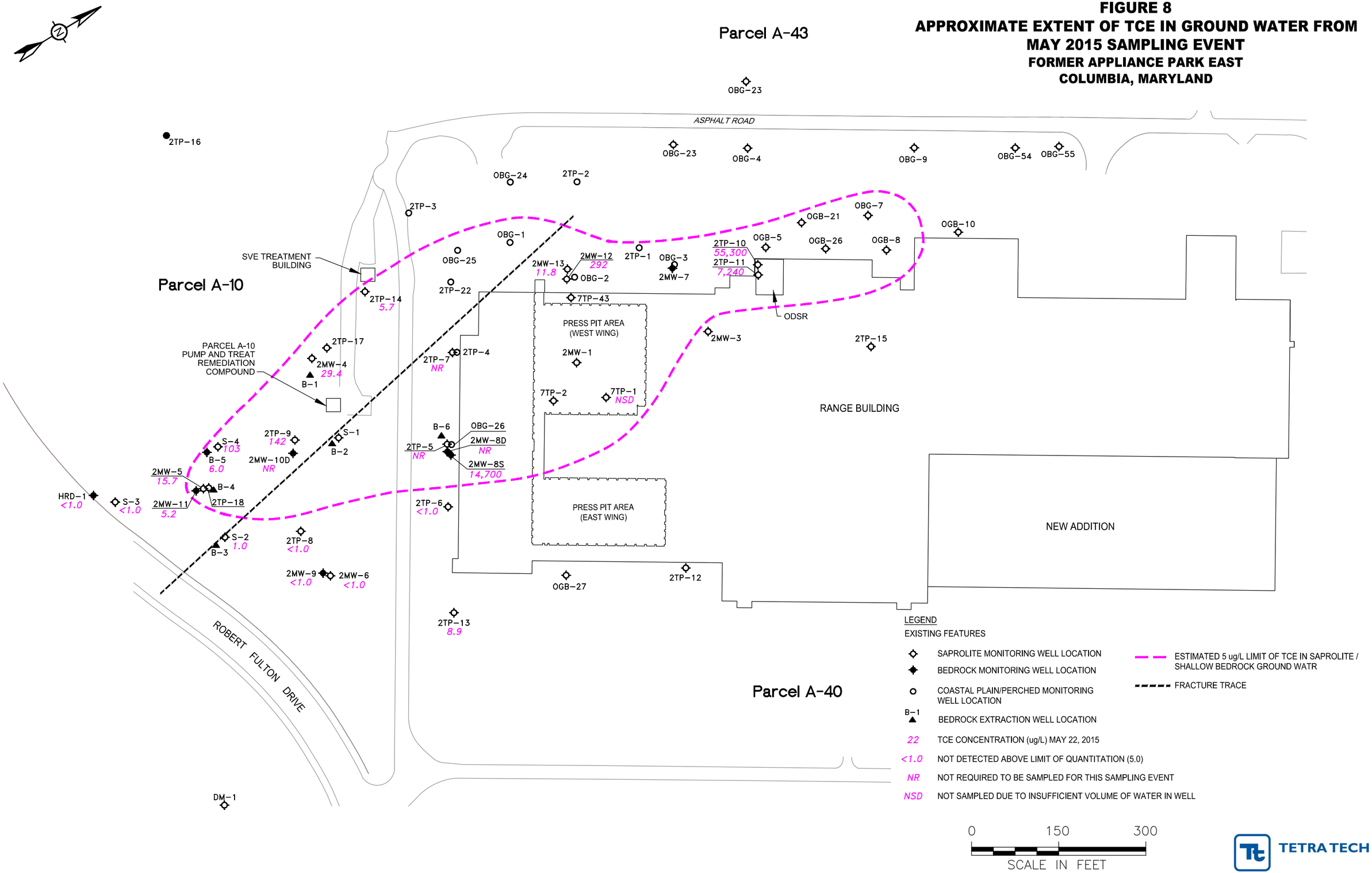
1. 2MW-13 IS A COASTAL PLAIN/PERCHED GROUNDWATER MONITORING WELL.
2. GROUNDWATER ELEVATIONS FOR 2MW-8D AND 2MW-10D WERE NOT USED TO DEVELOP GROUNDWATER ELEVATION CONTOURS.
3. B-3 WAS TURNED OFF DURING THE WATER LEVEL GAUGING EVENT, AND A WATER LEVEL WAS NOT COLLECTED; THEREFORE A GROUNDWATER ELEVATION FOR B-3 IS NOT AVAILABLE.

0 150 300
SCALE IN FEET

TETRA TECH

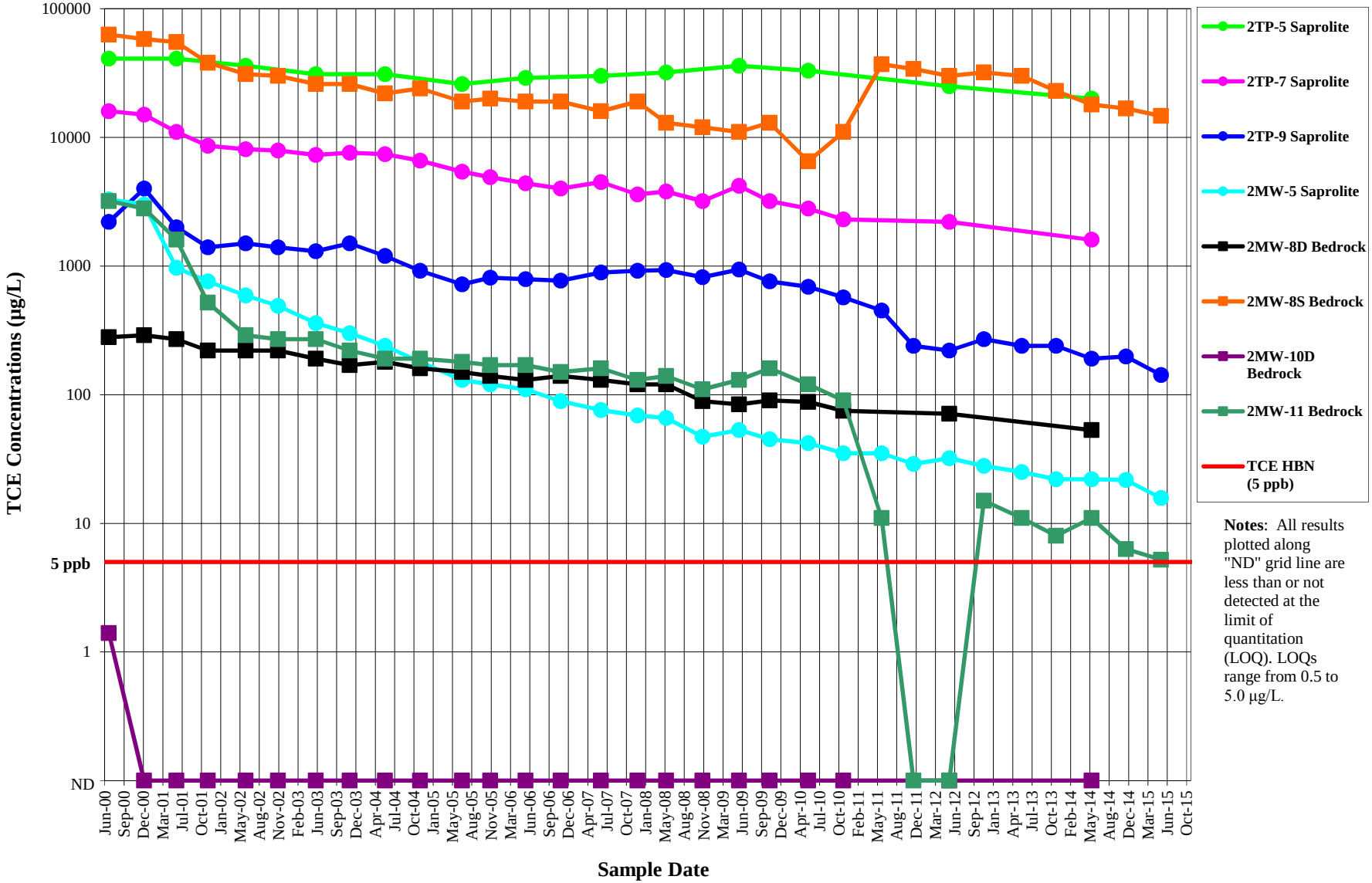
2204275018A.DWG

FIGURE 8
APPROXIMATE EXTENT OF TCE IN GROUND WATER FROM MAY 2015 SAMPLING EVENT
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



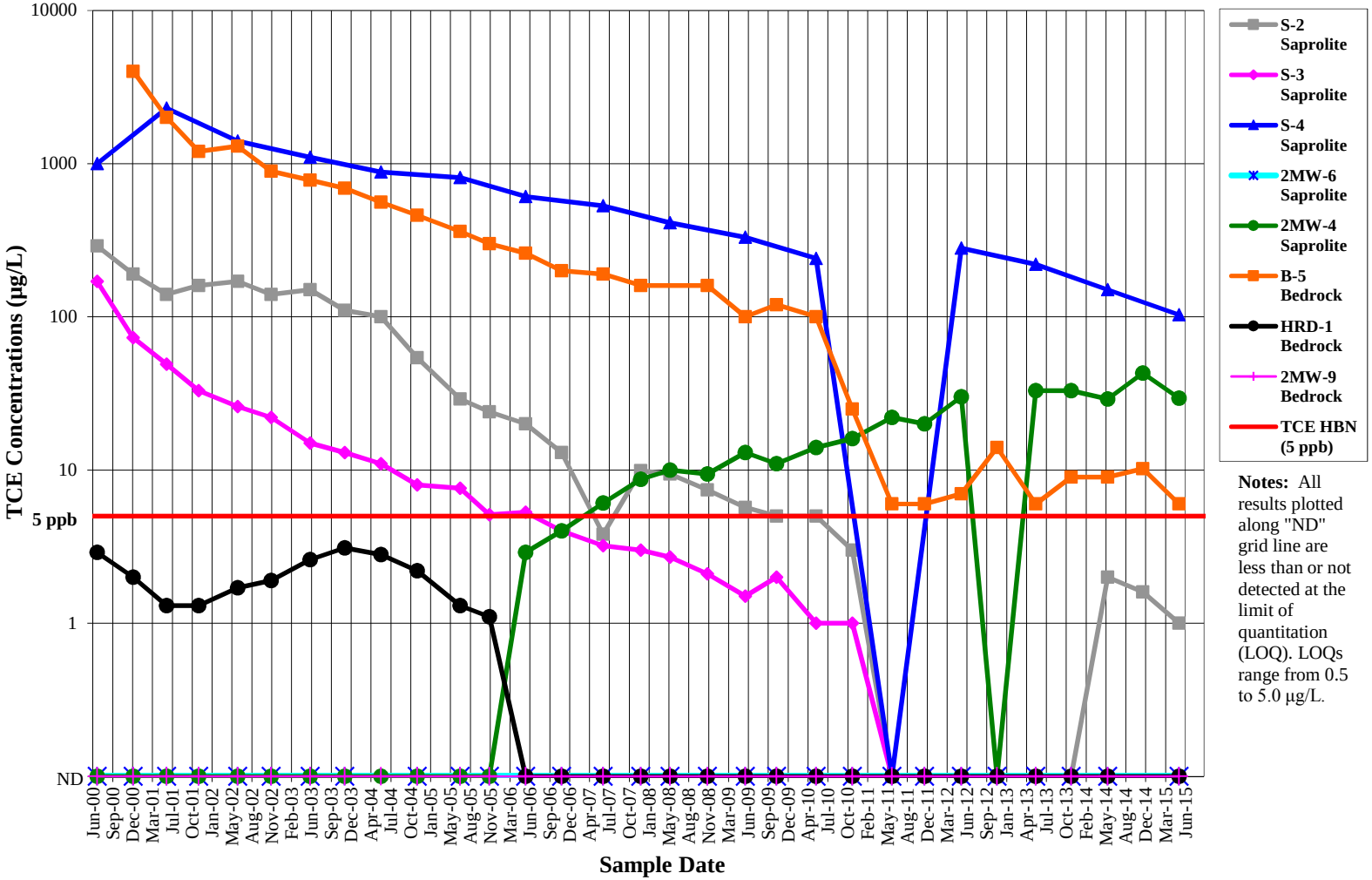
22042750230A.DWG

Figure 9
TCE Concentrations within Plume Core
Former Appliance Park East Facility
Columbia, Maryland



Notes: All results plotted along "ND" grid line are less than or not detected at the limit of quantitation (LOQ). LOQs range from 0.5 to 5.0 µg/L.

Figure 10
TCE Concentrations at Plume Toe and Cross-Gradient
Former Appliance Park East Facility
Columbia, Maryland



Notes: All results plotted along "ND" grid line are less than or not detected at the limit of quantitation (LOQ). LOQs range from 0.5 to 5.0 µg/L.

TABLE 1
Groundwater Elevations for Monitoring Wells at CMS Units 2 and 7
May 8, 2015
Former Appliance Park East Facility, Columbia, Maryland

Well ID	Interpreted Lithology	Reference Point Elevation (ft > MSL)	Well Depth (ft BGS)	Well Screen Length (ft)	Well Screen Top (ft BGS)	Well Screen Bottom (ft BGS)	Screen Top Elevation (ft > MSL)	Screen Bottom Elevation (ft > MSL)	Sampling Frequency**	Water Level Monitoring Frequency	Depth to Water on May 8, 2015 (ft BRE)	Groundwater Elevation on May 8, 2015 (ft > MSL)
SAPROLITE / WATER TABLE												
7TP-1	Saprolite	345.76	24	20	4	24	342	322	Annually	Semi-Annually	Dry	Dry
2TP-5	Saprolite	358.02	63	15	48	63	308.38	293.38	Biennially	Semi-Annually	56.14	301.88
2TP-6	Saprolite	358.79	50	15	35	50	321.41	306.41	Annually	Semi-Annually	49.28	309.51
2TP-7	Saprolite	358.76	59	15	44	59	313.16	298.16	Biennially	Semi-Annually	42.04	316.72
2TP-8	Saprolite	348.67	62	15	47	62	299.11	284.11	Annually	Semi-Annually	39.40	309.27
2TP-9	Saprolite	348.85	55	15	40	55	305.95	290.95	Semi-Annually	Semi-Annually	41.50	307.35
2TP-10	Coastal Plain & Saprolite	358.95	23	10	13	23	345	335	Annually	Semi-Annually	17.25	341.70
2TP-11	Coastal Plain & Saprolite	357.57	30	10	20	30	338	328	Annually	Semi-Annually	17.47	340.10
2TP-13	Saprolite	362.11	59	15	44	59	315.58	300.58	Annually	Semi-Annually	58.15	303.96
2TP-14	Saprolite	348.85	48	15	33	48	314.77	299.77	Annually	Semi-Annually	28.70	320.15
2TP-17	Saprolite	349.29	47	15	32	47	314.8	299.8	None	Semi-Annually	37.01	312.28
2TP-18	Saprolite	346.42	43	15	28	43	316.02	301.02	None	Semi-Annually	37.74	308.68
2MW-4	Saprolite	348.8	46	20	26	46	320.31	300.31	Semi-Annually	Semi-Annually	37.48	311.32
2MW-5	Saprolite	346.06	68	15	53	68	290.87	275.87	Semi-Annually	Semi-Annually	37.58	308.48
2MW-6	Saprolite	350.13	44	15	29	44	318.6	303.6	Semi-Annually	Semi-Annually	40.51	309.62
2MW-12	Saprolite	353.61	36	15.0	21.0	36.0	332.57	317.57	Annually	Semi-Annually	29.60	324.01
2MW-13	Coastal Plain/Perched	353.42	11	8	3	11	350.69	342.69	Annually	Semi-Annually	2.72	350.70
S-1	Saprolite	349.94	41	30	11	41	336.9	306.9	None	Semi-Annually	43.54	306.40
S-2	Saprolite	346.89	50	30	20	50	325.06	295.06	Semi-Annually	Semi-Annually	37.37	309.52
S-3	Saprolite	347.69	50	30	20	50	325.78	295.78	Semi-Annually	Semi-Annually	36.29	311.40
S-4	Saprolite	346.14	50	30	19	49	325.23	295.23	Annually	Semi-Annually	37.05	309.09
BEDROCK												
2MW-8S	Bedrock	359.24	128	20	108	128	248.8	228.8	Semi-Annually	Semi-Annually	57.37	301.87
2MW-9	Bedrock	349.45	93	20	73	93	274.47	254.47	Semi-Annually	Semi-Annually	39.35	310.10
2MW-11	Bedrock	345.54	120	20	100	120	243.61	223.61	Semi-Annually	Semi-Annually	35.65	309.89
2MW-8D	Bedrock	359.09	208	15	193	208	163.43	148.43	Biennially	Semi-Annually	43.32	315.77
2MW-10D	Bedrock	348.56	200	24	176	200	170.08	146.08	Biennially	Semi-Annually	30.92	317.64
HRD-1	Bedrock	341.11	140	20	120	140	221.11	201.11	Semi-Annually	Semi-Annually	28.18	312.93
B-5	Bedrock	345.99	140	86	54	140	290.08	204.08	Semi-Annually	Semi-Annually	36.96	309.03

NOTES:
BGS = below ground surface
ft = feet
BRE = below reference elevation
> MSL = above mean sea level
** Semi-annual frequency: May/June and November/December. Annual frequency: May/June. Biennial sampling: May/June of even years starting in 2012.
The low set points for the pump-and-treat system recovery (extraction) wells are: B-1: 300.97 ft MSL; B-2: 301.07 ft MSL; B-3: 306.43 ft MSL; B-4: 301.37 ft MSL; and B-6: 300.00 ft MSL.

TABLE 2
VOC Detections for CMS Units 2 and 7 Groundwater Monitoring
May 22, 2015
Former Appliance Park East Facility, Columbia, Maryland

Well - Sample ID	Trichloroethene (ug/L)	Cis-1,2-dichloroethene (ug/L)	Trans-1,2-dichloroethene (ug/L)	1,1-Dichloroethane (ug/L)	1,1-Dichloroethene (ug/L)	Tetrachloroethene (ug/L)	Chloroform (ug/L)	1,1,2-Trichloroethane (ug/L)	Vinyl Chloride (ug/L)
Saprolite / Water Table									
7TP-1	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD
2TP-5	NR	NR	NR	NR	NR	NR	NR	NR	NR
2TP-6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-7	NR	NR	NR	NR	NR	NR	NR	NR	NR
2TP-8	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-9	**142**	**249**	**5.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-10[CS]	**55,300**	**48.9**	**4.2**	**1.7**	**3.5**	**67.8**	**8.3**	**26.5**	<1.0
2TP-11[CS]	**7,240**	**20.6**	**3.0**	<1.0	**2.8**	**8.3**	**2.5**	**1.8**	<1.0
2TP-13	**8.9**	**2.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-14	**5.7**	**34.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-4	**29.4**	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-5	**15.7**	**5.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-12	**292**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-13[CP]	**11.8**	**3.6**	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0
S-2	**1.0**	**<1.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
S-3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
S-4	**103**	**39.4**	**1.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bedrock									
2MW-8S	**14,700 / 13,600**	**449 / 439**	**7.7 / 7.5**	**5.4 / 5.4**	**9.7 / 9.8**	**3.2 / 3.2**	<1.0 / <1.0	<1.0 / <1.0	**4.5 / 4.2**
2MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-11	**5.2**	**44**	**2.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-8D	NR	NR	NR	NR	NR	NR	NR	NR	NR
2MW-10D	NR	NR	NR	NR	NR	NR	NR	NR	NR
HRD-1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-5	**6.0**	**31.3**	**1.5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Field Blank	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

NOTES:

ug/L = Micrograms per liter

/ = Duplicate samples

NR = well not sampled - not required for this sampling event

Starting in November 2009 samples analyzed using EPA Method 8260

MW-12, MW-13, 2TP-10, and 2TP-11 added to semi-annual sampling in June 2011

< = result is less than or not detected at this limit of quantitation

[CS] Costal Plain & Saprolite

[CP] Coastal Plain/Perched Well

NSD = Not sampled due to well being dry or had insufficient volume of water

TABLE 3
Historical TCE Analytical Results for CMS Units 2 and 7 Groundwater Monitoring
Former Appliance Park East Facility, Columbia, Maryland

Well - Sample ID	Well Depth (ft BGS)	Well Screen (ft BGS) Top (ft BGS)	Well Screen (ft BGS) Bottom (ft BGS)	6/14/2007 TCE (ug/L)	12/20/2007 TCE (ug/L)	1/2008 TCE (ug/L)	5/16/2008 TCE (ug/L)	11/20/2008 TCE (ug/L)	5/29/2009 TCE (ug/L)	11/3/2009 TCE (ug/L)	5/21/2010 TCE (ug/L)	11/19/2010 TCE (ug/L)	6/6/2011 TCE (ug/L)	11/18/2011 TCE (ug/L)
Saprolite / Water Table														
7TP-1	24	4.0	24.0	NC	NC	NC	NC	NC	NC	NC	NC	NC	NSD	NR
2TP-5	63.0	48.0	63.0	30,000	NR	NC	32,000	NR	36,000	NR	33,000	NR	NR	NR
2TP-6	50.0	35.0	50.0	NSD	<2.0	NC	NSD	NSD	NSD	NSD	NSD	<1.0	NSD	NR
2TP-7	59.0	44.0	59.0	4,500	3,600	NC	3,800	3,200	4,200	3,200	2,800	2,300	NR	NR
2TP-8	62.0	47.0	62.0	<2.0	<2.0	NC	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	NR
2TP-9	55.0	40.0	55.0	890	920	NC	930	820	940	760	690	570	450	240
2TP-10[CS]	21.9	13.0	23.0	NC	50,000	NC	NC	NC	NC	NC	NC	NC	68,000	NR
2TP-11[CS]	30.0	19.2	30.0	NC	3,200	NC	NC	NC	NC	NC	NC	NC	5,400	NR
2TP-13	59.0	44.0	59.0	<2.0	<2.0	NC	<2.0	0.7	0.5	<1.0	<1.0	<1.0	7.0	NR
2TP-14	58.0	43.0	58.0	5.4	4.6	NC	4.4	3.6	3.1	2.0 J	3.0 J	4.0 J	<5.0	NR
2MW-4	46.0	26.0	46.0	6.1	8.7	NC	10.0	9.4	13.0	11.0	14.0	16	22/22	20
2MW-5	68.0	53.0	68.0	76	69	NC	66	47	53	45	42	35	35	29
2MW-6	44.0	29.0	44.0	<2.0	<2.0	NC	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0
2MW-12	34.9	19.9	34.9	NA	NC	890	NC	NC	NC	NC	NC	NC	1,900	NR
2MW-13[CP]	11.0	3.0	11.0	NA	NC	8.1	NC	NC	NC	NC	NC	NC	21	NR
S-2	50.0	20.0	50.0	4	10	NC	9	7	6	5.0 J	5.0 J	3.0 J	<5.0	<5.0
S-3	50.0	20.0	50.0	3.2	3.0	NC	2.7	2.1	1.5	2.0 J	1.0 J	1.0 J	<5.0	<5.0
S-4	50.0	20.0	50.0	530	NR	NC	410	NR	330	NR	240	NR	<5.0	NR
Bedrock														
2MW-8S	128.0	108.0	128.0	16,000	19,000	NC	13,000	12,000	11,000	13,000	6,500	11,000	37,000	34,000/33,000
2MW-9	93.0	73.0	93.0	<2.0	<2.0	NC	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0
2MW-11	120.0	100.0	120.0	160	130	NC	140	110	130	160	120	90	11	<5.0
2MW-8D	208.0	193.0	208.0	130	120	NC	120	89	84	90	88	75	NR	NR
2MW-10D	200.0	176.0	200.0	<2.0	<2.0	NC	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	NR	NR
HRD-1	140.0	120.0	140.0	<2.0	<2.0	NC	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0
B-5	140.0	54.0	140.0	190	160	NC	NS	160 E	100	120	100	25	6	6
Field Blank	-	-	-	<2.0	<2.0	NC	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0

NOTES:

ug/L = Micrograms per liter
BGS = Below ground surface
[CS] Costal Plain & Saprolite
[CP] Coastal Plain/Perched Well
/ = Duplicate samples
TCE = Trichloroethene

NC = Not collected
NA = Not avaliable
NR = Not required for this sampling event
NS = Not sampled unable to retrieve passive bag sampler
NSD = Not sampled due to insufficient volume of water in well
< = result is less than or not detected at this limit of quantitation
MW-12, MW-13, 2TP-10, and 2TP-11 added to semi-annual sampling in June 2011
Starting in November 2009 samples analyzed using EPA Method 8260

TABLE 3
Historical TCE Analytical Results for CMS Units 2 and 7 Groundwater Monitoring
Former Appliance Park East Facility, Columbia, Maryland

Well - Sample ID	Well Depth (ft BGS)	Well Screen (ft BGS) Top (ft BGS)	Well Screen (ft BGS) Bottom (ft BGS)	5/21/2012 TCE (ug/L)	11/16/2012 TCE (ug/L)	5/30/2013 TCE (ug/L)	11/25/2013 TCE (ug/L)	5/27/2014 TCE (ug/L)	11/21/2014 TCE (ug/L)	5/22/2015 TCE (ug/L)
Saprolite / Water Table										
7TP-1	24	4.0	24.0	NSD	NR	NSD	NR	NSD	NR	NSD
2TP-5	63.0	48.0	63.0	25,000	NR	NR	NR	20,000	NR	NR
2TP-6	50.0	35.0	50.0	NSD	NR	NSD	NR	NSD	NR	<1.0
2TP-7	59.0	44.0	59.0	2,200	NR	NR	NR	1,600	NR	NR
2TP-8	62.0	47.0	62.0	<5.0	NR	<5.0	NR	<5.0	NR	<1.0
2TP-9	55.0	40.0	55.0	220	270	240	240	190	198	142
2TP-10[CS]	21.9	13.0	23.0	58,000	NR	53,000	NR	54,000	NR	55,300
2TP-11[CS]	30.0	19.2	30.0	7,800	NR	6,400	NR	7,000	NR	7,240
2TP-13	59.0	44.0	59.0	10	NR	10	NR	9	NR	8.9
2TP-14	58.0	43.0	58.0	<5.0	NR	<5.0	NR	<5.0	NR	5.7
2MW-4	46.0	26.0	46.0	30	<5.0	33	33	29	33	29.4
2MW-5	68.0	53.0	68.0	32	28	25	22	22	21.7	15.7
2MW-6	44.0	29.0	44.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
2MW-12	34.9	19.9	34.9	2,000	NR	1,200	NR	1,000	NR	292
2MW-13[CP]	11.0	3.0	11.0	9	NR	13	NR	11	NR	11.8
S-2	50.0	20.0	50.0	<5.0	<5.0	<5.0	<5.0	<5.0	1.6	1.0
S-3	50.0	20.0	50.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
S-4	50.0	20.0	50.0	280	NR	220	NR	150	NR	103
Bedrock										
2MW-8S	128.0	108.0	128.0	29,000/30,000	30,000/32,000	28,000/30,000	23,000/23,000	18,000/18,000	14,700/16,800	14,700/13,600
2MW-9	93.0	73.0	93.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
2MW-11	120.0	100.0	120.0	<5.0	15	11	8	11	6.3	5.2
2MW-8D	208.0	193.0	208.0	71	NR	NR	NR	53	NR	NR
2MW-10D	200.0	176.0	200.0	<5.0	NR	NR	NR	<5.0	NR	NR
HRD-1	140.0	120.0	140.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0
B-5	140.0	54.0	140.0	7	14	6	9	9	10.2	6.0
Field Blank	-	-	-	<5.0	<5.0	<5.0	<5.0	<5.0	1.0	<1.0

NOTES:

ug/L = Micrograms per liter
BGS = Below ground surface
[CS] Costal Plain & Saprolite
[CP] Coastal Plain/Perched Well
/ = Duplicate samples
TCE = Trichloroethene

NC = Not collected
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MW-12, MW-13, 2TP-10, and 2TP-11 added to semi-annual sampling in June 2011
Starting in November 2009 samples analyzed using EPA Method 8260

ATTACHMENT 3

To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period 1 January 2015 to 30 June 2015

Findings Summary for the Phase II SVE System at RFI Units 2 and 7

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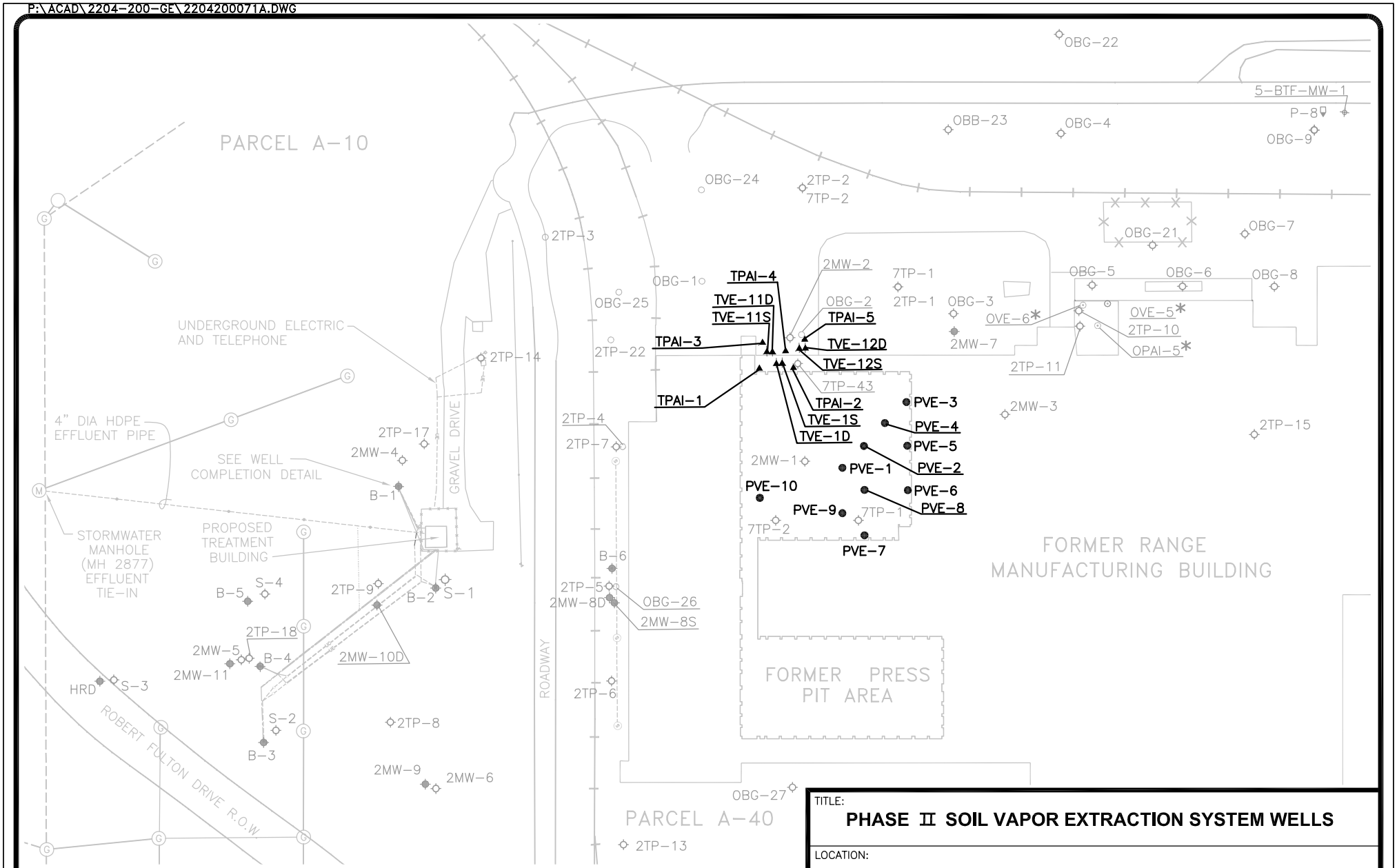


0 150 300

SCALE IN FEET

LEGEND

* WELLS DECOMMISSIONED ON 12-20-2001.

TITLE:

PHASE II SOIL VAPOR EXTRACTION SYSTEM WELLS

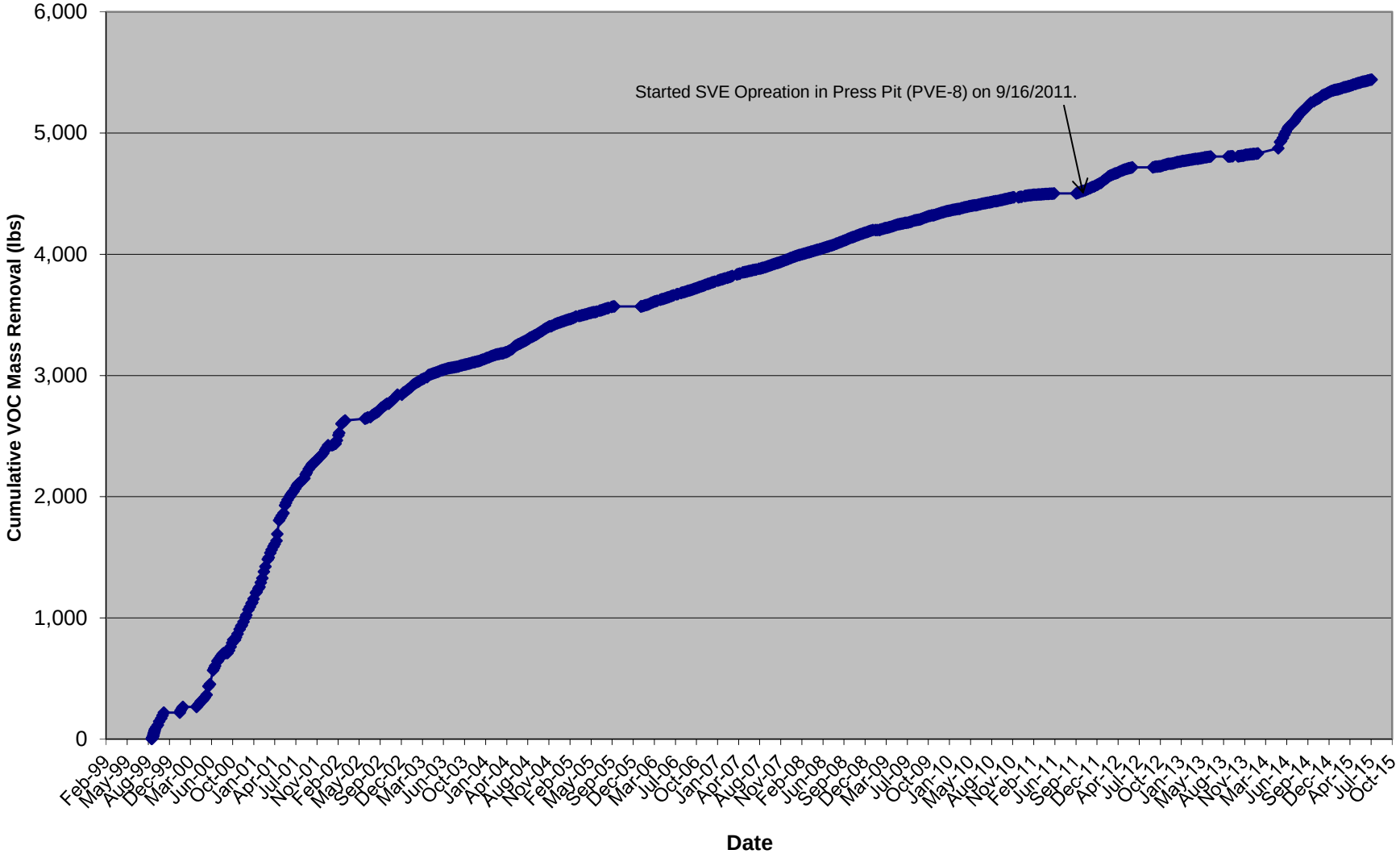
LOCATION:

Former Appliance Park East Facility, Columbia, Maryland

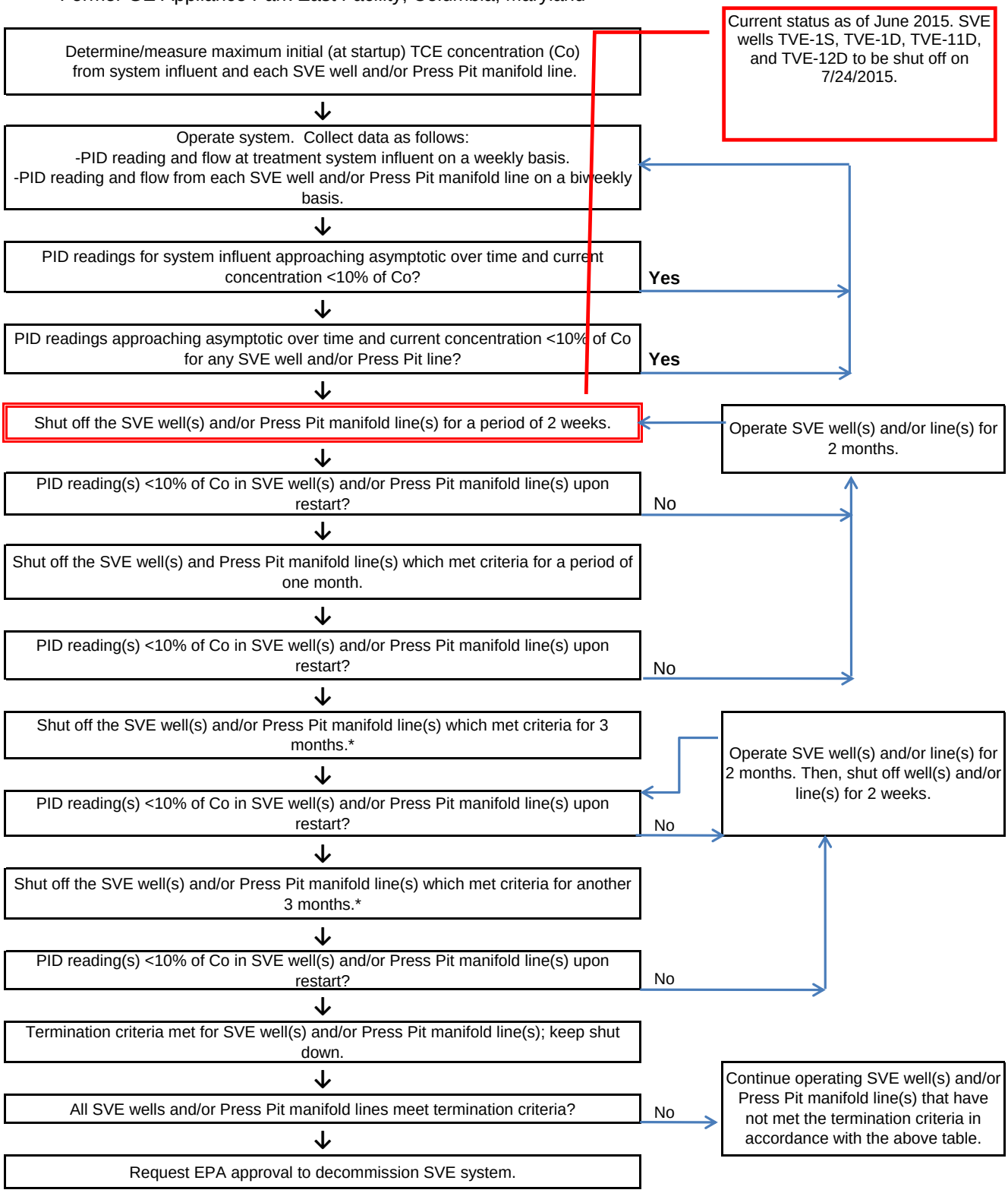
TETRA TECH GEO

APPROVED	BC	FIGURE
DRAFTED	CP	1
PROJECT#	117-2204200	
DATE	8-25-11	

Phase II Soil Vapor Extraction System VOC Mass Removal
Former Appliance Park East Facility, Columbia, Maryland



Phase II Soil Vapor Extraction System Termination Criteria
CURRENT STATUS
Former GE Appliance Park East Facility, Columbia, Maryland



Notes:
* The annual system shutdown for the months of June, July and August will be used as a desorption test.
(Desorption test refers to collection of PID readings upon restarting a well or line.)
In 2011, the data for the system and SVE wells in ETT area will be evaluated according to the above criteria.
The data for the Press Pit wells will not be evaluated until after the 2012 summer system shutdown.

ATTACHMENT 4

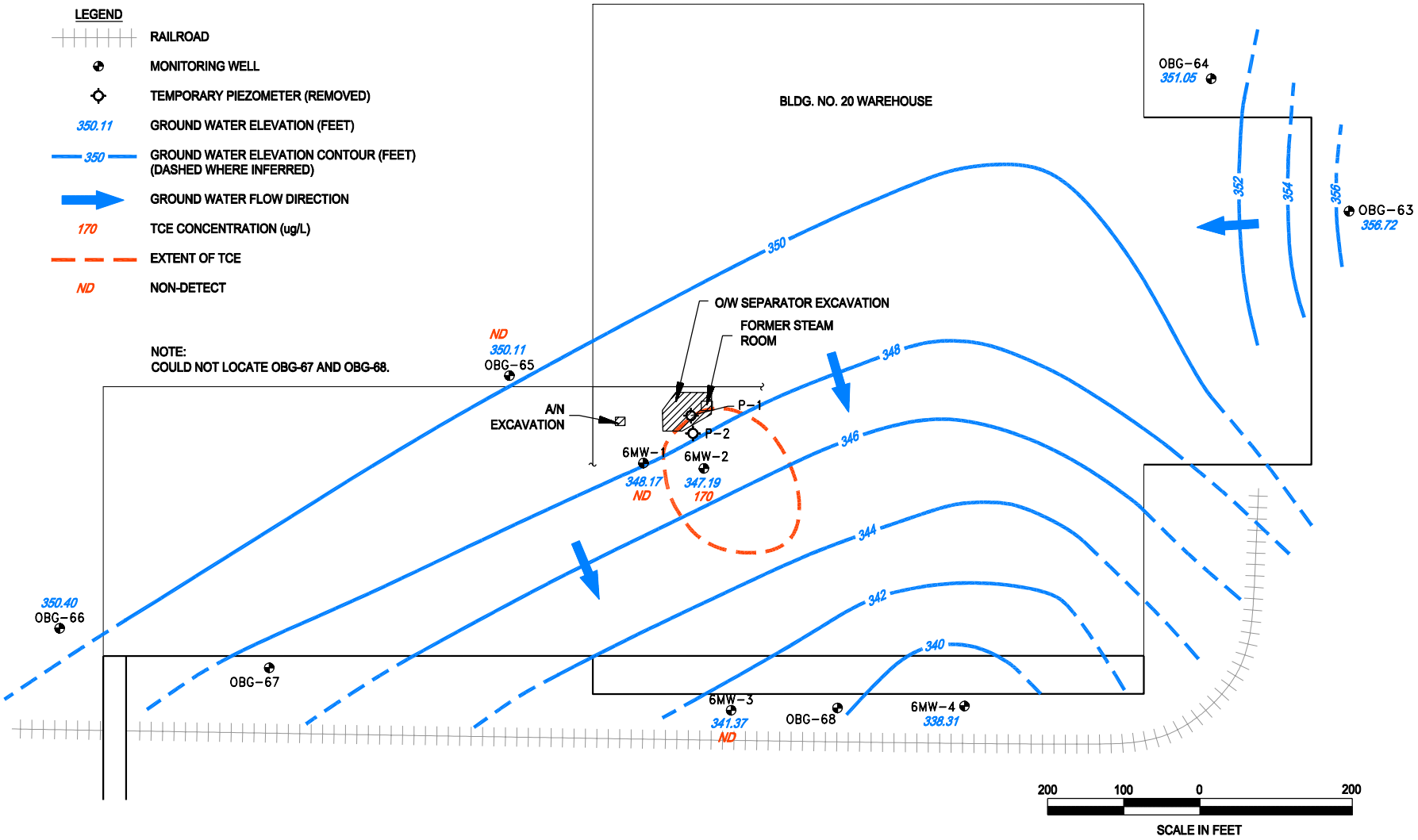
To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period 1 January 2015 to 30 June 2015

Findings Summary for
Warehouse Building Oil/Water Separator and
Acid Neutralization Units
RFI Unit 6

FIGURE 1
GROUND WATER ELEVATION CONTOUR MAP
29 NOVEMBER 2012
RFI UNIT #6
GE - FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



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MLB/1-16-13

ERM, INC.

Table 1 Summary of Ground Water Elevations
RFI Unit 6
Former Appliance Park East, Columbia, Maryland

Date		17-Oct-94*		17-Jan-95*		18-Apr-95*		18-Jul-95*		16-May-02		14-Nov-07		29-Nov-12	
Well ID	**Reference Elevation Feet, MSL**	**Depth to Water**	**Ground Water Elevation Feet, MSL**	**Depth to Water**	**Ground Water Elevation Feet, MSL**	**Depth to Water**	**Ground Water Elevation Feet, MSL**	**Depth to Water**	**Ground Water Elevation Feet, MSL**	**Depth to Water**	**Ground Water Elevation Feet, MSL**	**Depth to Water**	**Ground Water Elevation Feet, MSL**	**Depth to Water**	**Ground Water Elevation Feet, MSL**
6MW-1	359.70	10.99	348.71	11.41	348.29	11.37	348.33	11.05	348.65	12.69	347.01	12.08	347.62	11.53	348.17
6MW-2	359.49	11.58	347.91	12.04	347.45	11.93	347.56	11.55	347.94	13.42	346.07	12.68	346.81	12.30	347.19
6MW-3	355.21	11.91	343.30	12.00	343.21	12.17	343.04	11.77	343.44	17.14	338.07	14.76	340.45	13.84	341.37
6MW-4	355.17	10.81	344.36	10.52	344.65	NM	--	10.59	344.58	15.83	339.34	16.55	338.62	16.86	338.31
OBG-63	361.58	9.61	351.97	8.33	353.25	9.22	352.36	9.35	352.23	5.60	355.98	5.61	355.97	4.86	356.72
OBG-64	362.40	11.33	351.07	10.52	351.88	11.01	351.39	11.00	351.40	11.51	350.89	11.99	350.41	11.35	351.05
OBG-65	362.61	11.97	350.64	11.83	350.78	12.30	350.31	12.12	350.49	13.33	349.28	13.41	349.20	12.50	350.11
OBG-66	361.99	11.81	350.18	12.57	349.42	12.42	349.57	11.95	350.04	13.54	348.45	13.37	348.62	11.59	350.40
OBG-67	355.05	5.44	349.61	5.55	349.50	5.38	349.67	4.36	350.69	6.69	348.36	NM	--	NM	--
OBG-68	355.54	12.05	343.49	12.27	343.27	12.50	343.04	11.93	343.61	NM	--	NM	--	NM	--

Notes:
* - Data presented in *Addendum to the RCRA Facility Investigation Report for RFI Unit 6,* dated 2 August 1995
Reference elevation for all wells is top of PVC casing
MSL - Mean Sea Level
NM - Not measured, well was inaccessible

Table 2 Detected Analytes for Ground Water Samples
RFI Unit 6
Former Appliance Park East, Columbia, Maryland

		Sample Number	6-MW-1				6-MW-2				6-MW-3				6-MW-4		OBG-65				OBG-67	OBG-68
		Sample Collection Date	8/22/94*	5/16/2002	11/14/2007	11/29/2012	8/23/94*	5/16/2002	11/14/2007	11/29/2012	8/23/94*	5/16/2002	11/14/2007	11/29/2012	8/23/94*	5/16/2002	8/22/94*	5/16/2002	11/14/2007	11/29/2012	8/23/94*	8/23/94*
Analyte	**HBN**	**PQL**																				
Field Parameters																						
pH (standard units)	--	--	6.9	6.4	5.9	6.3	6.3	6.2	6.7	6.0	6	6.6	6.8	6.7	5.4	6.2	6.2	6.4	6.2	6.0	6.8	6.7
Conductivity (mS/cm)	--	--	NA	0.169	0.238	0.116	NA	0.203	0.660	0.079	NA	0.771	0.616	0.298	NA	0.908	NA	0.213	0.315	0.090	NA	NA
Temperature (^{o}C)	--	--	NA	19.8	17.4	19.1	NA	19.7	16.5	19.5	NA	16.7	16.6	17.7	NA	16.5	NA	15.9	15.7	16.1	NA	NA
D.O. (mg/L)	--	--	NA	2.83	NA	NA	NA	0.84	NA	NA	NA	2.21	NA	NA	NA	4.59	NA	4.63	NA	NA	NA	NA
Permit List 4 Volatiles (µg/L)																						
1,1-Dichloroethene	7	5	--	< 5	< 5	< 5	--	30	56	85	--	< 5	< 5	< 5	--	< 5	--	< 5	< 5	< 5	--	--
cis-1,2-Dichloroethene	--	5	NA	< 5	< 5	< 5	NA	82	89	97	NA	< 5	< 5	< 5	NA	< 5	NA	< 5	< 5	< 5	NA	NA
1,2-Dichloroethene (total)	100	5	--	NA	NA	NA	11	NA	NA	NA	--	NA	NA	NA	--	NA	--	NA	NA	NA	--	--
Trichloroethene	5	5	--	< 5	< 5	< 5	24	110	130	170	--	< 5	< 5	< 5	--	< 5	--	< 5	< 5	< 5	--	--
Benzene	5	5	--	< 5	< 5	< 5	2 J	< 5	< 5	< 5	--	< 5	< 5	< 5	--	< 5	--	< 5	< 5	< 5	--	--
Tetrachloroethene	5	5	--	< 5	< 5	< 5	--	6	18	44	--	< 5	< 5	< 5	--	< 5	--	< 5	< 5	< 5	--	--
Inorganic Parameters (µg/L)																						
Antimony	10	30	--	< 5	NA	NA	--	< 5	NA	NA	--	< 5	NA	NA	--	< 5	--	< 5	NA	NA	2.3	--
Chromium	100	10	2.2 J	< 3	NA	NA	0.44 J	< 3	NA	NA	--	< 3	NA	NA	2 J	< 3	--	< 3	NA	NA	7.9	3.8 B

Notes:
mg/L - milligrams per liter
µg/L - micrograms per liter
HBN - Health Based Number
PQL - Practical Quantitation Limit
* - Data presented in *RCRA Facility Investigation Report for RFI Unit 6,* dated 3 March 1995
< 5 - Analyte not detected, value indicates detection limit
-- - Not detected.
NA - Not analyzed
J - Analyte present, result may not be accurate or precise
B - Not detected substantially above the level reported in laboratory or field blanks
d - Sample is a duplicate of 6MW-2

Table 2 (cont.) Detected Analytes for Ground Water Samples
RFI Unit 6
Former Appliance Park East, Columbia, Maryland

		Sample Number	6-MW-100[d]	6-MW-20[d]	6-MW-5[d]		6-FB-1		6-EB-1		6-TB-1		TB-1	
		Sample Collection Date	8/23/94*	5/16/2002	11/14/2007	11/29/2012	8/22/94*	5/16/2002	8/22/94*	5/16/2002	8/23/94*	5/16/2002	11/14/2007	11/29/2012
Analyte	**HBN**	**PQL**												
Field Parameters														
pH (standard units)	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductivity (mS/cm)	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature (^{0}C)	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D.O. (mg/L)	--	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Permit List 4 Volatiles (µg/L)														
1,1-Dichloroethene	7	5	--	30	57	84	--	< 5	--	< 5	--	< 5	< 5	< 5
cis-1,2-Dichloroethene	--	5	NA	83	95	96	NA	< 5	NA	< 5	NA	< 5	< 5	< 5
1,2-Dichloroethene (total)	100	5	10	NA	NA	NA	--	NA	--	NA	--	NA	NA	NA
Trichloroethene	5	5	23	110	130	170	--	< 5	--	< 5	--	< 5	< 5	< 5
Benzene	5	5	2 J	< 5	< 5	< 5	--	< 5	--	< 5	--	< 5	< 5	< 5
Tetrachloroethene	5	5	--	6	17	45	--	< 5	--	< 5	--	< 5	< 5	< 5
Inorganic Parameters (µg/L)														
Antimony	10	30	--	< 5	NA	NA	--	< 5	--	< 5	--	< 5	NA	NA
Chromium	100	10	--	< 3	NA	NA	1	< 3	--	< 3	--	< 3	NA	NA

Notes:
mg/L - milligrams per liter
µg/L - micrograms per liter
HBN - Health Based Number
PQL - Practical Quantitation Limit
* - Data presented in *RCRA Facility Investigation Report for RFI Unit 6,* dated 3 March 1995
< 5 - Analyte not detected, value indicates detection limit
-- - Not detected, detection limit not available
NA - Not analyzed
J - Analyte present, result may not be accurate or precise
B - Not detected substantially above the level reported in laboratory or field blanks
d - Sample is a duplicate of 6MW-2