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File: MD, Brunswick; Brunswick Yard; 9415381

November 8, 2022

Maryland Department of the Environment  
Oil Control Program  
Waste Management Administration  
1800 Washington Blvd., Suite 620  
Baltimore, Maryland 21230-1719

**Quarterly Report – Second Quarter 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**  
**MDE Case No. 1994-1379-FR**

To Mr. Psenicnik.:

Please find attached the *Quarterly Report – Second Quarter 2022* for the above referenced site. This site is an active rail yard. This report summarizes the activities completed in the Second Quarter of 2022, including groundwater and LPH monitoring and LPH recovery completed in accordance with the *Remedial Recovery and Monitoring Plan (RRMP)* dated May 23, 2017 and the MDE *RRMP Approval* letter dated December 20, 2017. The activities outlined in the *RRMP* and *RRMP Approval* letter will continue to be implemented progressively in the Third Quarter 2022. If you have any questions or concerns, please do not hesitate to contact me at (518) 767-6049.

Sincerely,

William Parry, CGWP, PG  
Manager Environmental Remediation

Copy:

Ellen Jackson, MDE  
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Mr. Nicholas Psenicnik  
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Date: November 8, 2022  
Our Ref: 30128305  
Subject: Quarterly Report – Second Quarter 2022  
CSXT Brunswick Yard, Brunswick, Maryland  
CSXT Project # 9415381

Dear Ms. Psenicnik,

On behalf of CSX Transportation, Inc. (CSXT), Arcadis U.S., Inc. (Arcadis) has prepared this quarterly report presenting the results of work performed during the second quarter of 2022 (April through June) at the CSXT Brunswick Yard (the Site) in Brunswick, Maryland. The work performed was implemented pursuant to the Remedial Recovery and Monitoring Plan (RRMP) approval letter dated December 20, 2017.

The RRMP was developed following a review of historical investigation results, which supported a transition to a risk-based management plan for the Site that would include long-term periodic monitoring and no active remediation. The recommendation is founded in a multiple lines of evidence approach, in which historical fluid level gauging data, groundwater monitoring data, the current and historical monitoring well network and extent of liquid phase hydrocarbon (LPH) impacts, LPH recovery, evaluation of LPH transmissivity, and quantification of natural source zone depletion rates are included. To reinforce this finding, transitional and post-remedial monitoring plans were included in the RRMP to further guide the Site to an optimized scope of work focused on evaluating pertinent Site conditions while maintaining compliance with applicable regulatory guidance.

The specific Site transition plan activities conducted during this reporting period included the following:

- Groundwater elevation and LPH thickness monitoring was conducted to further develop existing hydrographs. The hydrographs were visually examined for trends in groundwater elevation and LPH thickness to determine if LPH is stable or if conditions exist that suggest a significant change in site conditions or that LPH is unstable and potentially migrating.
- Manual LPH recovery was conducted at wells where greater than 0.2 feet of LPH was present at the time of gauging.
- LPH monitoring and recovery data was assessed to supplement previous findings regarding the feasibility of ongoing LPH mass removal from the subsurface, both manually and hydraulically.
- A round of representative groundwater sampling was conducted to further assess dissolved-phase plume stability.

In addition to the completed activities listed above, and as shown on **Table 1**, a schedule of upcoming transitional and post-remedial Site activities is outlined in **Table 2**.

## Transitional Liquid Phase Hydrocarbon Recover and Monitoring Activities

Multiple lines of evidence, developed through historical collection of data and including data collected during the second quarter of 2022, demonstrate that the LPH plume is stable and continue to support a transition in Site management to a risk based LPH management strategy.

Since December 2017, a transitional period of Site operation and maintenance, monitoring, and LPH recovery has been conducted to further develop the Site Conceptual Model, demonstrate data consistency, and strengthen the existing lines of evidence. These transitional activities are progressively guiding the Site from its former operational and monitoring status to an optimized scope of activities focused on evaluating existing conditions and potential risk, while maintaining the required compliance with applicable regulatory guidance. The following data were collected in the second quarter of 2022 to support this strategy.

### Fluid Level Gauging

Quarterly site-wide gauging of accessible CSXT and National Park Service (NPS) monitoring wells, extraction wells, and collection sumps was conducted on June 13, 2022. The second quarter 2022 well gauging data are presented on **Table 3** and hydrographs for wells that have historically had measurable LPH present are included as **Attachment 1**. Potentiometric groundwater elevation contours and measured LPH thicknesses from the second quarter event are presented on **Figure 1**. Groundwater elevations measured during this reporting period are within the range of historically observed elevations, though elevations at several wells remain slightly elevated or near historical maximums as compared to historically collected measurements prior to implementation of the RRMP and subsequent redevelopment of the wells.

Measurable LPH was detected in 17 wells during the second quarter 2022 (identified with bold print in the table below). All of the 17 wells where LPH was detected during the second quarter 2022 have historically had measurable LPH present.

Site Wells with Historic Occurrences of Measurable LPH (1995-present)
CS-1, CS-2, CS-3, CSXT MW-02, CSXT MW-4R, CSXT MW-6R, CSXT MW-23, <b>CSXT MW-26</b> , CSXT MW-27, CSXT MW-28, CSXT MW-30, CSXT MW-32, CSXT MW-33, <b>CSXT MW-37</b> , <b>CSXT MW-38</b> , CSXT MW-39, <b>CSXT MW-41</b> , <b>CSXT MW-49</b> , CSXT MW-53, <b>CSXT MW-54</b> , <b>CSXT MW-55</b> , <b>CSXT MW-56</b> , <b>CSXT MW-57</b> , <b>CSXT MW-58</b> , CSXT MW-59, <b>CSXT MW-60</b> , <b>CSXT MW-61</b> , <b>CSXT MW-62</b> , <b>CSXT MW-63</b> , CSXT MW-65, <b>CSXT MW-67</b> , CSXT MW-68, CSXT MW-70, EW-1, EW-2, EW-3, EW-4, EW-5, EW-7, and NPS MW-04.

Measurable LPH thicknesses were not detected in the area to the southeast of the former roundhouse during the second quarter of 2022. LPH thicknesses were within the historic range of seasonal fluctuation previously recorded in the areas to the east of the former fuel pump house, in the vicinity of the former aboveground storage tank, and west of the former roundhouse. When evaluating the recent fluid level measurements and LPH thicknesses at the wells, the following should be taken into consideration:

- All wells with LPH historically measured were redeveloped in March 2018 at the start of the RRMP implementation.
- The LPH skimmer system that began operations in 2009 was shut down prior to that redevelopment and remains inactive.

- Since December 2017, manual recovery of LPH from wells has been reduced from monthly to quarterly and only at wells with more than 0.2 feet of LPH present at the time of gauging.

### Dissolved-phase Groundwater Trend Monitoring

Statistical trending of dissolved-phase constituent concentrations at locations where measurable LPH has not been observed in the well historically can be used to assess dissolved-phase plume stability. Stable or decreasing concentrations of dissolved LPH compounds in groundwater can subsequently be used as a line of evidence to indicate that the dissolved portion of the LPH plume is stable and/or decreasing in size.

As requested by the Maryland Department of the Environment (MDE) in the 2021 annual meeting to review site activities and status, the GSI Mann-Kendall Toolkit for Constituent Trend Analysis was used to analyze time-series groundwater monitoring data via a Mann-Kendall statistical test. Groundwater concentrations of indicator constituents (total petroleum hydrocarbons – diesel range organics [TPH-DRO]) selected based on LPH type and available historical analytical data for a site were analyzed to determine the stability of the groundwater plume.

Since the implementation of the RRMP in 2018, and following well development at all wells within the groundwater sampling network, concentrations of TPH-DRO are not increasing in any of the sampled monitoring wells and indicate stable to decreasing trends or no trend was identified. Previously reported concentrations at downgradient wells CSXT MW-69, NPS MW-13, and NPS MW-18 included the full historical data set and resulted in findings of potentially increasing to increasing trends. However, these low-level detections and resulting concentration trends likely represent a natural range in variability which, over a longer dataset time series, may show stable trends consistent with other wells at the Site. The prevalence of stable to decreasing trends during recent events (2018 to present), especially in monitoring wells located downgradient of areas where LPH is present, demonstrates that the dissolved-phase plume is stable or decreasing, which is an indication that the LPH footprint is also stable or decreasing. A summary of the Mann-Kendall evaluation is presented in **Table 4**.

### Liquid Phase Hydrocarbon Recovery

Manual LPH recovery was conducted via peristaltic pump on June 13, 2022 and was generally focused on monitoring wells with greater than 0.2 feet of measurable LPH. The volume of LPH removed at each well was recorded, and the recovered LPH was stored in on-site containers (e.g., 55-gallon drums). LPH recovery volumes are presented in **Table 3**.

Hydrographs depicting the historical fluid gauging data for LPH thickness, LPH recovery during the second quarter event, cumulative LPH recovery, and potentiometric groundwater elevations are included in **Attachment 2** for the wells listed below. A total of 13 wells had more than 0.2 feet of LPH present at the time of gauging in June 2022, and manual LPH recovery was performed on all 13 wells (bolded in the table below).

#### Well Locations Included in Attachment 1 (Historical Gauging Data Charts)

CSXT MW-02, CSXT MW-04R, **CSXT MW-26**, CSXT MW-28, CSXT MW-32, CSXT MW-33, **CSXT MW-37**, CSXT MW-38, **CSXT MW-41**, **CSXT MW-49**, CSXT MW-53, **CSXT MW-54**, **CSXT MW-55**, **CSXT MW-56**, **CSXT MW-57**, CSXT MW-58, CSXT MW-59, **CSXT MW-60**, CSXT MW-61, CSXT MW-62, **CSXT MW-63**, **CSXT MW-67**, **CSXT EW-3**, **CSXT EW-5**, and CSXT EW-7.

Total LPH recovery in the second quarter of 2022 was approximately 23 gallons. Cumulative recovery since July 2009, including LPH recovered through the skimmer system, is approximately 1,493 gallons. Based on the LPH thicknesses measured in the wells and some conservative assumptions regarding borehole size, approximately 10 gallons of LPH was present in the well casing and 5 gallons were present in the borehole filter pack, totaling approximately 15 gallons of LPH collectively. The manual recovery of approximately 22 gallons from wells with

LPH present was more than the approximate 15 gallons calculated as present in the well casings and adjacent filter pack, indicating limited LPH recharge to the wells from the formation across the Site. LPH recovery volumes are presented in **Table 3**.

### Groundwater Monitoring

Groundwater sampling was completed at a total of 19 CSXT and NPS monitoring wells during second quarter 2022, as listed below.

Wells Sampled in June 2022	
<b>CSXT Wells:</b>	CSXT MW-03, CSXT MW-6R, CSXT MW-22, CSXT MW-24, CSXT MW-25, CSXT MW-29, CSXT MW-43, CSXT MW-51, CSXT MW-64, CSXT MW-69, and CSXT MW-71
<b>NPS Wells:</b>	NPS MW-01, NPS MW-02, NPS MW-04, NPS MW-05, NPS MW-13, NPS MW-14, NPS MW-16, and NPS MW-18

Groundwater samples were collected using disposable bailers, following removal of three well volumes of groundwater, or following water-level recovery after wells were purged dry at locations with poor hydraulic connectivity and groundwater recovery to the well (CSXT MW-22, CSXT MW-25, NPS MW-1, NPS MW-5, and NPS MW-18). Field parameters (i.e., pH, specific conductance, dissolved oxygen, temperature, and redox potential) were collected after each volume was purged. Field logs from the second quarter 2022 groundwater sampling are included as **Attachment 3**.

The groundwater samples were shipped to TestAmerica Laboratories, located in Savannah, Georgia, under chain-of-custody for the following analyses:

- Volatile organic compounds including benzene toluene, ethylbenzene, and xylene; naphthalene; methyl tert-butyl ether; tert-butyl alcohol; tert-amyl methyl ether; di-isopropyl ether; and ethyl-tert-butyl ether via United States Environmental Protection Agency (USEPA) Method 8260.
- TPH-DRO via USEPA Method 8015C.
- Total petroleum hydrocarbons – gasoline range organics (TPH-GRO) via USEPA Method 8015C.

Laboratory analytical reports are included as **Attachment 4**. Constituents detected during the second quarter 2022 groundwater sampling event are presented on **Table 5** and outlined in **Figure 2**. A summary of groundwater analytical results from second quarter 2022 is included below:

- A total of five volatile organic compounds were detected in groundwater samples from 5 of the 19 sampled monitoring wells.
- TPH-GRO concentrations were detected in groundwater samples from 10 of the 19 sampled monitoring wells. TPH-GRO concentrations ranged from an estimated value of 0.048 milligrams per liter (mg/L) (NPS MW-18) to 1.2 mg/L (NPS MW-4).
- TPH-DRO concentrations were detected in groundwater samples from 12 of the 19 sampled monitoring wells. TPH-DRO concentrations ranged from an estimated value of 0.23 mg/L (NPS MW-02) to 23 mg/L (CSXT MW-22).

These results, as compared to the historical concentrations, can be found in **Attachment 5**.

## Post Remedial Monitoring

The planned two-year transition phase has been completed in accordance with the RRMP. A post-remedial monitoring plan will be implemented as a long-term solution to Site and risk management following approval by MDE. Additional data collected as part of the transition phase detailed in this document continue to support the findings of the RRMP that the LPH plume at the Site is stable and not migrating, LPH is no longer practically recoverable, and the remaining LPH in the subsurface will continue to be degraded by ongoing natural source zone depletion processes. Per MDE request in November 2019, the Post-Remedial Monitoring Recommendation (PRMR) Memo detailing the recommendations for post-remedial monitoring implementation was submitted under separate cover on November 11, 2020. The following changes to current transitional activities were proposed:

- Well abandonment for redundancies in the monitoring well network.
- Fluid level gauging reduced from quarterly to bi-annually.
- Groundwater monitoring reduced from biannually to annually following confirmed ongoing stability of dissolved-phase TPH-DRO concentrations.
- LPH recovery, by either active or manual means, no longer conducted.

## Summary

LPH and groundwater level measurements collected in the second quarter of 2022 confirm that measurable LPH thicknesses remain in wells within the currently defined LPH plume footprint (as presented in the RRMP) and fluctuate with changes in groundwater conditions. However, measurable LPH has not been detected in wells outside of the known LPH plume footprint since implementation of the RRMP (December 2017), supporting LPH plume stability and that the LPH plume is not migrating.

Since December 2017, Site activities and monitoring plan modifications have been implemented to move towards a risk-based management strategy for the Site. These completed activities are summarized in **Table 1**. Data collected during the second quarter 2022 continues to support the lines of evidence established to transition the Site to a risk based LPH management strategy, as presented in the RRMP and the Site Conceptual Model – Second Addendum. As the transitional activities have been completed, the next phase of Site management will include implementation of the post-remedial monitoring program, as discussed previously.

## Future Activities

The RRMP dated May 23, 2017 and the MDE RRMP approval letter dated December 20, 2017 outline the remedial path forward for the Site. RRMP implementation commenced upon receipt of MDE approval in December 2017, and the included activities were completed over the planned two-year transitional period. Data collected during the transitional period continue to support the lines of evidence presented in the RRMP for implementing risk based LPH management at the Site. Specifically, the LPH is stable and not migrating and has been recovered to the maximum extent practicable. Additionally, dissolved-phase constituent trends in groundwater since the RRMP was implemented are stable or decreasing in wells located within the residual portion of the LPH plume. In accordance with the RRMP, these observations support implementing post-remedial monitoring at the Site, which will include the continued reduction of monitoring activities and discontinuation of LPH recovery. Arcadis, on behalf of CSXT, submitted the PRMR Memo on November 11, 2020, recommending implementation of a post-remedial monitoring plan for MDE review and approval. The activities detailed in the

Mr. Nicholas Psenicnik  
November 8, 2022

RRMP and MDE's approval letter will continue to be implemented through 2022, as outlined in **Table 2**, or until MDE approves implementing post-remedial monitoring.

The planned activities for third quarter 2022, pending MDE review and approval of the PRMR Memo include:

- Site-wide synoptic water level measurements and LPH recovery at wells with more than 0.2 feet of LPH.

Please contact the undersigned at 410.923.7761 if you have any questions or require additional information regarding this correspondence.

Sincerely,  
Arcadis U.S., Inc.



Joshua R. Wilson  
Associate Project Manager



Albert Buell  
Project Manager

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CC.     W. Parry, CSXT  
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         S. Rice, NPS  
         B. Glotfelty, Frederick County  
         T. Duffy, Arcadis

Mr. Nicholas Psenicnik  
November 8, 2022

Enclosures:

**Tables**

- 1 Completed RRMP Site Activities
- 2 2022 Groundwater Gauging, Sampling, Remedial Action and Reporting Schedule
- 3 Well Gauging and LPH Recovery Summary (Second Quarter 2022)
- 4 GSI Mann-Kendall TPH-DRO Concentration Trend Summary (2018-2022)
- 5 Groundwater Analytical Summary (Second Quarter 2022)

**Figure**

- 1 Groundwater Elevation Contours and LPH Thickness Map – June 13, 2022
- 2 TPH DRO Concentrations

**Attachments**

- 1 Hydrographs – Groundwater Elevations and LPH Thickness
- 2 LPH Recovery Data
- 3 Sample Logs
- 4 Lab Report
- 5 Historical Groundwater and Analytical Data

# Tables

**Table 1**  
**Completed RRMP Site Activities**  
**Quarterly Report – Second Quarter 2022**  
**Brunswick Yard, Brunswick, Maryland**



Date	Task				
	Groundwater and LPH Monitoring and Recovery <sup>1,3</sup>	Groundwater Sampling <sup>2</sup>	Remedial Recovery and Monitoring Plan Activities		
			Site Activities	Location Type	Location ID
March 2021	X				
June 2021	X	X			
September 2021	X				
December 2021	X	X			
March 2022	X				
June 2022	X	X			

#### Abbreviations

CSXT - CSX Transportation, Inc.  
EW - Extraction well  
LPH - Liquid phase hydrocarbon  
MW - Monitoring well

NPS - National Park Service  
NSZD - Natural source zone depletion  
USEPA - United States Environmental Protection Agency

#### Notes

1. LPH Monitoring will be conducted at a quarterly frequency through December 2022, per Maryland Department of the Environment approval and implementation of the Remedial Recovery and Monitoring Plan.
2. Groundwater sampling conducted on a semi-annual basis at monitoring wells CSXT MW-3, CSXT MW-6R, CSXT MW-22, CSXT MW-24, CSXT MW-25, CSXT MW-29, CSXT MW-43, CSXT MW-51, CSXT MW-64, CSXT MW-69, CSXT MW-71, NPS MW-1, NPS MW-2, NPS MW-4, NPS MW-5, NPS MW-13, NPS MW-14, NPS MW-16, and NPS MW-18. The analytic parameters include full-suite volatile organic compounds, including fuel oxygenates, using USEPA Method 8260 and total petroleum hydrocarbons/diesel-range organics by USEPA by Method 8015B. Field parameters including temperature, pH, and specific conductivity measured during the well purging process. Groundwater samples collected after three well volumes have been purged from each well with new polyethylene bailers, provided there is no measurable LPH present in the well at the time of sampling.
3. Site-wide synoptic water level and LPH measurements collected on a quarterly basis.

**Table 2**  
**2022 Groundwater Gauging, Sampling, Remedial Action and Reporting Schedule**  
**Quarterly Report – Second Quarter 2022**  
**Brunswick Yard, Brunswick, Maryland**

Date	Task			
	LPH Monitoring and Recovery <sup>1</sup>	Groundwater Monitoring & Sampling <sup>2,3</sup>	Remedial Recovery and Monitoring Plan Activities <sup>4,5</sup>	Remedial Action Progress Report
July 2022				
August 2022				✓ (for 2nd Quarter 2022)
September 2022	✓			
October 2022				
November 2022				✓ (for 3rd Quarter 2022)
December 2022	✓	✓	✓	
January 2023				
February 2023				✓ (for 4 <sup>th</sup> Quarter 2022)
March 2023	✓			
April 2023				
May 2023				✓ (for 1st Quarter 2023)
June 2023	✓	✓	✓	

Notes:

1. Liquid phase hydrocarbon (LPH) Monitoring and System Operation and Maintenance (O&M) will be conducted at a quarterly frequency through December 2023, per Maryland Department of the Environment (MDE) approval and implementation of the *Remedial Recovery and Monitoring Plan*.
2. Groundwater sampling will be conducted on a semi-annual basis at monitoring wells CSXT MW-3, CSXT MW-6R, CSXT MW-22, CSXT MW-24, CSXT MW-25, CSXT MW-29, CSXT MW-43, CSXT MW-51, CSXT MW-64, CSXT MW-69, CSXT MW-71, NPS MW-1, NPS MW-2, NPS MW-4, NPS MW-5, NPS MW-13, NPS MW-14, NPS MW-16, and NPS MW-18.  
The analytic parameters include full-suite volatile organic compounds (VOCs), including fuel oxygenates, using United States Environmental Protection Agency (USEPA) Method 8260 and total petroleum hydrocarbons/diesel-range organics (total petroleum hydrocarbons – diesel range organics [TPH-DRO]) by USEPA by Method 8015B. Field parameters including temperature, pH, and specific conductivity shall be measured during the well purging process. Groundwater samples will be collected after three well volumes have been purged from each well with new polyethylene bailers, provided there is no measurable LPH present in the well at the time of sampling.
3. Site-wide synoptic water level and LPH measurements and manual LPH recovery will be conducted on a quarterly basis.
4. Forty-five monitoring and extraction wells were redeveloped prior to the First Quarter 2018 groundwater sampling event in March 2018.
5. CSXT MW-21, CSXT MW-31, and CSXT MW-50 well abandonments, NSZD and transmissivity testing were be conducted during the Second Quarter 2018. Additional NSZD and transmissivity testing will be evaluated and conducted as needed in the Third and Fourth Quarters of 2018.
6. Any proposed modifications to *Remedial Recovery and Monitoring Plan* will be submitted to the MDE for approval prior to implementation.

**Table 3**  
**Well Gauging and LPH Recovery Summary (Second Quarter 2022)**  
**Quarterly Report - Second Quarter 2022**  
**Brunswick Yard, Brunswick, Maryland**



Well ID	Well Casing Diameter (inches)	Measurement Date	Top of Casing Elevation (feet amsl)	DTLPH (feet bTOC)	DTW (feet bTOC)	LPH Thickness (feet)	Groundwater Elevation (feet amsl)	Corrected Groundwater Elevation (feet amsl)	LPH Recovery Method	LPH Present in Well Casing (gallons)	LPH Present in Filter Pack/Borehole (gallons)	LPH Recovered (mL)	LPH Recovered (gallons)	Total LPH Recovered Since July 2009 (gallons)
CS-1	4	06-13-2022	239.38	--	8.00	--	231.38	231.38		--	--		0.00	0.02
CS-2	4	06-13-2022	236.90	--	5.50	--	231.40	231.40		--	--		0.00	0.00
CS-3	4	06-13-2022	235.13	--	5.52	--	229.61	229.61		--	--		0.00	0.00
CS-4	4	06-13-2022	234.81	--	5.30	--	229.51	229.51		--	--		0.00	0.00
CS-5	4	06-13-2022	232.45	--	3.70	--	228.75	228.75		--	--		0.00	0.00
EW-1	6	06-13-2022	243.50	--	7.66	--	235.84	235.84		--	--		0.00	0.03
EW-2	6	06-13-2022	243.30	--	11.25	--	232.05	232.05		--	--		0.00	0.04
EW-3	6	06-13-2022	242.70	11.51	12.22	0.71	230.48	231.10	PP	1.04	0.32	500	0.13	18.42
EW-4	6	06-13-2022	243.20	--	10.90	--	232.30	232.30		--	--		0.00	0.36
EW-5	6	06-13-2022	243.60	12.43	12.80	0.37	230.80	231.12	PP	0.54	0.17	500	0.13	6.09
EW-6	6	06-13-2022	242.40	--	12.12	--	230.28	230.28		--	--		0.00	0.02
EW-7	6	06-13-2022	243.20	--	12.00	--	231.20	231.20		--	--		0.00	0.52
MW-01	4	06-13-2022	247.20	--	13.19	--	234.01	234.01		--	--		0.00	0.67
MW-02	4	06-13-2022	247.55	--	14.33	--	233.22	233.22		--	--		0.00	0.56
MW-03	4	06-13-2022	248.38	--	15.90	--	232.48	232.48		--	--		0.00	0.30
MW-04R	4	06-13-2022	244.68	--	12.41	--	232.27	232.27		--	--		0.00	2.51
MW-05	4	06-13-2022	245.37	--	13.21	--	232.16	232.16		--	--		0.00	1.66
MW-06R	4	06-13-2022	233.63	--	5.70	--	227.93	227.93		--	--		0.00	1.59
MW-08	4	06-13-2022	235.51	--	12.08	--	223.43	223.43		--	--		0.00	1.46
MW-09	4	06-13-2022	237.54	--	13.12	--	224.42	224.42		--	--		0.00	1.25
MW-20	4	06-13-2022	236.27	--	8.80	--	227.47	227.47		--	--		0.00	0.39
MW-22	4	06-13-2022	245.65	--	12.88	--	232.77	232.77		--	--		0.00	0.03
MW-23	4	06-13-2022	244.57	--	11.45	--	233.12	233.12		--	--		0.00	0.30
MW-24	4	06-13-2022	244.50	--	8.78	--	235.72	235.72		--	--		0.00	1.59
MW-25	4	06-13-2022	245.36	--	13.30	--	232.06	232.06		--	--		0.00	0.06
MW-26	4	06-13-2022	244.67	12.57	13.01	0.44	231.66	232.04	PP	0.29	0.11	750	0.20	5.09
MW-27	4	06-13-2022	244.29	--	8.98	--	235.31	235.31		--	--		0.00	4.10
MW-28	4	06-13-2022	244.23	--	12.24	--	231.99	231.99		--	--		0.00	0.17
MW-29	4	06-13-2022	243.74	--	13.25	--	230.49	230.49		--	--		0.00	0.00
MW-30	4	06-13-2022	245.46	--	12.99	--	232.47	232.47		--	--		0.00	0.00
MW-32	4	06-13-2022	245.80	--	12.80	--	233.00	233.00		--	--		0.00	5.82
MW-33	4	06-13-2022	244.26	--	12.16	--	232.10	232.10		--	--		0.00	0.01
MW-35	4	06-13-2022	245.80	--	13.69	--	232.11	232.11		--	--		0.00	0.00
MW-37	4	06-13-2022	245.06	12.85	14.10	1.25	230.96	232.05	PP	0.82	0.32	11400	3.01	34.58
MW-38	4	06-13-2022	246.09	4.85	5.00	0.15	241.09	241.22		0.10	0.04	NR	0.00	88.67
MW-41	4	06-13-2022	246.07	13.2	15.76	2.56	230.31	232.54	PP	1.67	0.66	15100	3.99	188.81
MW-43	4	06-13-2022	238.90	--	7.00	--	231.90	231.90		--	--		0.00	0.00
MW-49	4	06-13-2022	246.02	5.4	6.40	1.00	239.62	240.49	PP	0.65	0.26	13250	3.50	55.06
MW-51	4	06-13-2022	249.34	--	12.74	--	236.60	236.60		--	--		0.00	0.00
MW-52	4	06-13-2022	247.00	--	10.45	--	236.55	236.55		--	--		0.00	0.00
MW-53	2	06-13-2022	246.10	--	16.03	--	230.07	230.07		--	--		0.00	192.30
MW-54	2	06-13-2022	245.60	12.89	15.56	2.67	230.04	232.36	PP	0.44	0.31	3785	1.00	144.28
MW-55	2	06-13-2022	246.12	13.18	16.28	3.10	229.84	232.54	PP	0.51	0.35	4500	1.19	296.73
MW-56	2	06-13-2022	244.63	11.9	16.50	4.60	228.13	232.13	PP	0.75	0.53	3400	0.90	193.79

**Table 3**  
**Well Gauging and LPH Recovery Summary (Second Quarter 2022)**  
**Quarterly Report - Second Quarter 2022**  
**Brunswick Yard, Brunswick, Maryland**

Well ID	Well Casing Diameter (inches)	Measurement Date	Top of Casing Elevation (feet amsl)	DTLPH (feet bTOC)	DTW (feet bTOC)	LPH Thickness (feet)	Groundwater Elevation (feet amsl)	Corrected Groundwater Elevation (feet amsl)	LPH Recovery Method	LPH Present in Well Casing (gallons)	LPH Present in Filter Pack/Borehole (gallons)	LPH Recovered (mL)	LPH Recovered (gallons)	Total LPH Recovered Since July 2009 (gallons)
MW-57	2	06-13-2022	244.52	12.05	14.73	2.68	229.79	232.12	PP	0.44	0.31	750	0.20	45.55
MW-58	2	06-13-2022	244.42	12.34	12.50	0.16	231.92	232.06		0.03	0.02	NR	0.00	3.88
MW-59	4	06-13-2022	246.07	--	11.70	--	234.37	234.37		--	--		0.00	17.78
MW-60	4	06-13-2022	245.57	12.79	14.00	1.21	231.57	232.62	PP	0.79	0.31	11400	3.01	36.20
MW-61	4	06-13-2022	245.63	12.96	13.00	0.04	232.63	232.66		--	--		0.00	4.29
MW-62	4	06-13-2022	246.08	13.51	13.70	0.19	232.38	232.55		0.12	0.05	NR	0.00	7.58
MW-63	4	06-13-2022	246.25	13.5	16.15	2.65	230.10	232.41	PP	1.73	0.68	19000	5.02	122.25
MW-64	4	06-13-2022	245.45	--	4.32	--	241.13	241.13		--	--		0.00	0.00
MW-65	4	06-13-2022	245.54	--	4.70	--	240.84	240.84		--	--		0.00	1.77
MW-67	4	06-13-2022	245.83	13.13	13.49	0.36	232.34	232.65	PP	0.24	0.09	2270	0.60	6.43
MW-68	4	06-13-2022	245.09	--	4.13	--	240.96	240.96		--	--		0.00	0.00
MW-69	4	06-13-2022	244.98	--	13.00	--	231.98	231.98		--	--		0.00	0.01
MW-70	4	06-13-2022	245.57	--	13.20	--	232.37	232.37		--	--		0.00	0.35
MW-71	4	06-13-2022	246.21	--	13.85	--	232.36	232.36		--	--		0.00	0.00
NPS MW-01	4	06-13-2022	234.94	--	6.40	--	228.54	228.54		--	--		0.00	0.00
NPS MW-02	4	06-13-2022	237.19	--	5.38	--	231.81	231.81		--	--		0.00	0.00
NPS MW-03	4	06-13-2022	234.50	--	5.90	--	228.60	228.60		--	--		0.00	0.00
NPS MW-04	4	06-13-2022	238.50	--	7.00	--	231.50	231.50		--	--		0.00	0.00
NPS MW-05	4	06-13-2022	235.69	--	8.21	--	227.48	227.48		--	--		0.00	0.00
NPS MW-10	2	06-13-2022	237.73	--	6.15	--	231.58	231.58		--	--		0.00	0.00
NPS MW-12	2	06-13-2022	242.61	--	10.72	--	231.89	231.89		--	--		0.00	0.00
NPS MW-13	2	06-13-2022	234.72	--	11.35	--	223.37	223.37		--	--		0.00	0.00
NPS MW-14	2	06-13-2022	234.74	--	5.80	--	228.94	228.94		--	--		0.00	0.00
NPS MW-15	2	06-13-2022	234.38	--	6.35	--	228.03	228.03		--	--		0.00	0.00
NPS MW-16	2	06-13-2022	240.09	--	9.44	--	230.65	230.65		--	--		0.00	0.00
NPS MW-17	2	06-13-2022	242.71	--	14.81	--	227.90	227.90		--	--		0.00	0.00
NPS MW-18	4	06-13-2022	234.15	--	2.28	--	231.87	231.87		--	--		0.00	0.00
									Total:	10.15	4.52		22.88	1493.36

Notes:

amsl - above mean sea level

bTOC - below top of well casing

DTLPH- depth to liquid phase hydrocarbons

NR - LPH recovery not attempted

NM - Not Measured

DTW - depth to water

LPH - liquid phase hydrocarbon

PP - Peristaltic pump

\* - Borehole diameter was estimated to be 2 inches larger than the well casing at each location, and a LPH specific yeild value of 0.175 (per ATSM E2856) was used to calculate borehole/filter pack storage capacity.

**Table 4**  
**GSI Mann-Kendall TPH-DRO Concentration Trend Summary (2018-2022)**  
**Quarterly Report – Second Quarter 2022**  
**Brunswick Yard, Brunswick, Maryland**



Well	Constituent of Concern	Number of Samples	Number of Detections	Coefficient of Variation	Mann-Kendall (S)	Confidence in Trend	Concentration Trend	Ratio of Detections	Corrected Concentration Trend
CSXT MW-03	PHC as Diesel Fuel	7	4	0.274	-12	0.949	PD	57%	PD
CSXT MW-22	PHC as Diesel Fuel	7	7	0.480	3	0.614	NT	100%	NT
CSXT MW-24	PHC as Diesel Fuel	5	4	0.627	-10	0.992	D	80%	D
CSXT MW-25	PHC as Diesel Fuel	7	7	0.422	-13	0.965	D	100%	D
CSXT MW-29	PHC as Diesel Fuel	4	4	0.684	-6	0.958	D	100%	D
CSXT MW-43	PHC as Diesel Fuel	7	7	0.577	-13	0.965	D	100%	D
CSXT MW-51	PHC as Diesel Fuel	7	5	0.619	-13	0.965	D	71%	D
CSXT MW-64	PHC as Diesel Fuel	7	7	1.163	-6	0.764	NT	100%	NT
CSXT MW-69	PHC as Diesel Fuel	8	8	0.420	-15	0.958	D	100%	D
CSXT MW-71	PHC as Diesel Fuel	7	5	0.509	-8	0.845	S	71%	S
NPS MW-01	PHC as Diesel Fuel	7	7	0.549	-9	0.881	S	100%	S
NPS MW-02	PHC as Diesel Fuel	7	7	0.505	-15	0.985	D	100%	D
NPS MW-05	PHC as Diesel Fuel	7	7	0.398	-13	0.965	D	100%	D
NPS MW-13	PHC as Diesel Fuel	7	6	0.572	-15	0.985	D	86%	D
NPS MW-14	PHC as Diesel Fuel	7	5	1.116	-12	0.949	PD	71%	PD
NPS MW-16	PHC as Diesel Fuel	7	7	0.434	-13	0.965	D	100%	D
NPS MW-18	PHC as Diesel Fuel	7	6	0.417	-13	0.965	D	86%	D

ND All results were non-detect

NT Sufficient data for analysis, but no statistical trend resolved

D Decreasing

PD Probably Decreasing

S Stable

PI Probably Increasing

I Increasing

N/A Data not analyzed due to insufficient number of detections

**Table 5**  
**Groundwater Analytical Summary**  
**Quarterly Report – Second Quarter 2022**  
**Brunswick Yard, Brunswick, Maryland**

Location ID:		CSXT MW-03 6/14/2022	CSXT MW-06R 6/15/2022	CSXT MW-22 6/14/2022	CSXT MW-24 6/14/2022	CSXT MW-25 6/14/2022	CSXT MW-29 6/14/2022	CSXT MW-43 6/15/2022	CSXT MW-51 6/14/2022	CSXT MW-64 6/14/2022	CSXT MW-69 6/14/2022	
Date Collected:	Sample Name:	Units	CSXT MW- 3 (061422)	CSXT MW- 6R (061522)	CSXT MW- 22 (061422)	CSXT MW- 24(061422)	CSXT MW- 25(061422)	CSXT MW- 29(061422)	CSXT MW- 43 (061522)	CSXT MW- 51 (061422)	CSXT MW- 64(061422)	CSXT MW- 69(061422)
<b>Detected Volatile Organics</b>												
Ethylbenzene	µg/L	< 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
Methylcyclohexane	µg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<b>0.86 J</b>	<b>0.70 J</b>	< 1.0 U	< 1.0 U
Toluene	µg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<b>0.51 J</b>	< 1.0 U	< 1.0 U	< 1.0 U
Cyclohexane	µg/L	< 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
Total Xylenes	µg/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene	µg/L	< 1.0 U	< 1.0 U	<b>0.61 J</b>	< 1.0 U	< 1.0 U						
<b>Detected TPH</b>												
C10-C28 Petroleum Hydrocarbons	mg/L	< 0.13 U	<b>2.1</b>	<b>23</b>	<b>0.54</b>	<b>0.76</b>	<b>1.0</b>	<b>0.44</b>	< 0.13 U	<b>0.54</b>	<b>7.5</b>	
C6-C10 Petroleum Hydrocarbons	mg/L	< 0.1 U	<b>0.63</b>	<b>0.44</b>	< 0.1 U	<b>0.18</b>	<b>0.24</b>	<b>0.069 J</b>	<b>0.52</b>	<b>0.34</b>	< 0.1 U	

Notes:

µg/L - microgram per liter

ID - identification

mg/L - milligram per liter

TPH - total petroleum hydrocarbons

**Bolded** values indicate detections.

**Table 5**  
**Groundwater Analytical Summary**  
**Quarterly Report – Second Quarter 2022**  
**Brunswick Yard, Brunswick, Maryland**

Location ID:		CSXT MW-69 6/14/2022	CSXT MW-71 6/14/2022	NPS MW-01 6/14/2022	NPS MW-02 6/15/2022	NPS MW-04 6/15/2022	NPS MW-05 6/14/2022	NPS MW-13 6/14/2022	NPS MW-14 6/14/2022	NPS MW-16 6/15/2022	NPS MW-18 6/15/2022
Date Collected:		DUP- 01 (061422)	CSXT MW-71 (061422)	NPS MW- 1 (061422)	NPS MW- 2 (061522)	NPS MW- 4 (061522)	NPS MW- 5 (061422)	NPS MW- 13 (061422)	NPS MW- 14 (061422)	NPS MW- 16 (061522)	NPS MW- 18 (061522)
Sample Name:	Units										
<b>Detected Volatile Organics</b>											
Ethylbenzene	µg/L	< 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
Methylcyclohexane	µg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<b>3.3</b>	< 1.0 U				
Toluene	µg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<b>1.6</b>	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Cyclohexane	µg/L	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<b>2.3</b>	< 1.0 U				
Total Xylenes	µg/L	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
Isopropylbenzene	µg/L	< 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
<b>Detected TPH</b>											
C10-C28 Petroleum Hydrocarbons	mg/L	<b>5.1</b>	< 0.13 U	< 0.14 U	<b>0.23</b>	<b>5.2</b>	<b>0.25</b>	< 0.13 U	< 0.13 U	<b>0.87</b>	< 0.13 U
C6-C10 Petroleum Hydrocarbons	mg/L	<b>0.05 J</b>	< 0.1 U	< 0.1 U	< 0.1 U	< 0.1 U	<b>1.2</b>	< 0.1 U	< 0.1 U	< 0.1 U	<b>0.048 J</b>

Notes:

µg/L - microgram per liter

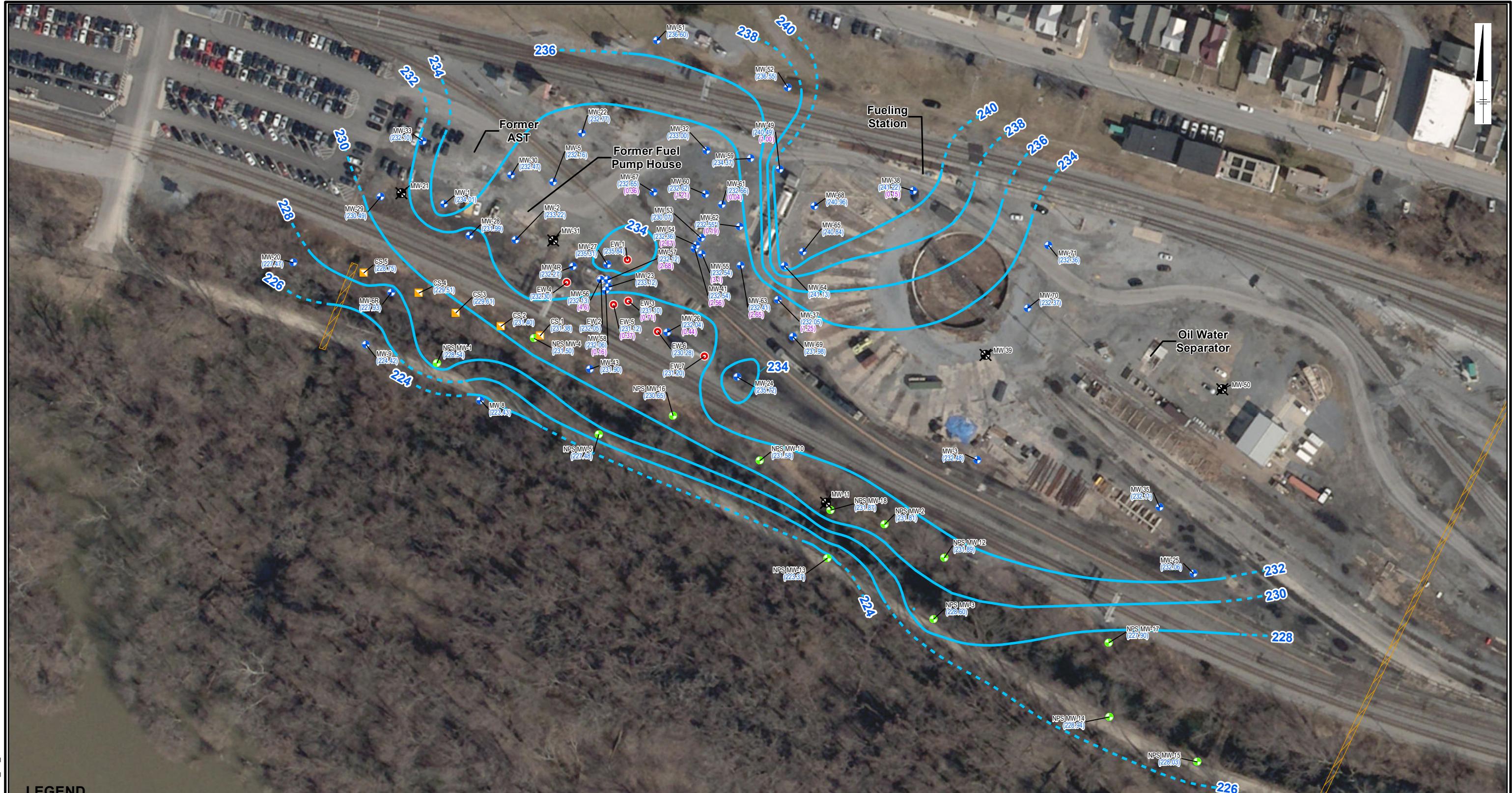
ID - identification

mg/L - milligram per liter

TPH - total petroleum hydrocarbons

**Bolded** values indicate detections.

# Figures



## **LEGEND**

- National Park Service Monitoring Well
  - CSXT Monitoring Well
  - Extraction Well
  - Collection Sump
  - Abandoned Monitoring Well
  - Stone Drainage Culvert

Groundwater Elevation Contour (Dashed Where Inferred)

(232.04) Groundwater Elevation in Feet Mean Sea Level (MSL)

[0.44] Liquid Phase Hydrocarbon Thickness (FT)

(NM) Not Measured

(\*) Not Used in Contouring Due to Anomalous Value

A horizontal scale bar with tick marks at 0, 100, and 200. The text "SCALE IN FEET" is centered below the bar.

**CSX TRANSPORTATION, INC.  
BRUNSWICK, MARYLAND**

# GROUNDWATER ELEVATION CONTOURS AND LPH THICKNESSES MAP

## JUNE 13, 2022

Coordinate System: NAD 1983 StatePlane Maryland FIPS 1900 Feet  
Imagery Source: ESRI World Imagery 2015



#### LEGEND

- National Park Service Monitoring Well
  - CSXT Monitoring Well
  - Existing Canal
  - ▨ Stone Drainage Culvert
- [0.44] Total Petroleum Hydrocarbon Diesel Range Organics (TPH-DRO) Concentration - JUNE 2021 (mg/L)

#### Notes:

- mg/L - milligrams per Liter
- [] - Duplicate sample results shown in brackets
- J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
- [--] - Not accessible during sampling event

0 100 200  
SCALE IN FEET

CSX TRANSPORTATION, INC.  
BRUNSWICK, MARYLAND

TPH-DRO CONCENTRATION IN GROUNDWATER  
JUNE 2022

# **Attachment 1**

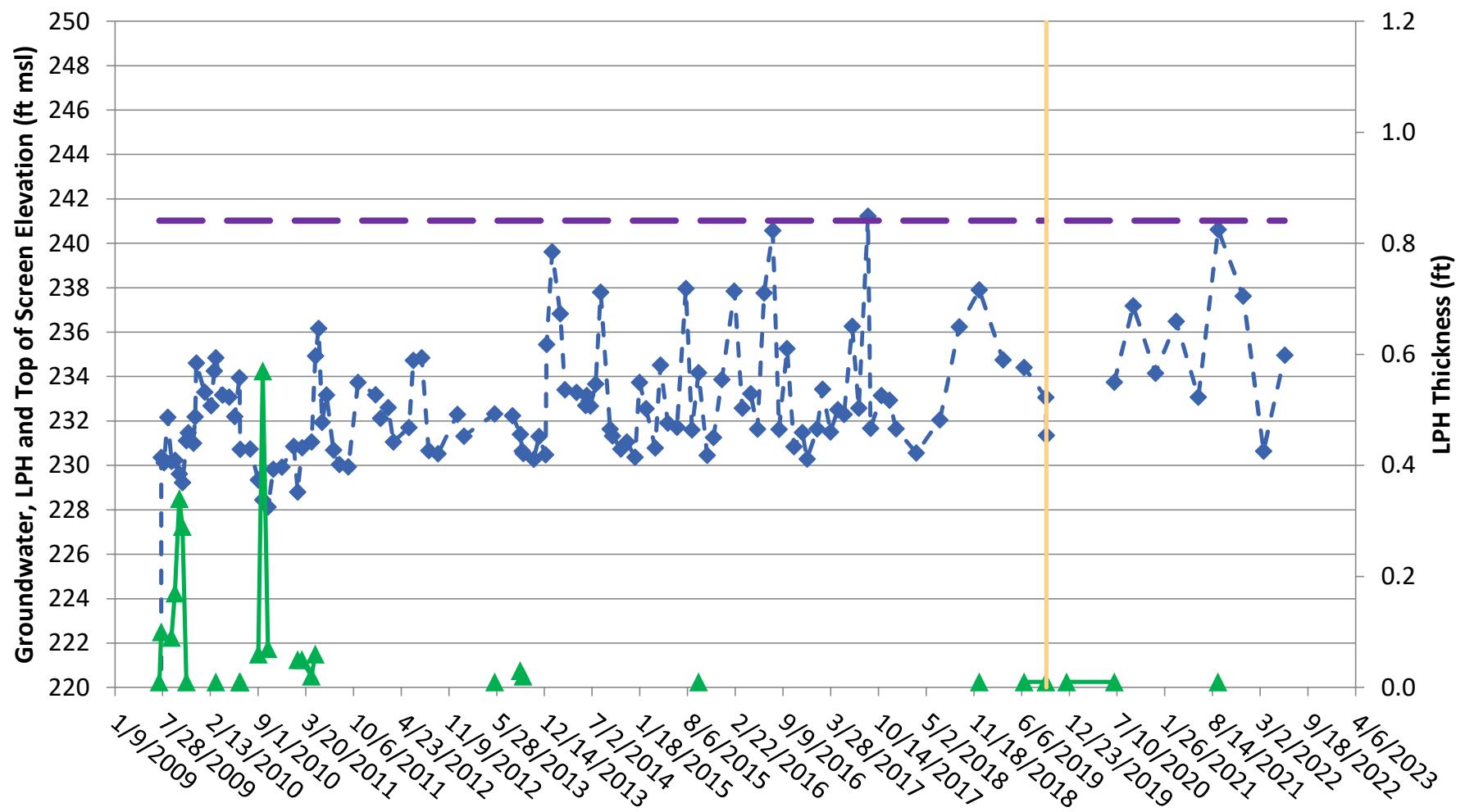
**Hydrographs – Groundwater Elevations and LPH Thickness**

## LPH and Groundwater Elevations and LPH Recovery: MW-2

July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland

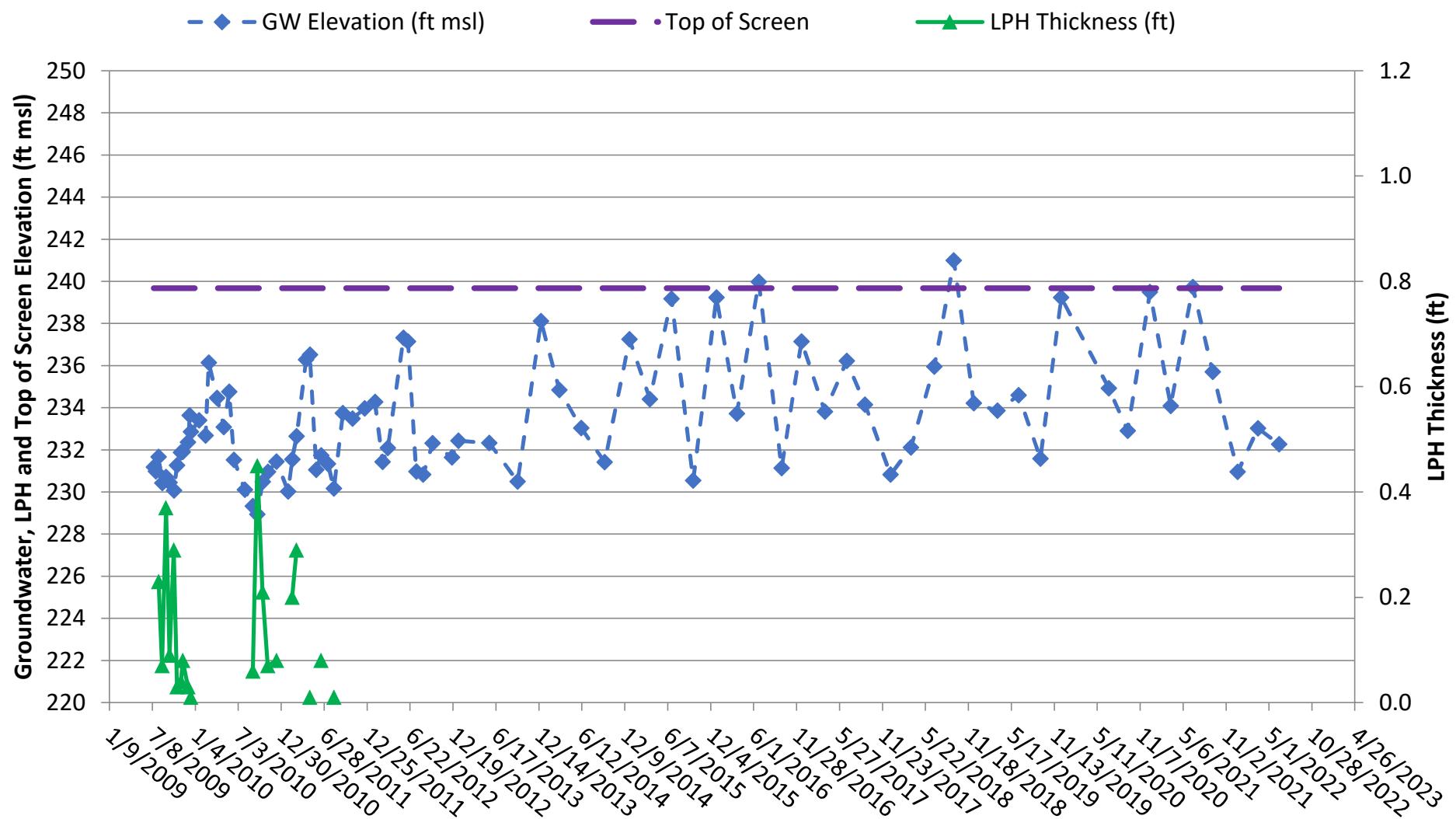
—♦— GW Elevation (ft msl)    —•— Top of Screen    —▲— LPH Thickness (ft)    ——— Qualitative Transmissivity Test



## LPH and Groundwater Elevations and LPH Recovery: MW-4R

July 12, 2009 through June 13, 2022

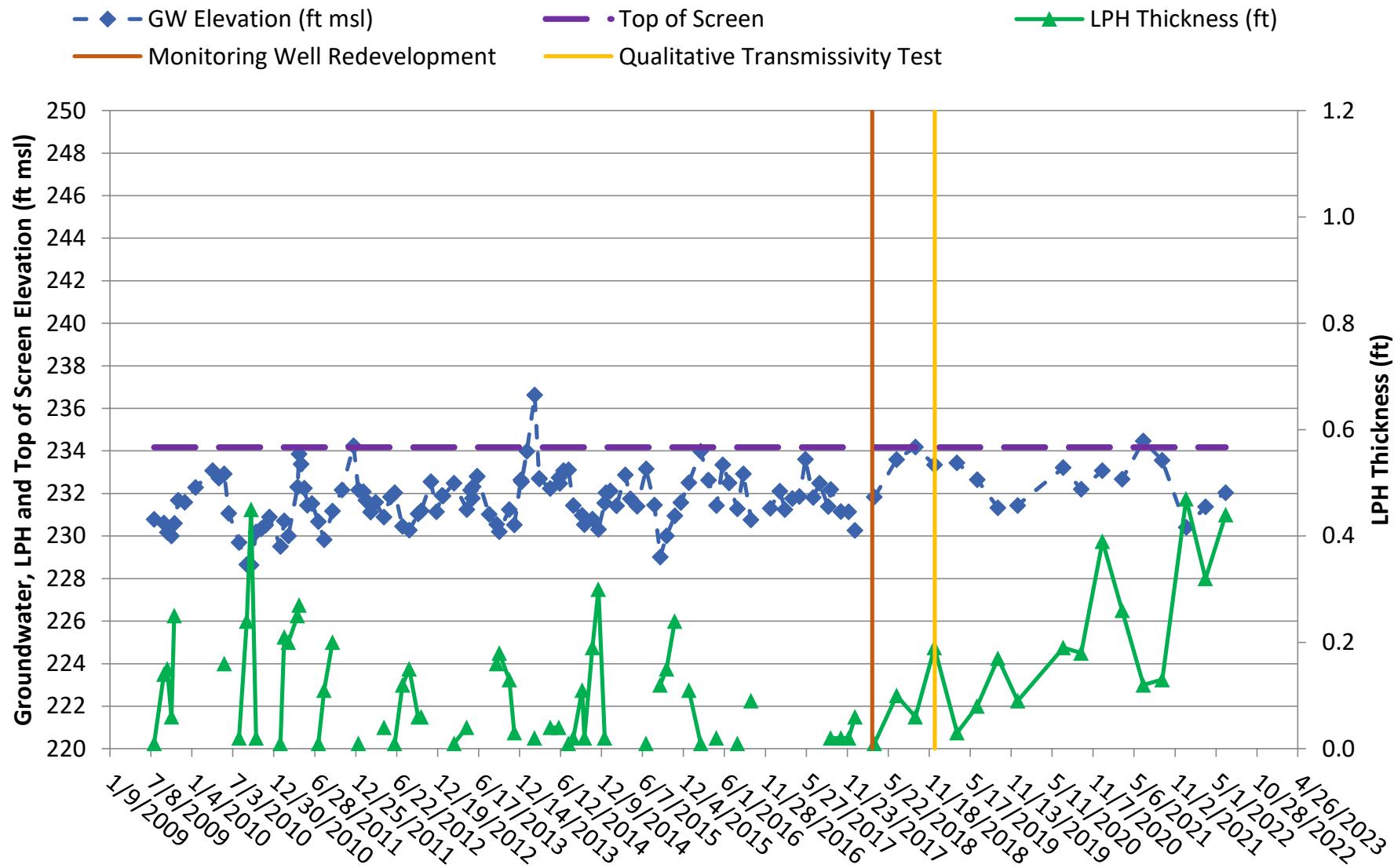
CSXT Brunswick Yard, Brunswick, Maryland



## LPH and Groundwater Elevations and LPH Recovery: MW-26

July 12, 2009 through June 13, 2022

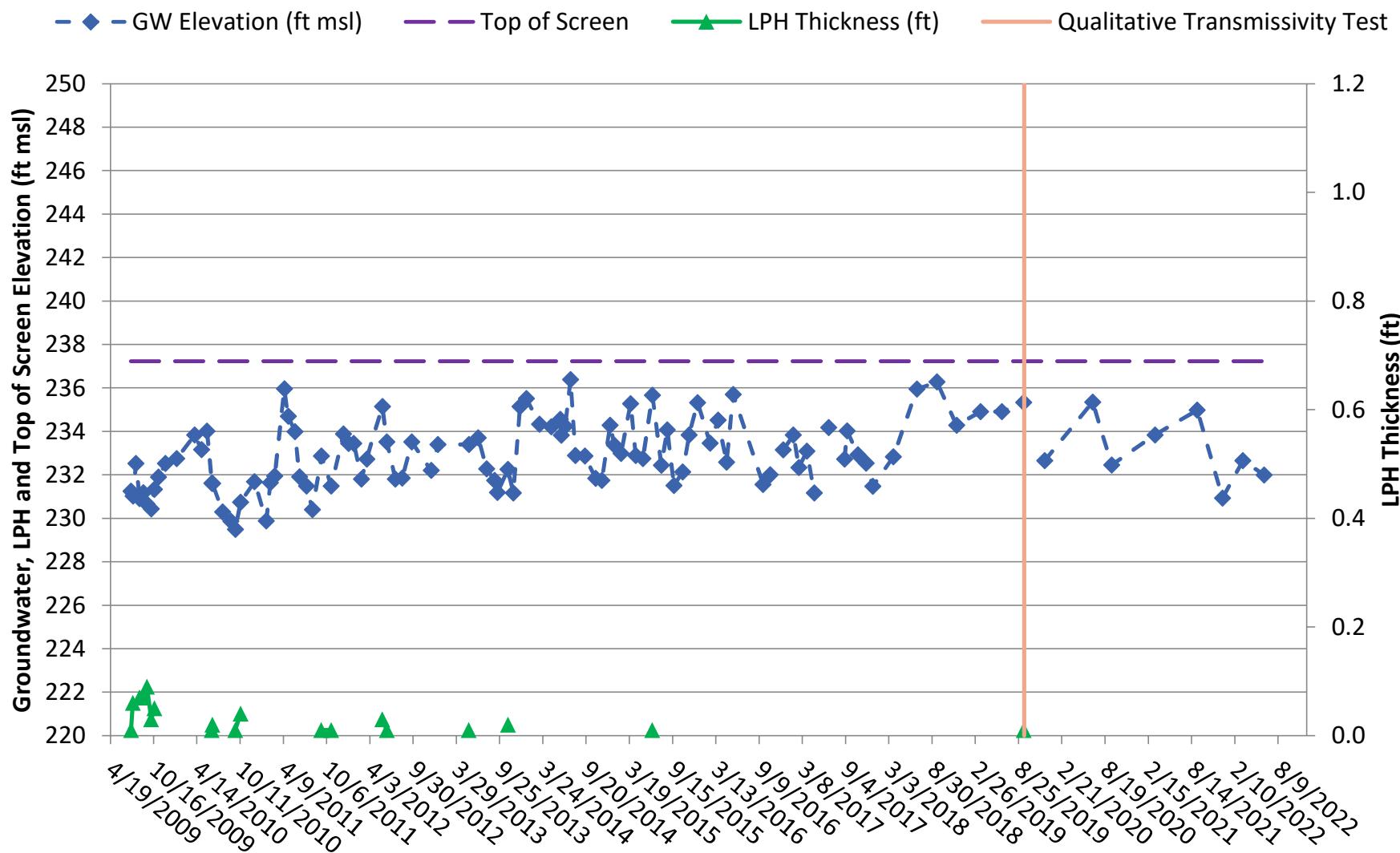
CSXT Brunswick Yard, Brunswick, Maryland



## LPH and Groundwater Elevations and LPH Recovery: MW-28

July 12, 2009 through June 13, 2022

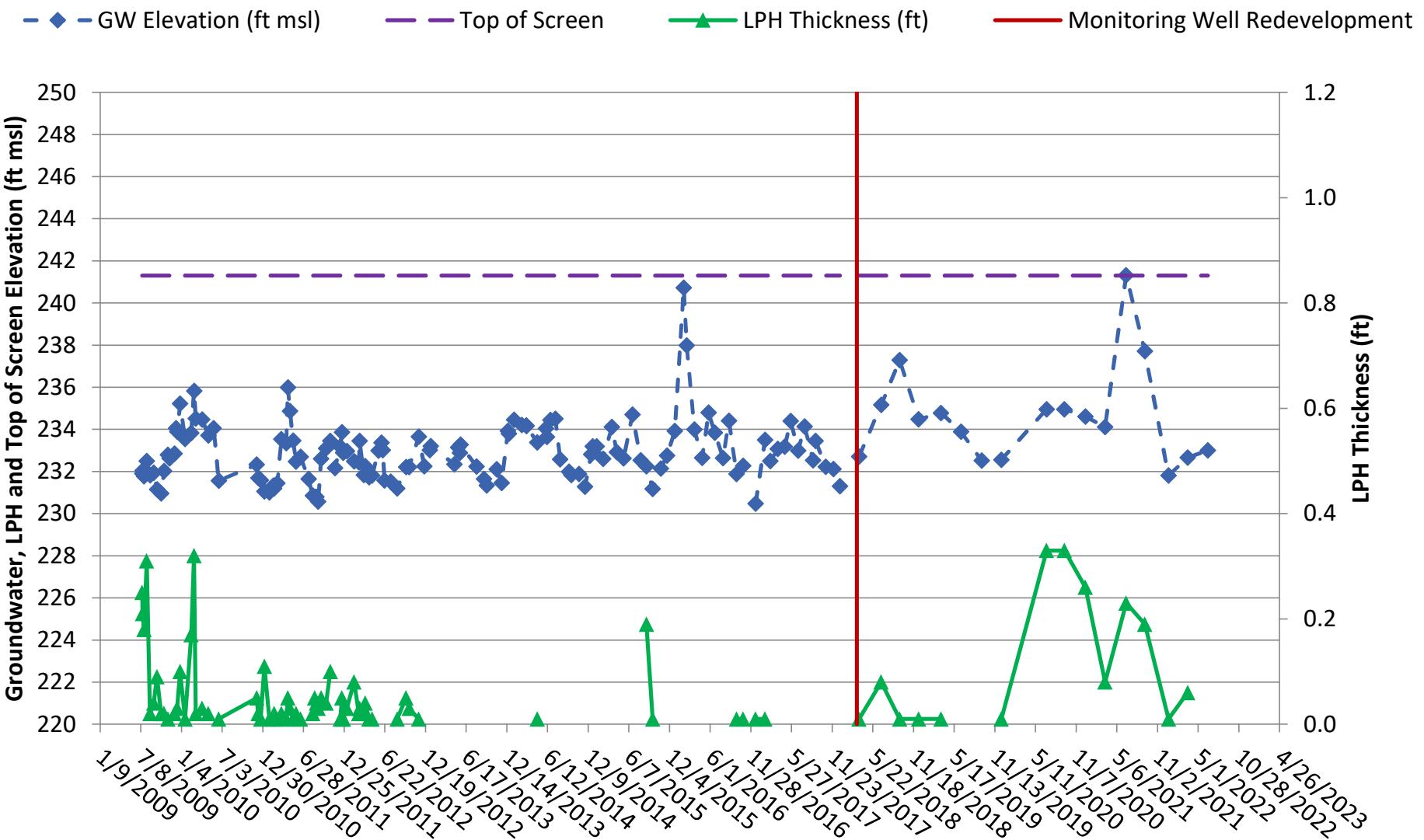
CSXT Brunswick Yard, Brunswick, Maryland



## LPH and Groundwater Elevations and LPH Recovery: MW-32

July 12, 2009 through June 13, 2022

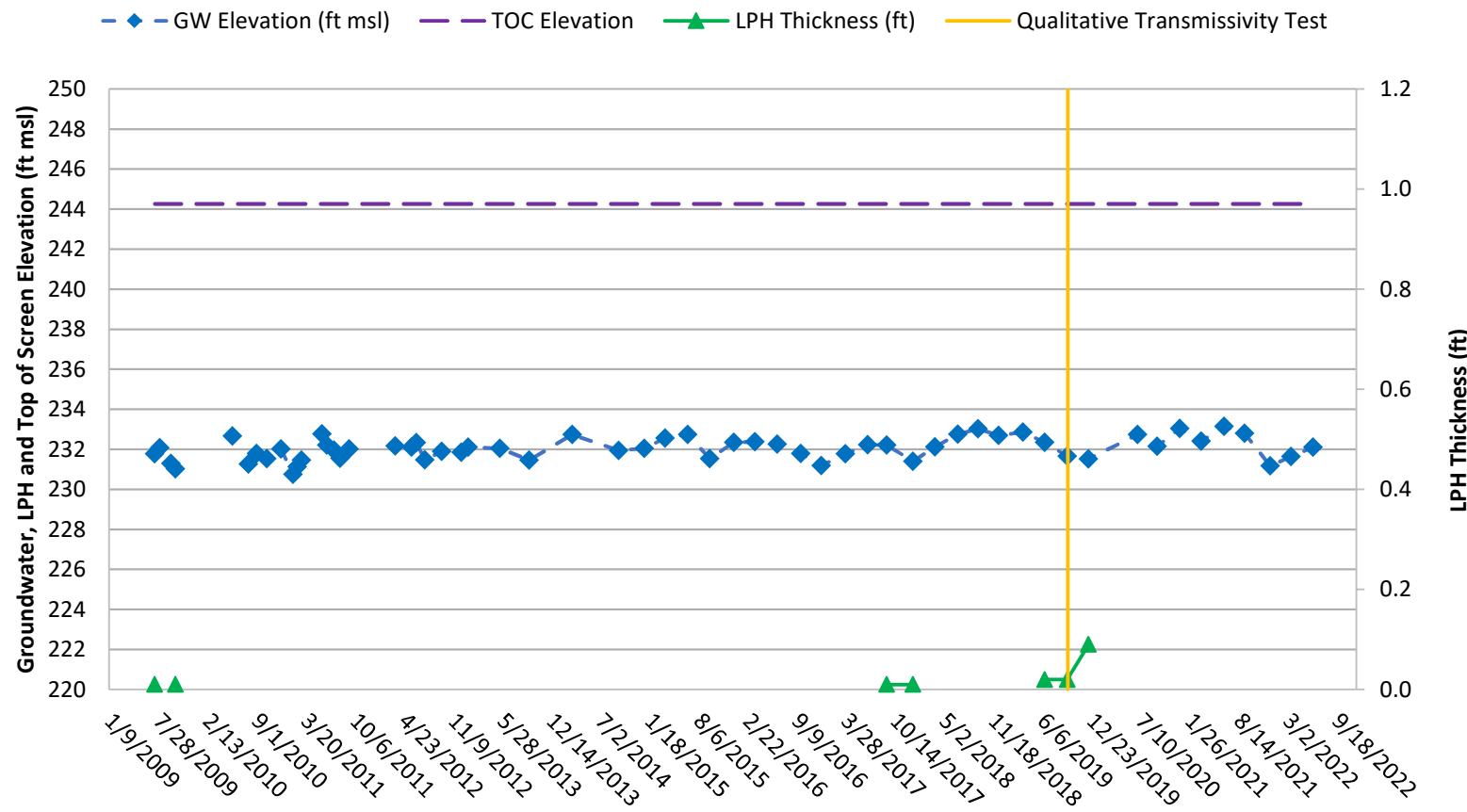
CSXT Brunswick Yard, Brunswick, Maryland



**LPH and Groundwater Elevations and LPH Recovery: MW-33**

**July 12, 2009 through June 13, 2022**

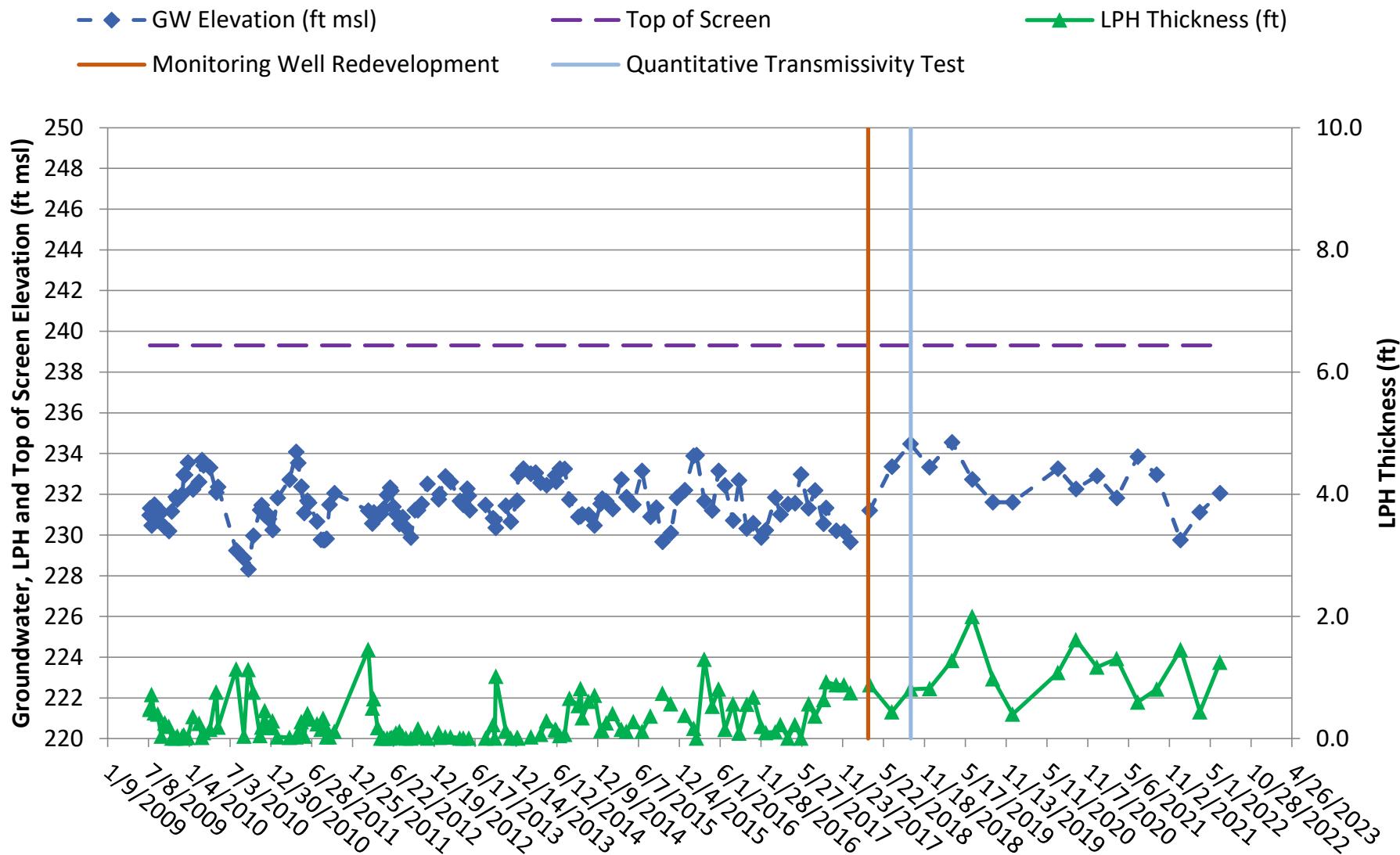
**CSXT Brunswick Yard, Brunswick, Maryland**



## LPH and Groundwater Elevations and LPH Recovery: MW-37

July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland

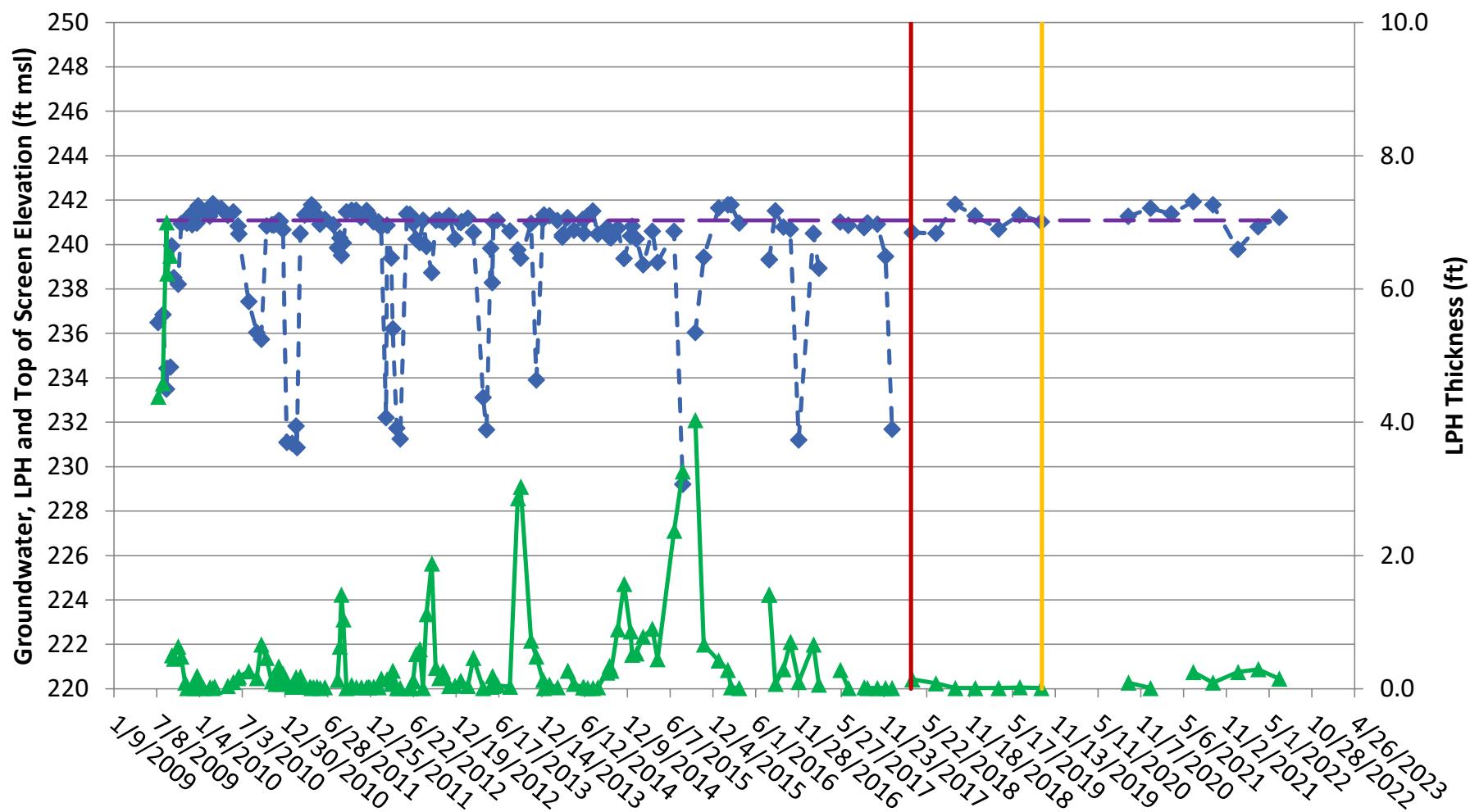


## LPH and Groundwater Elevations and LPH Recovery: MW-38

July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland

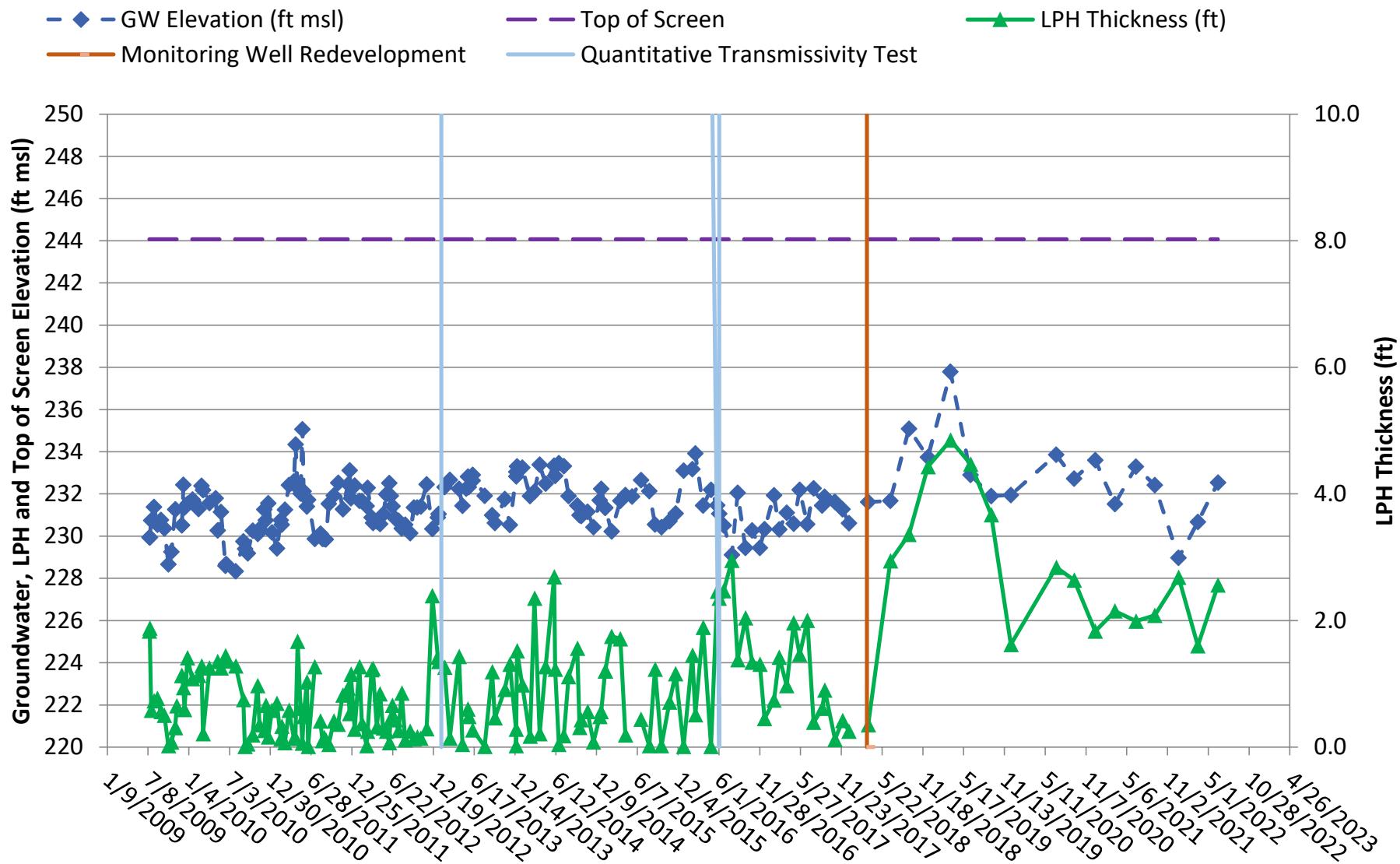
—♦— GW Elevation (ft msl)  
—●— Monitoring Well Redevelopment  
—■— Top of Screen  
—○— Qualitative Transmissivity Test  
—▲— LPH Thickness (ft)



## LPH and Groundwater Elevations and LPH Recovery: MW-41

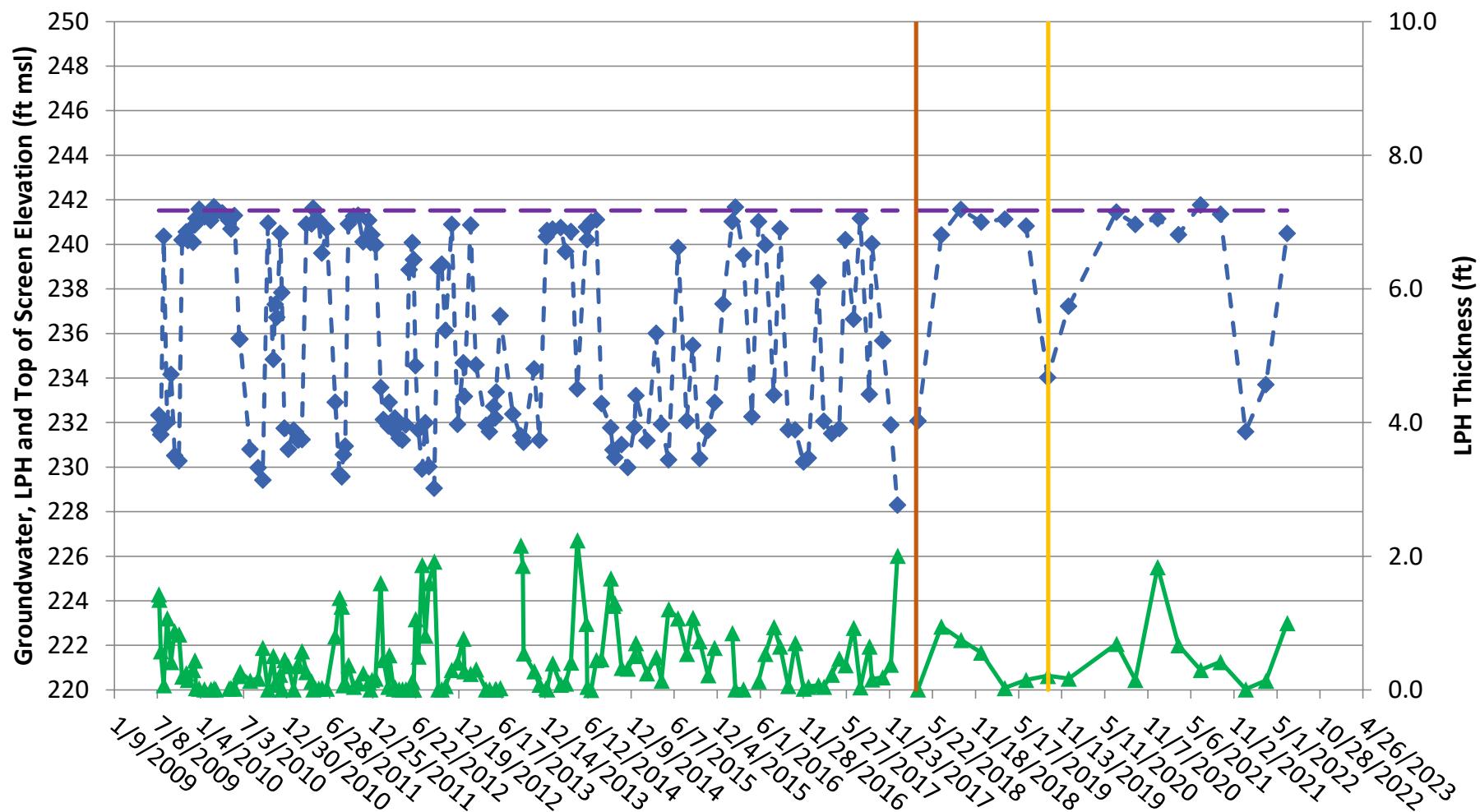
July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland



**LPH and Groundwater Elevations and LPH Recovery: MW-49**  
**July 12, 2009 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**

—◆— GW Elevation (ft msl)      —●— Top of Screen  
— Monitoring Well Redevelopment      — Qualitative Transmissivity Test

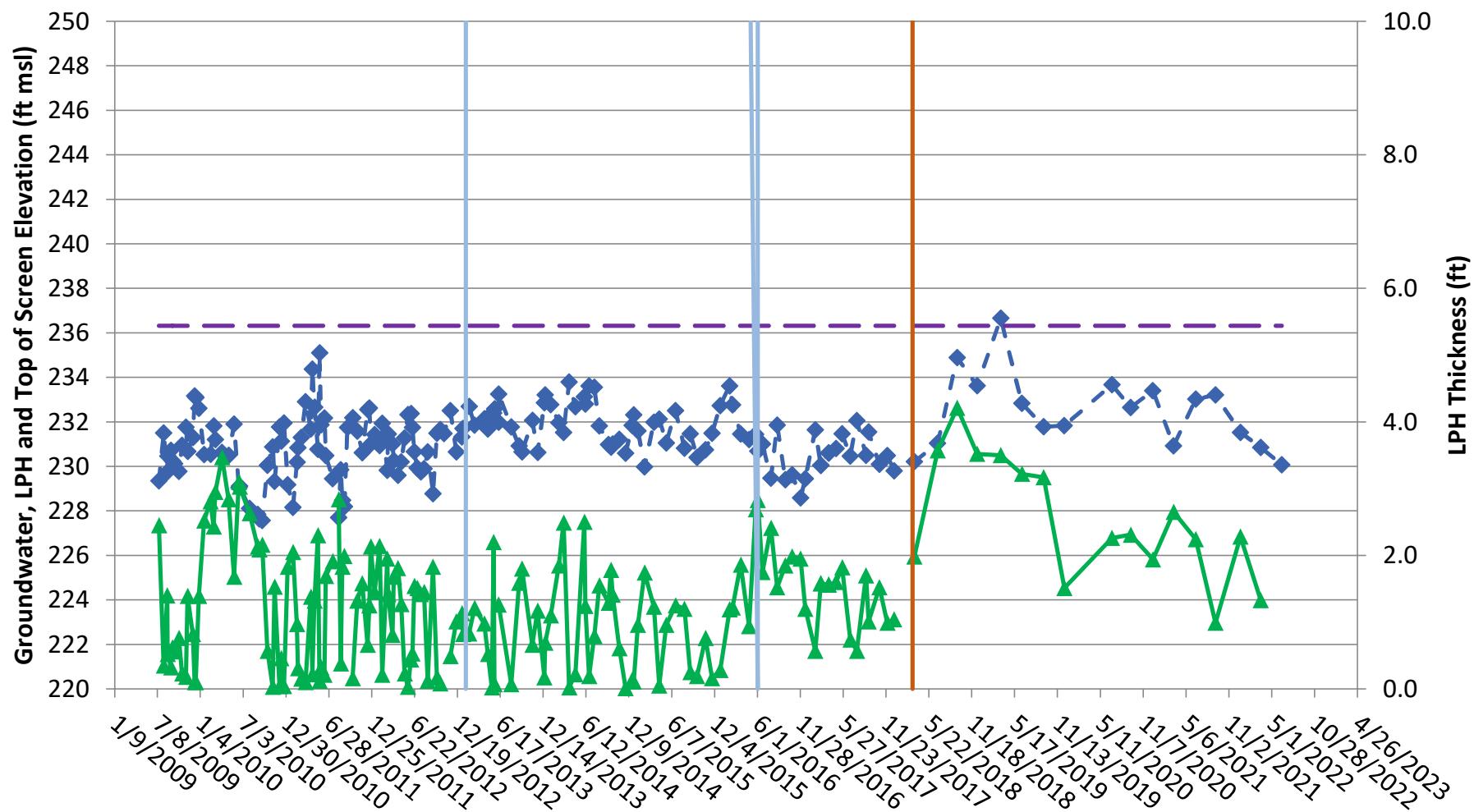


## LPH and Groundwater Elevations and LPH Recovery: MW-53

July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland

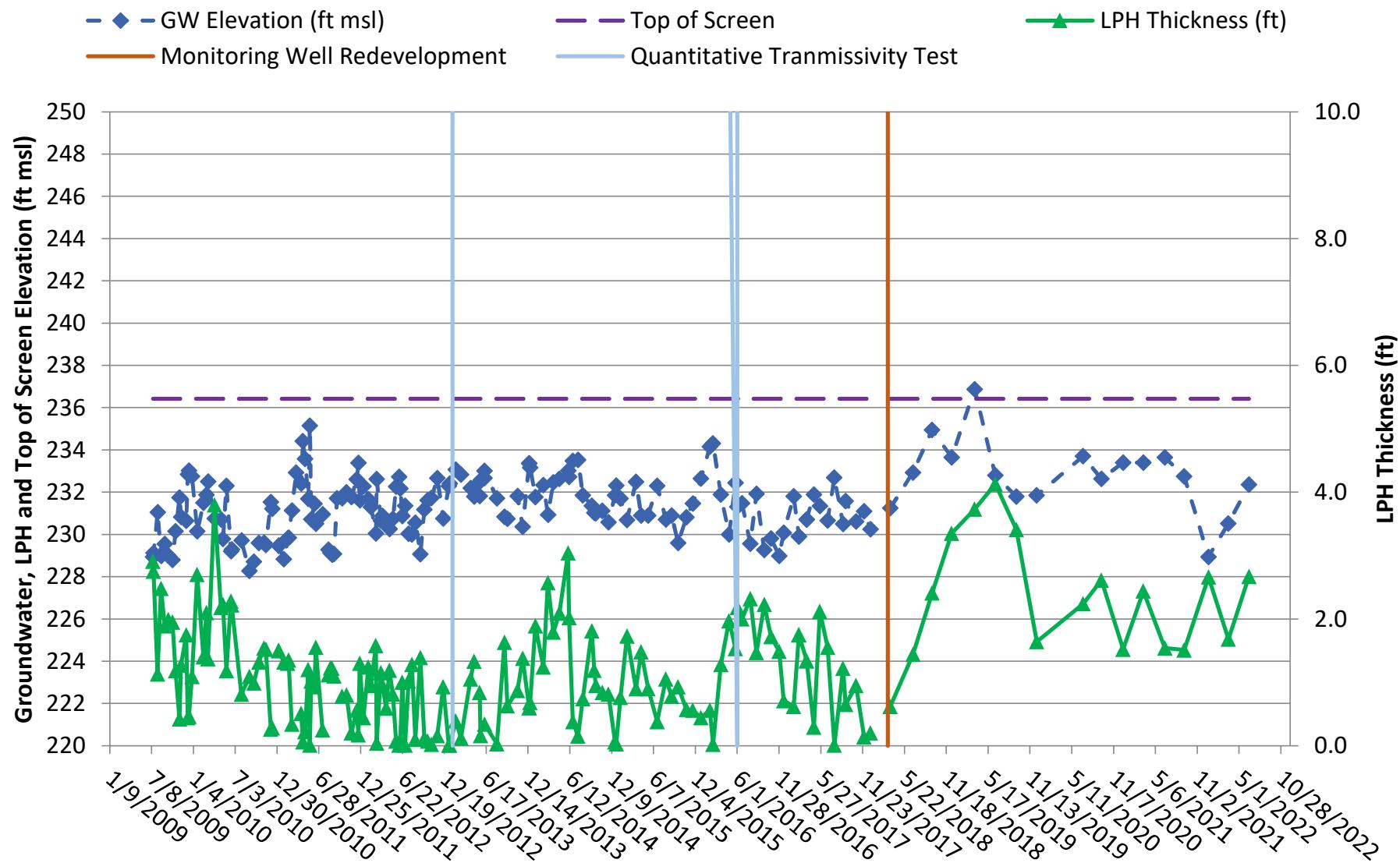
—◆— GW Elevation (ft msl)  
— Monitoring Well Redevelopment  
— Top of Screen  
— Quantitative Transmissivity Test  
—▲— LPH Thickness (ft)



## LPH and Groundwater Elevations and LPH Recovery: MW-54

July 12, 2009 through June 13, 2022

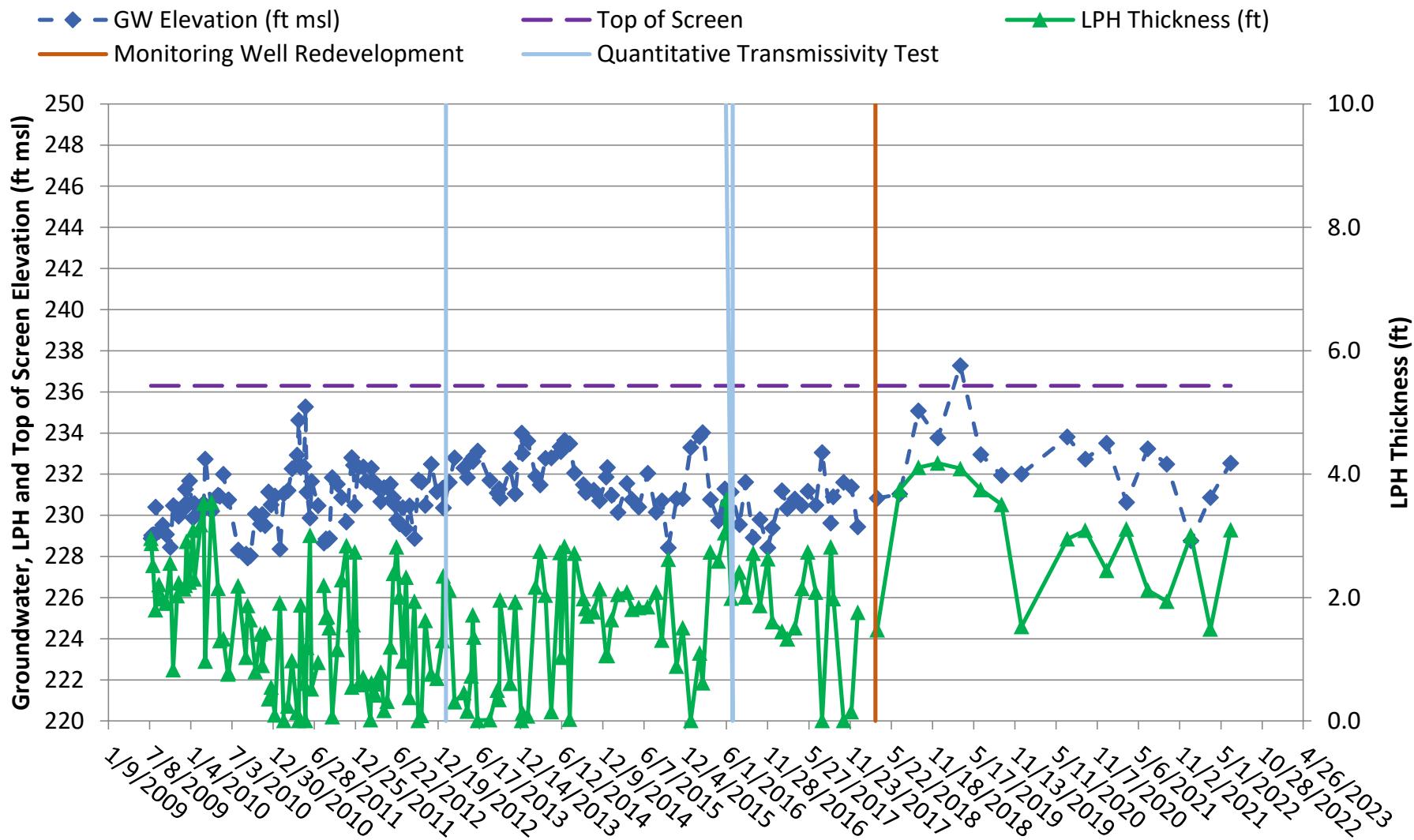
CSXT Brunswick Yard, Brunswick, Maryland



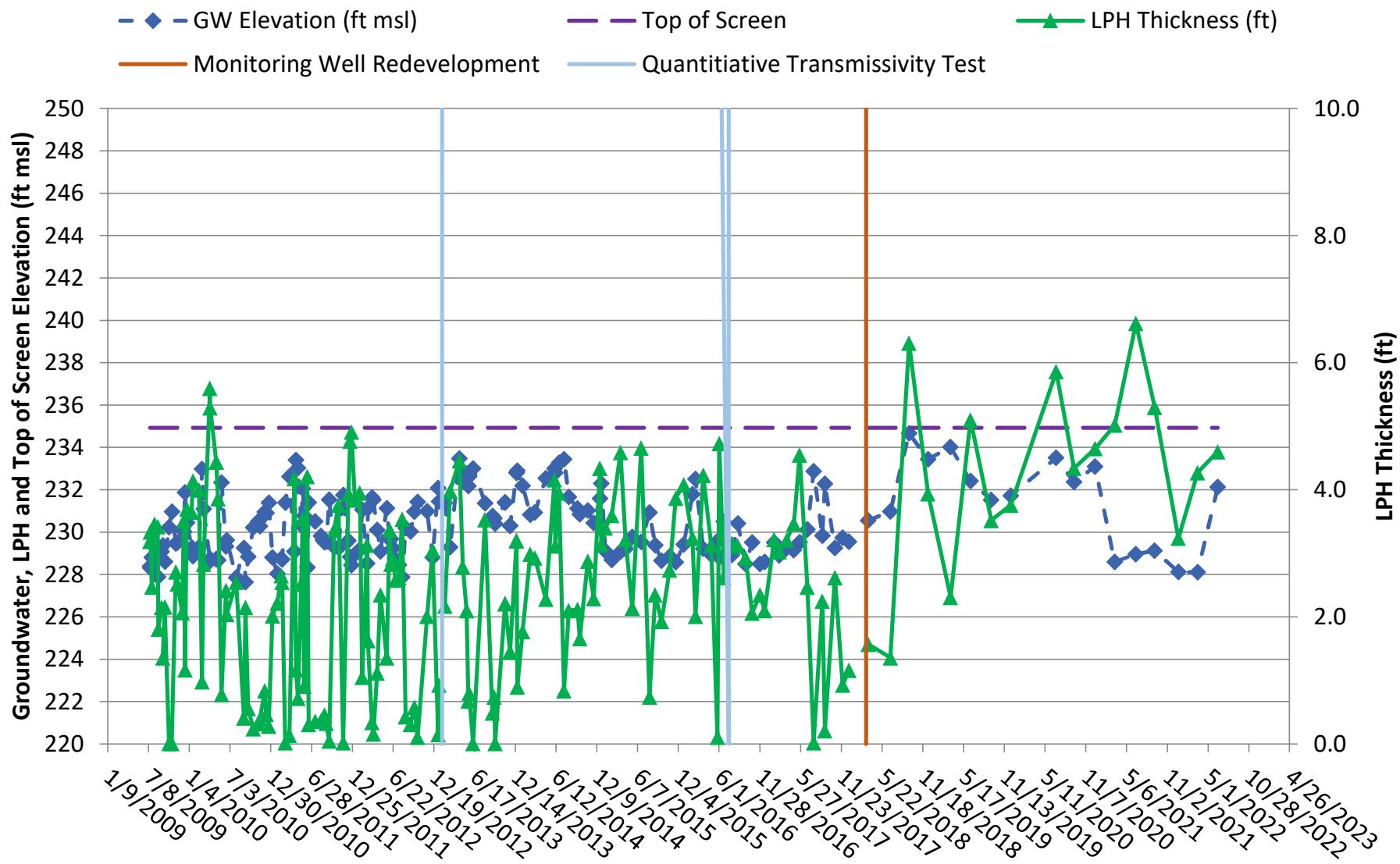
## LPH and Groundwater Elevations and LPH Recovery: MW-55

July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland



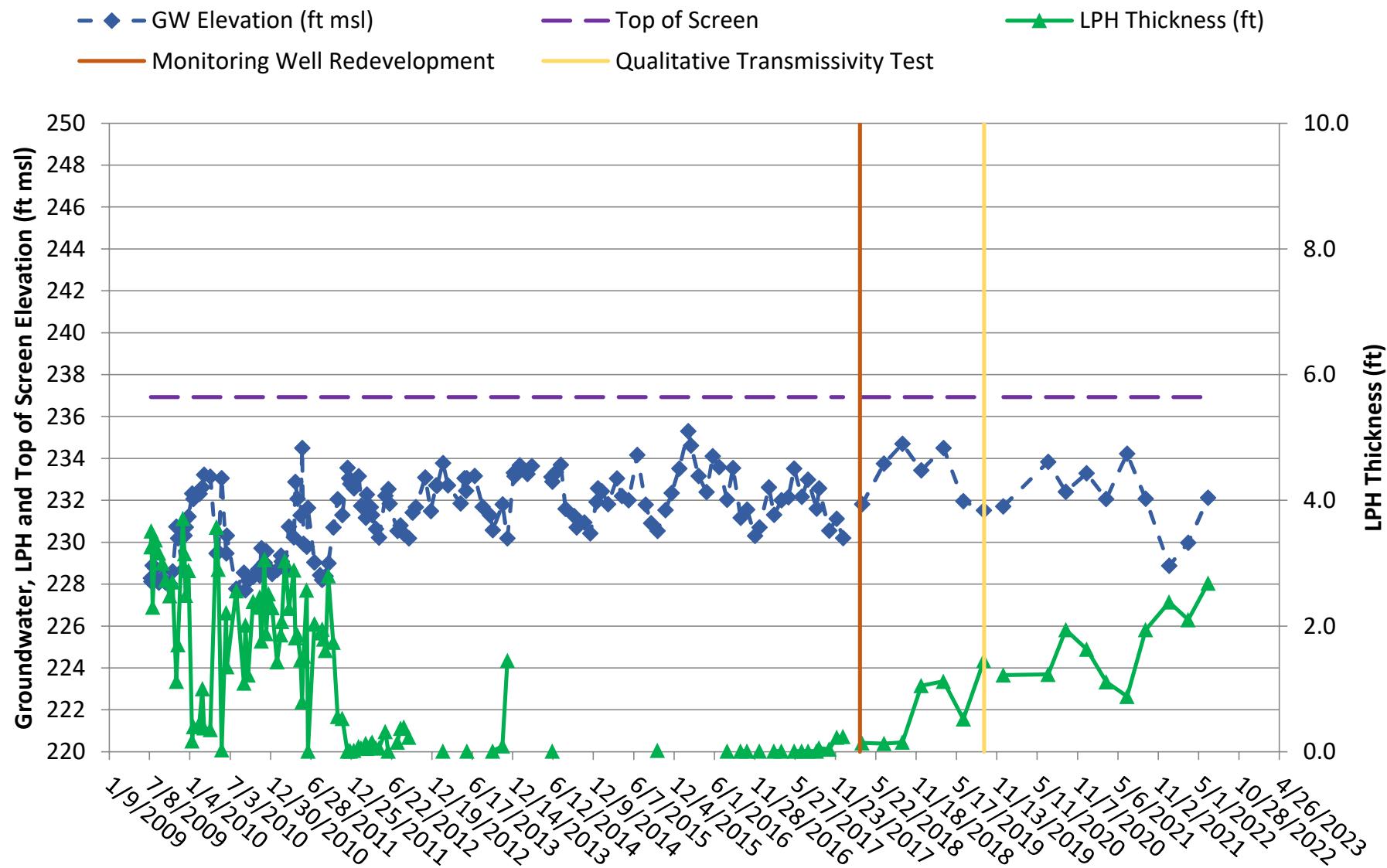
**LPH and Groundwater Elevations and LPH Recovery: MW-56**  
**July 2009 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**



## LPH and Groundwater Elevations and LPH Recovery: MW-57

July 12, 2009 through June 13, 2022

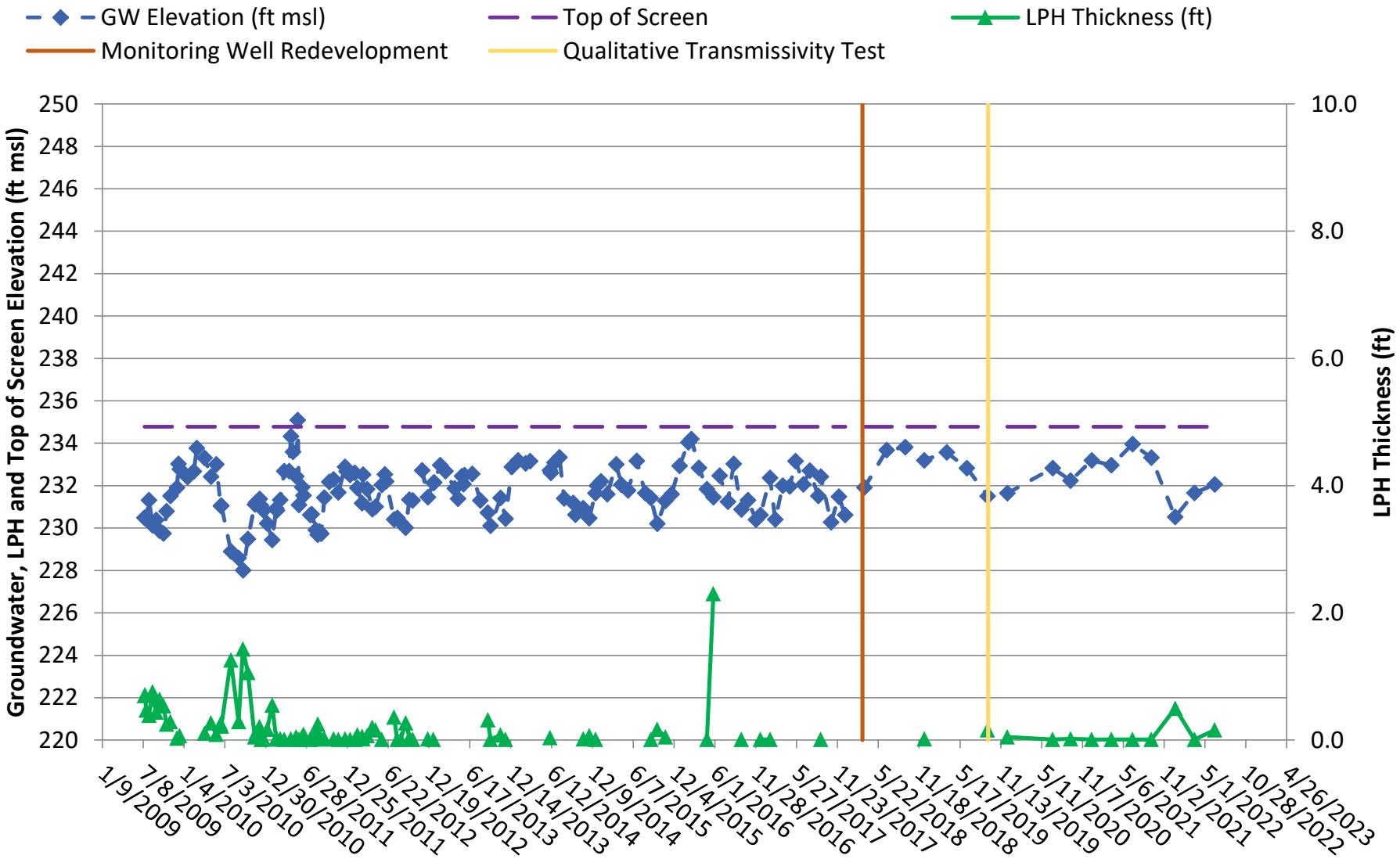
CSXT Brunswick Yard, Brunswick, Maryland



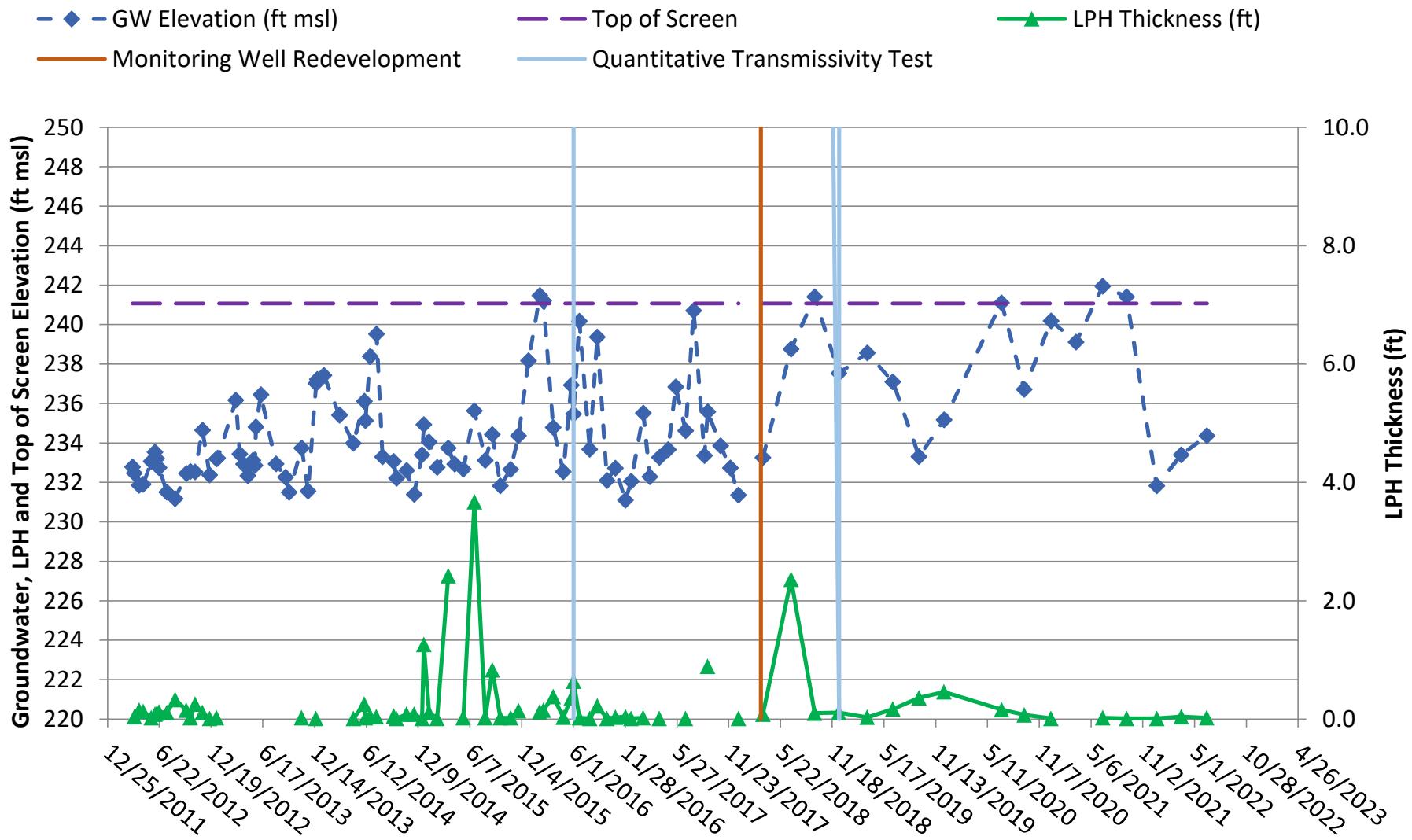
## LPH and Groundwater Elevations and LPH Recovery: MW-58

July 12, 2009 through June 13, 2022

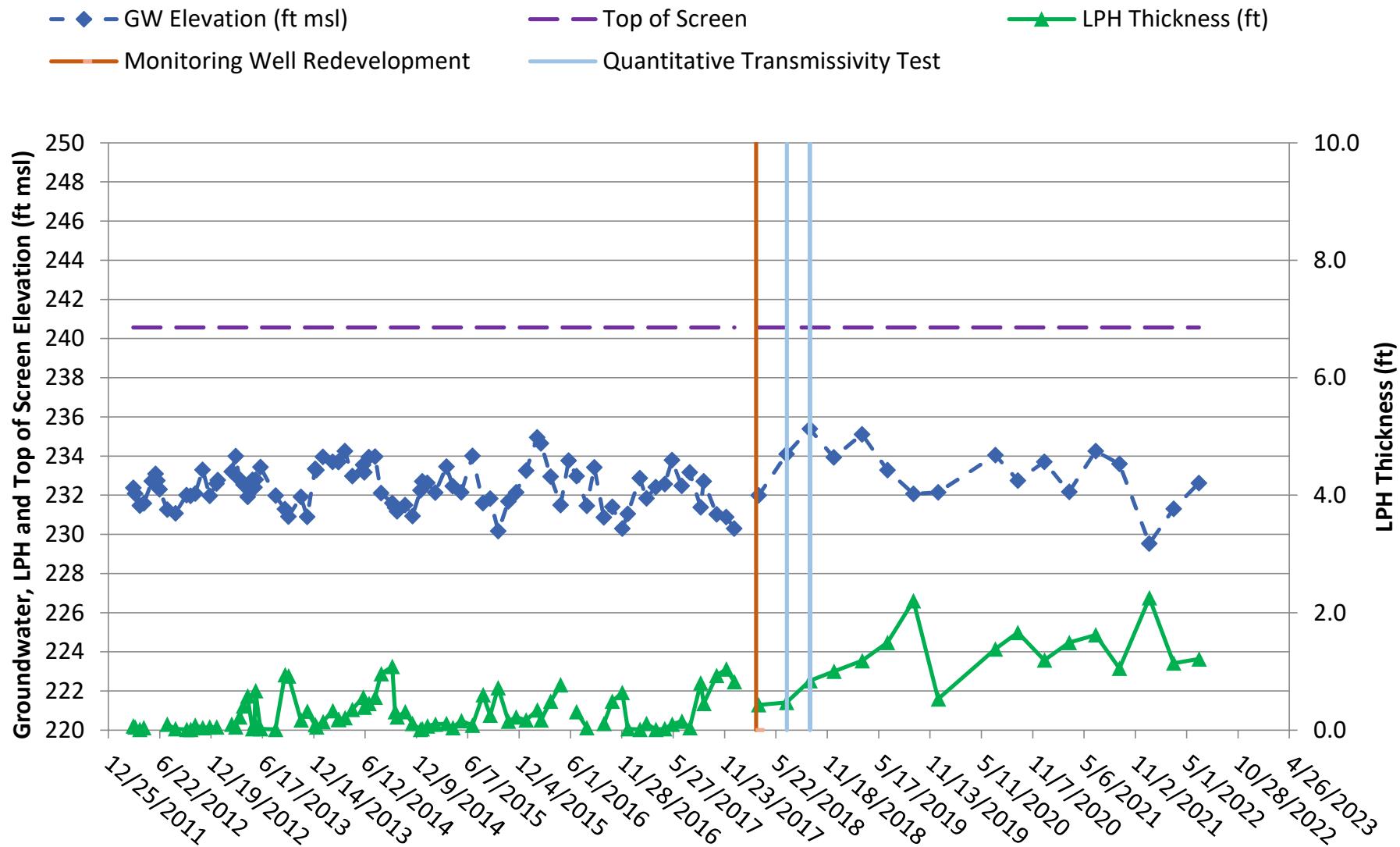
CSXT Brunswick Yard, Brunswick, Maryland



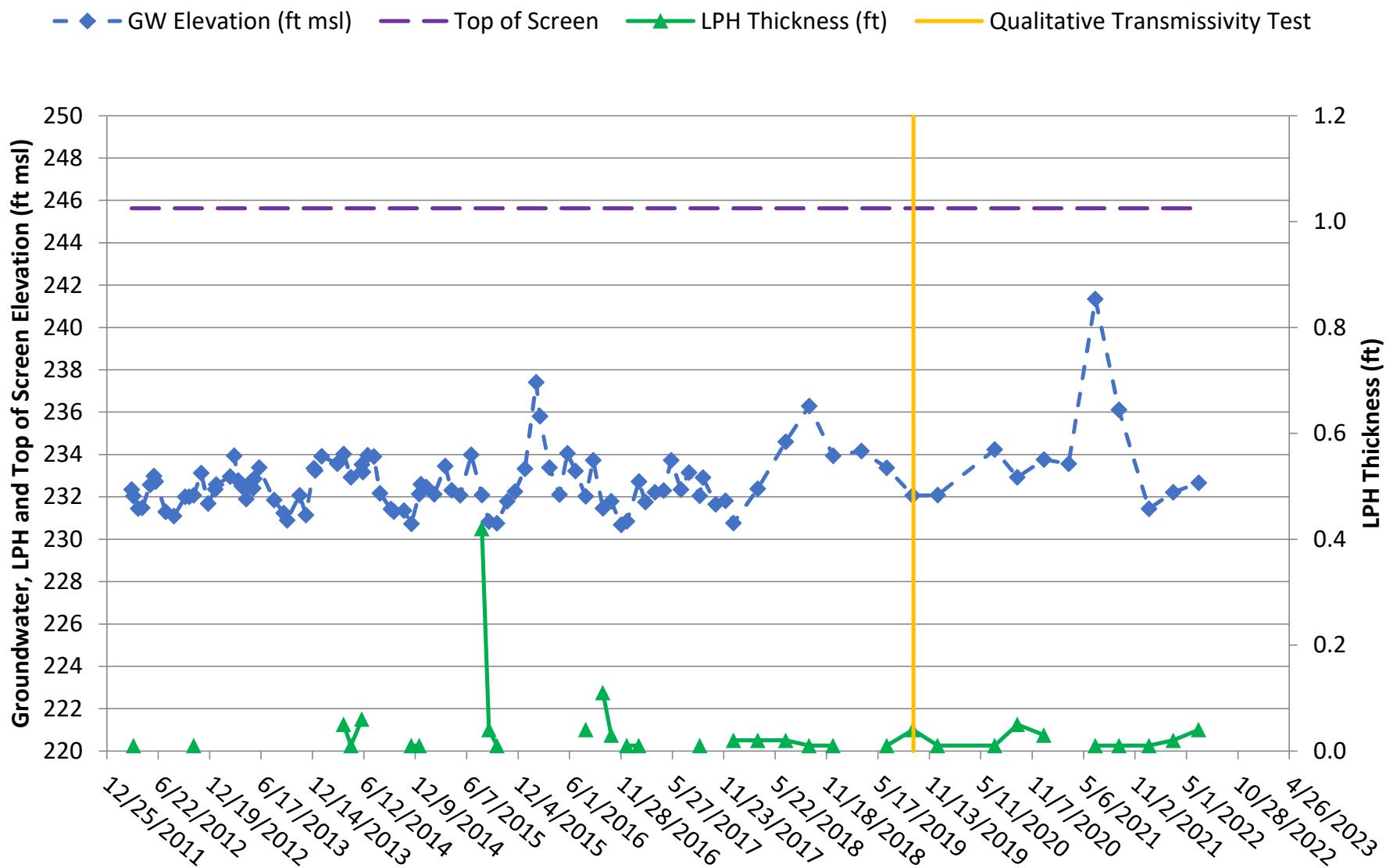
**LPH and Groundwater Elevations and LPH Recovery: MW-59**  
**March 21, 2012 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**



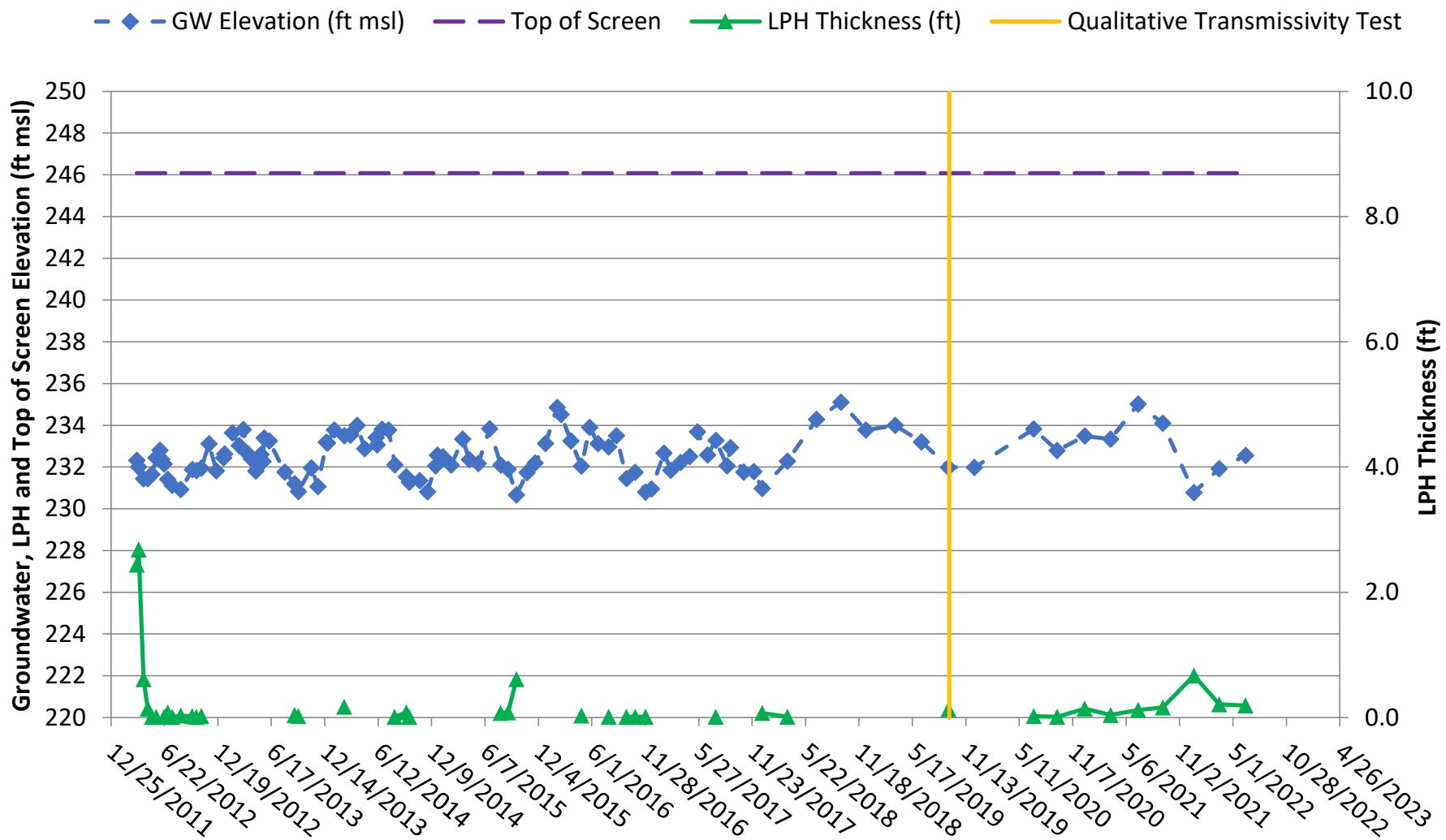
**LPH and Groundwater Elevations and LPH Recovery: MW-60**  
**March 21, 2012 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**



**LPH and Groundwater Elevations and LPH Recovery: MW-61**  
**March 21, 2012 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**



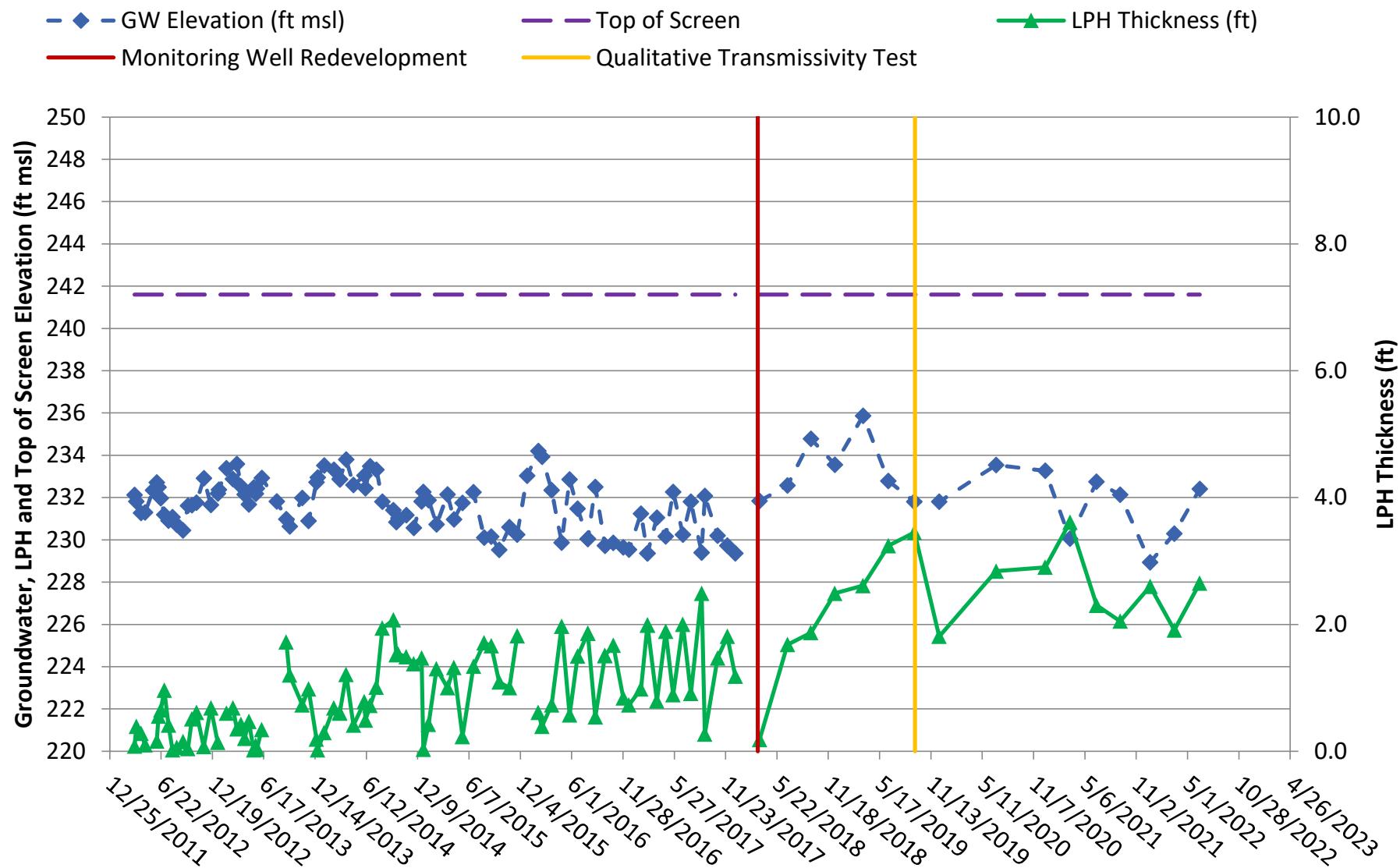
**LPH and Groundwater Elevations and LPH Recovery: MW-62**  
**March 21, 2012 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**



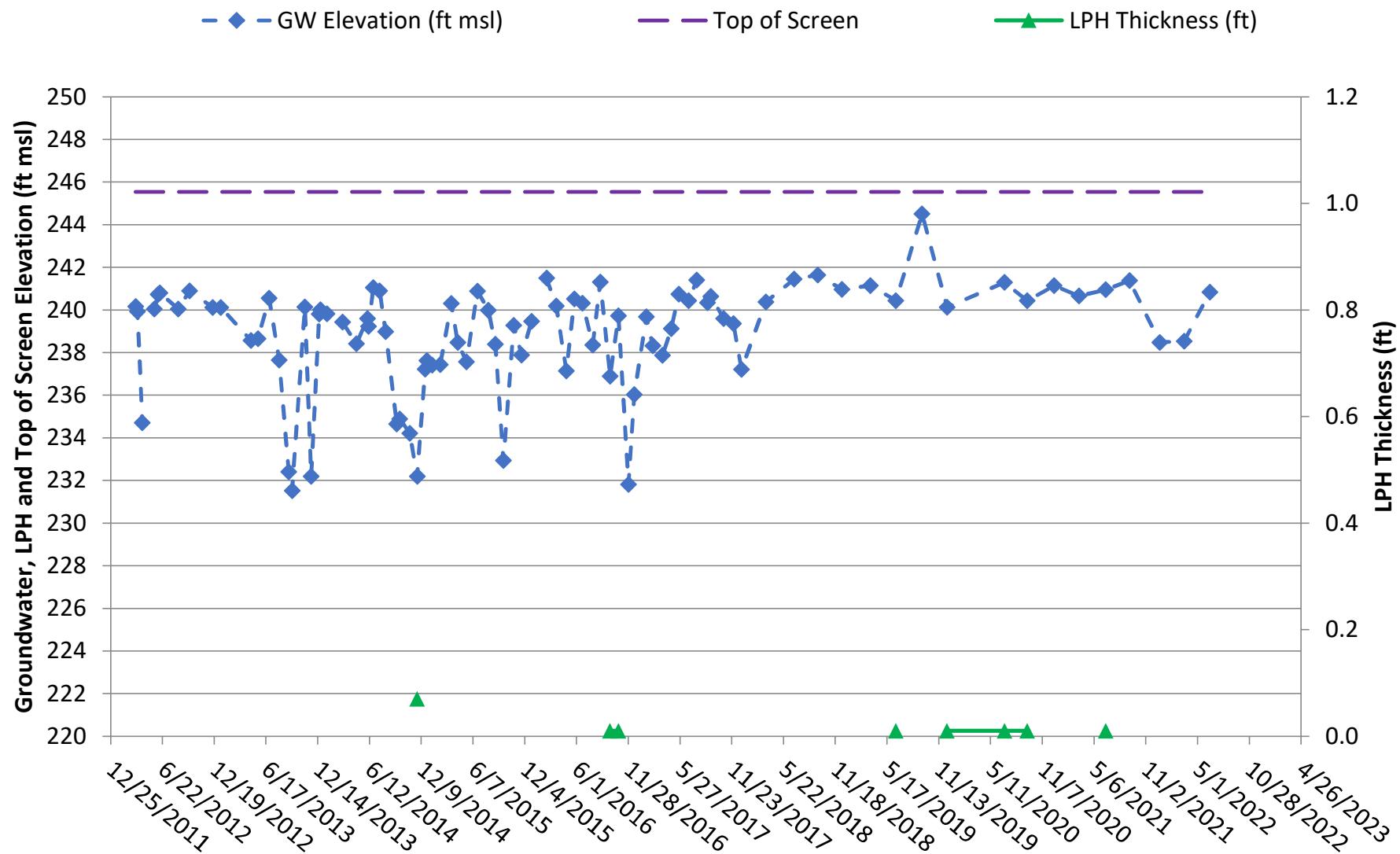
## LPH and Groundwater Elevations and LPH Recovery: MW-63

March 21, 2012 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland



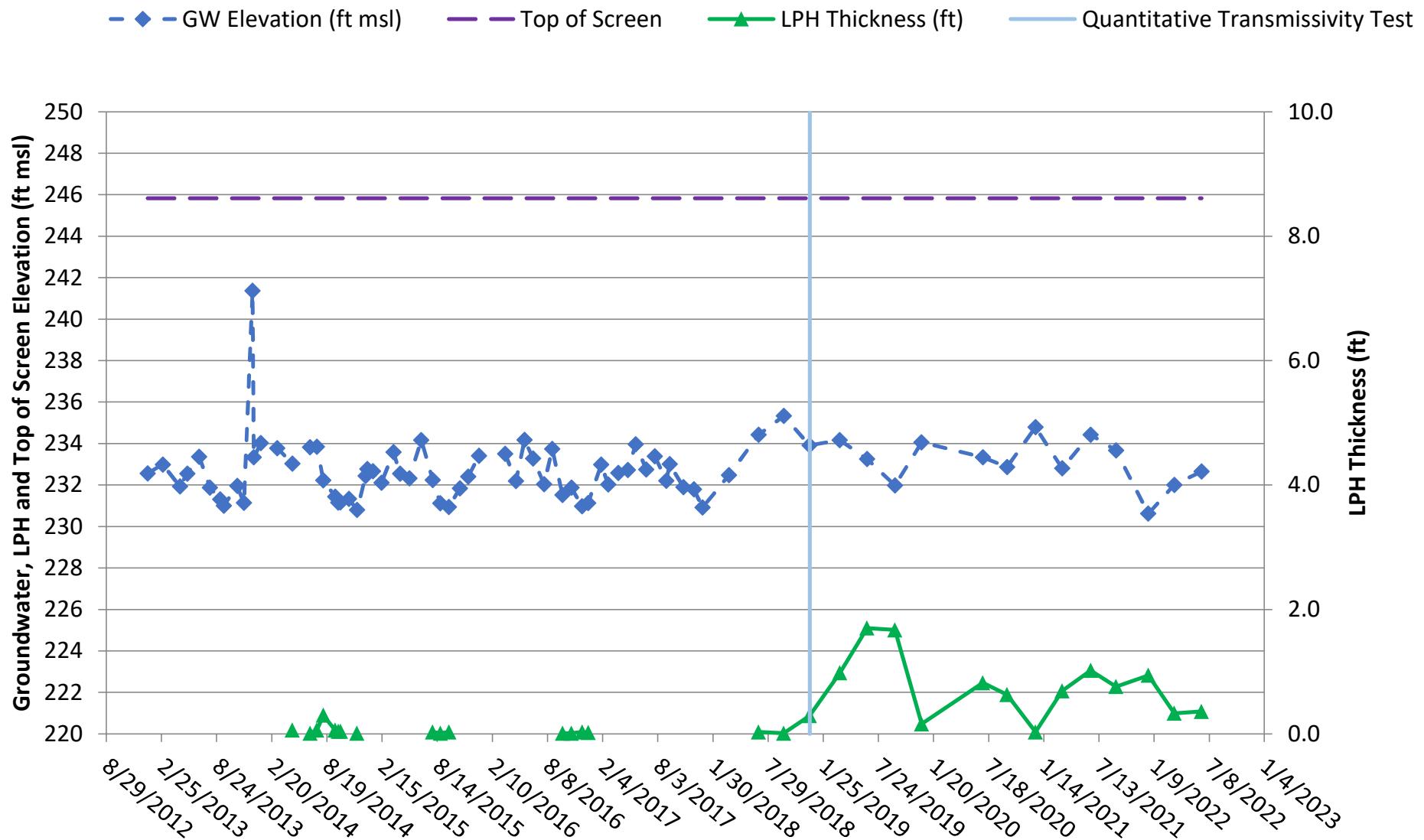
**LPH and Groundwater Elevations and LPH Recovery: MW-65**  
**March 21, 2012 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**



## LPH and Groundwater Elevations and LPH Recovery: MW-67

January 11, 2013 through June 13, 2022

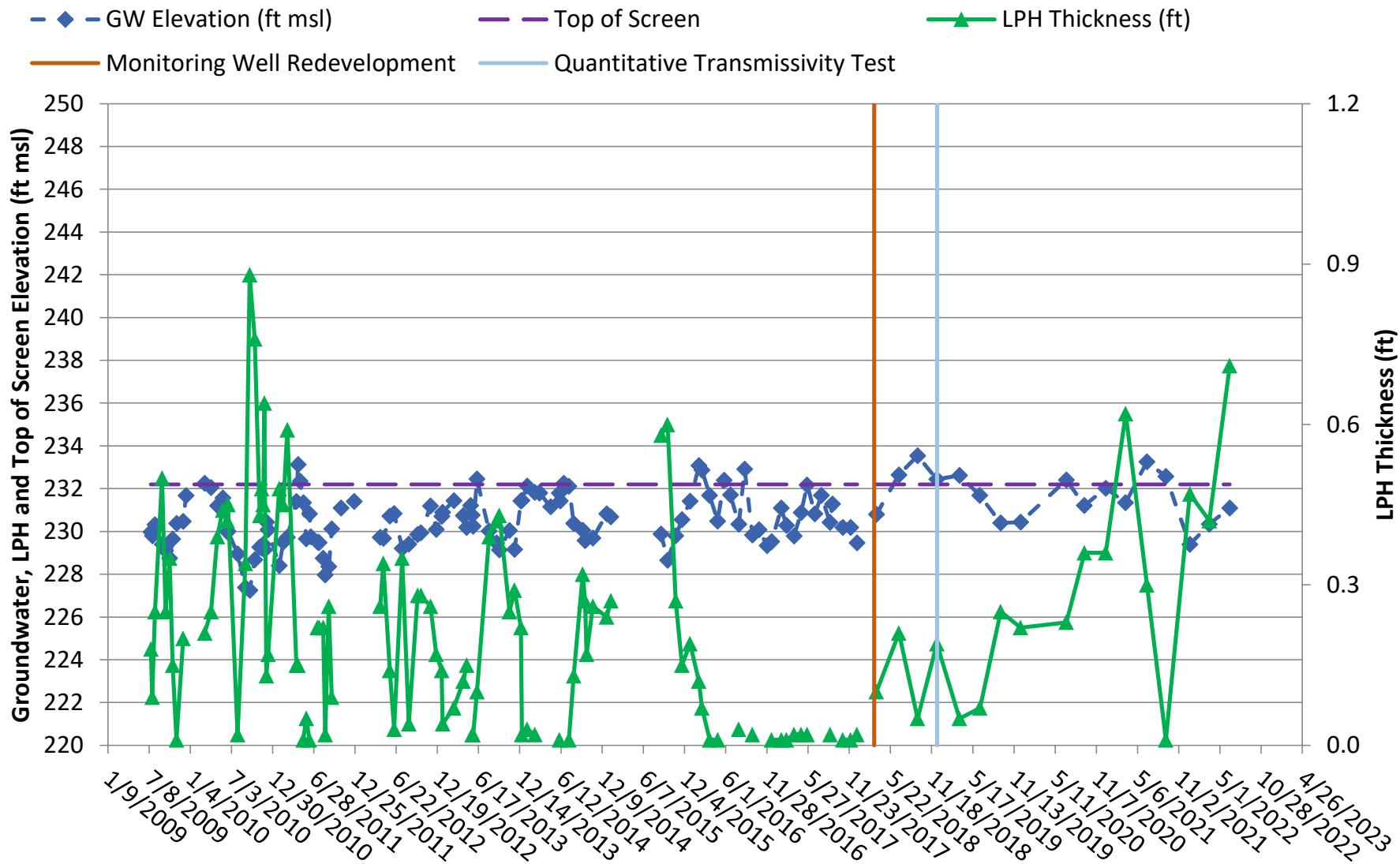
CSXT Brunswick Yard, Brunswick, Maryland



## LPH and Groundwater Elevations and LPH Recovery: EW-3

July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland

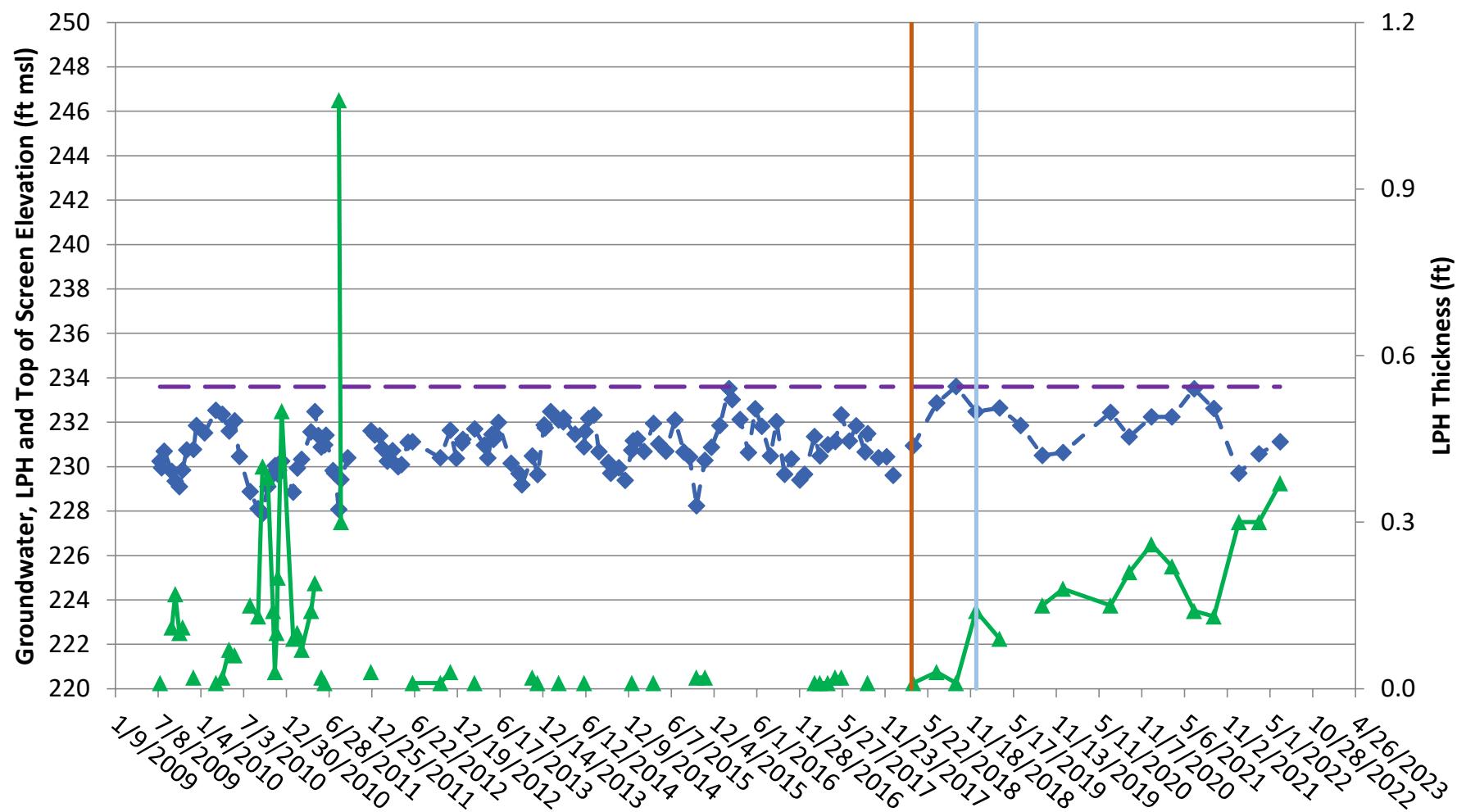


## LPH and Groundwater Elevations and LPH Recovery: EW-5

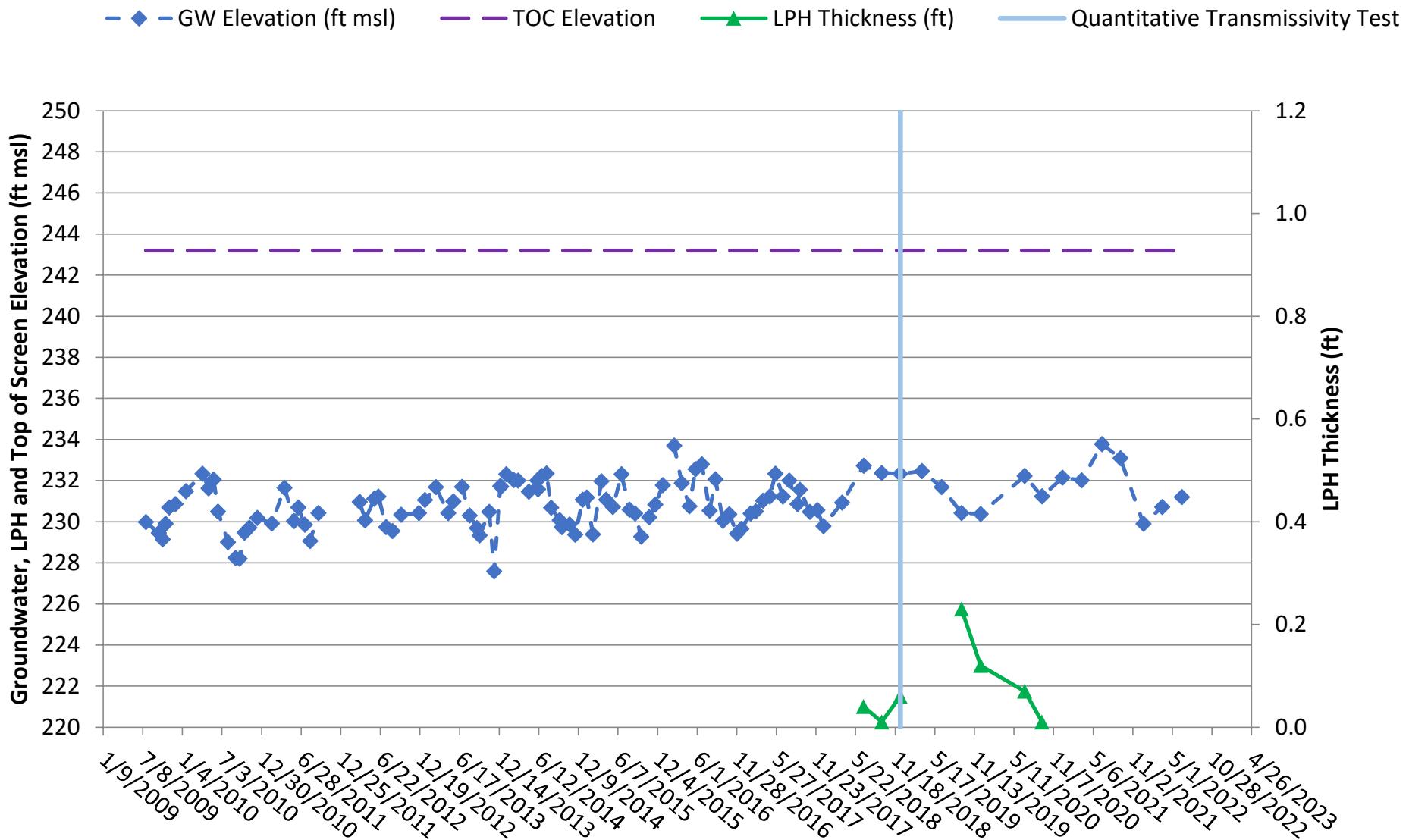
July 12, 2009 through June 13, 2022

CSXT Brunswick Yard, Brunswick, Maryland

—◆— GW Elevation (ft msl)      —■— Top of Screen  
—■— Monitoring Well Redevelopment      —■— Quantitative Transmissivity Test  
—▲— LPH Thickness (ft)

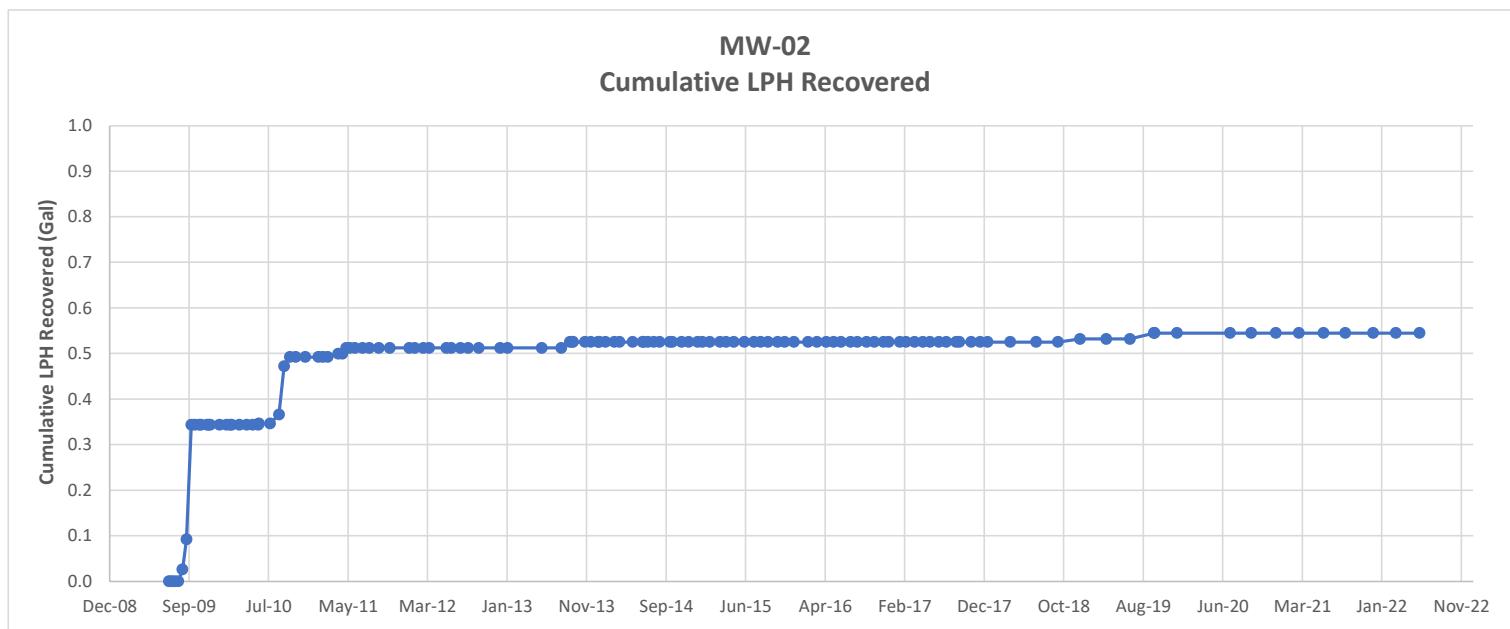
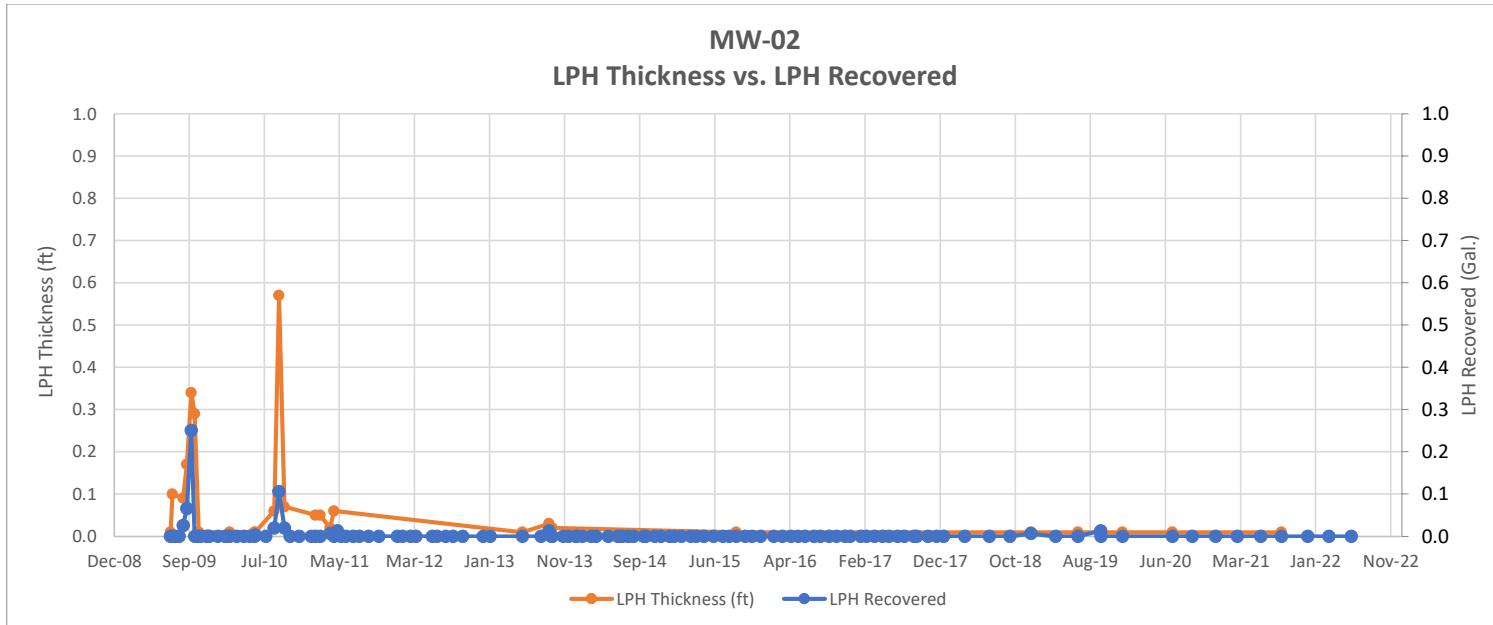


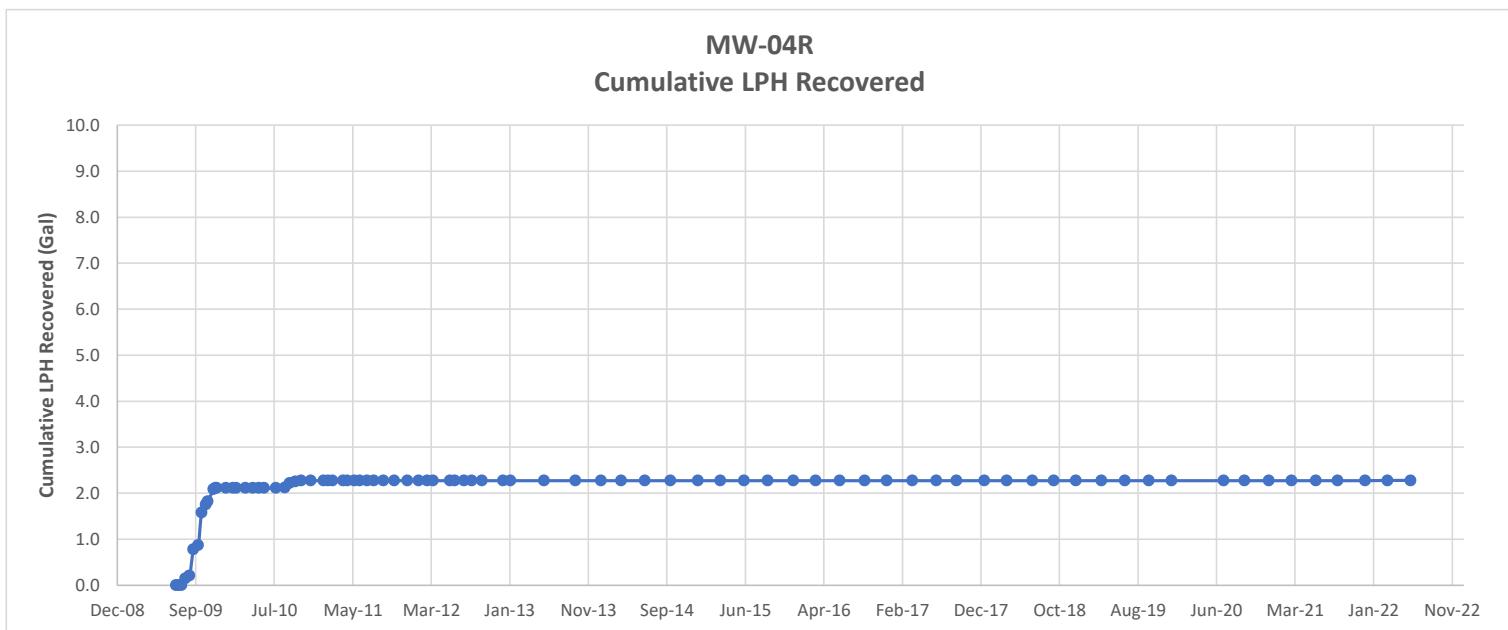
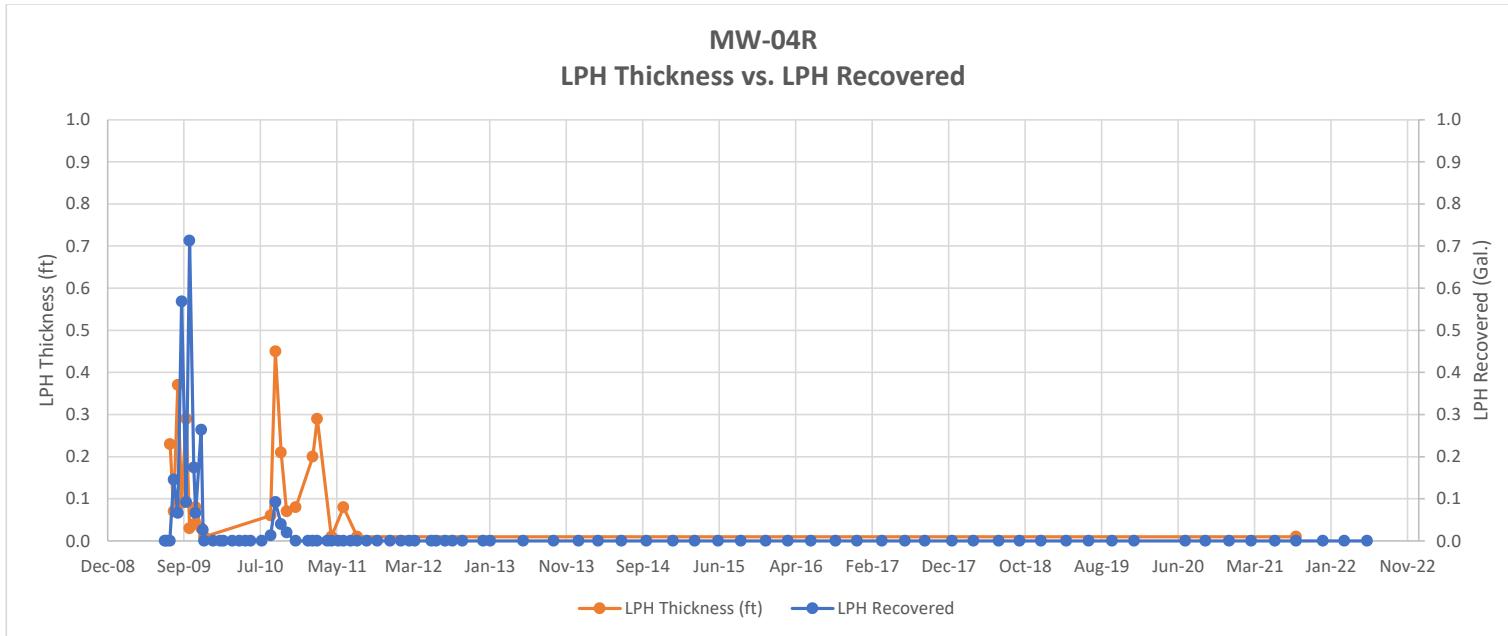
**LPH and Groundwater Elevations and LPH Recovery: EW-07**  
**July 22, 2009 through June 13, 2022**  
**CSXT Brunswick Yard, Brunswick, Maryland**

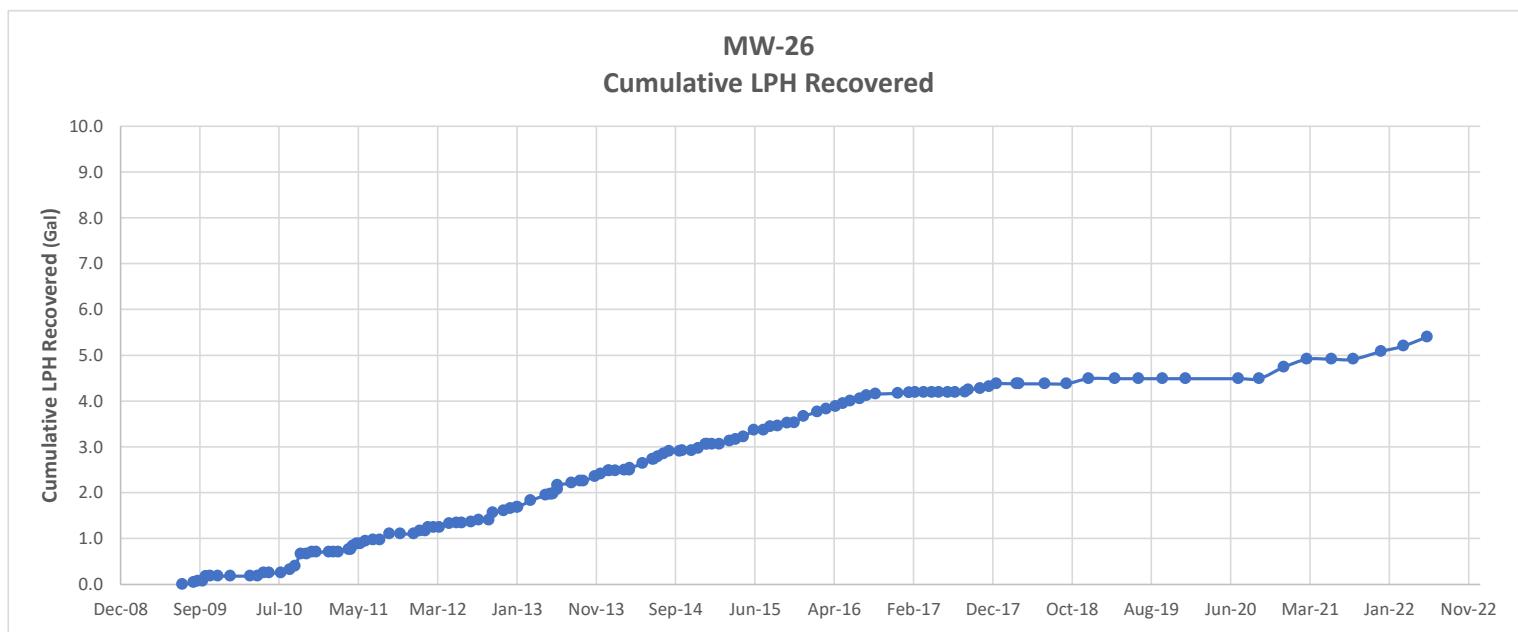
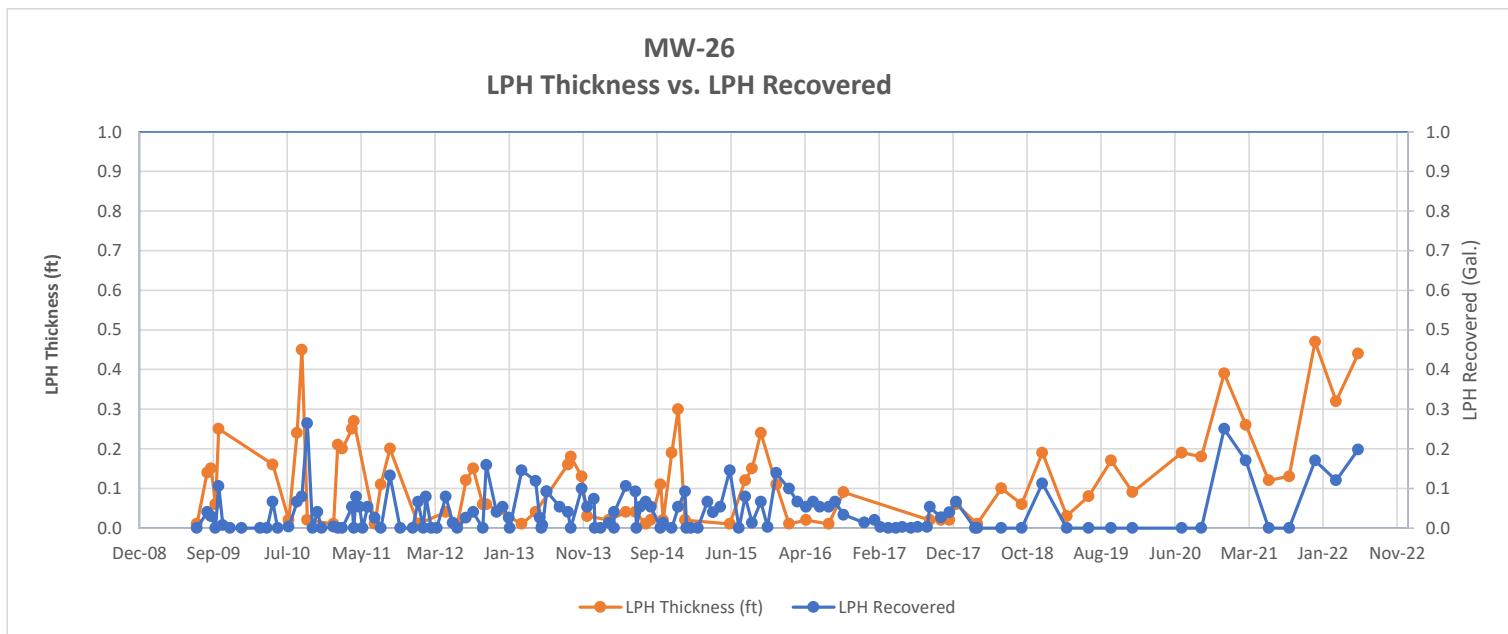


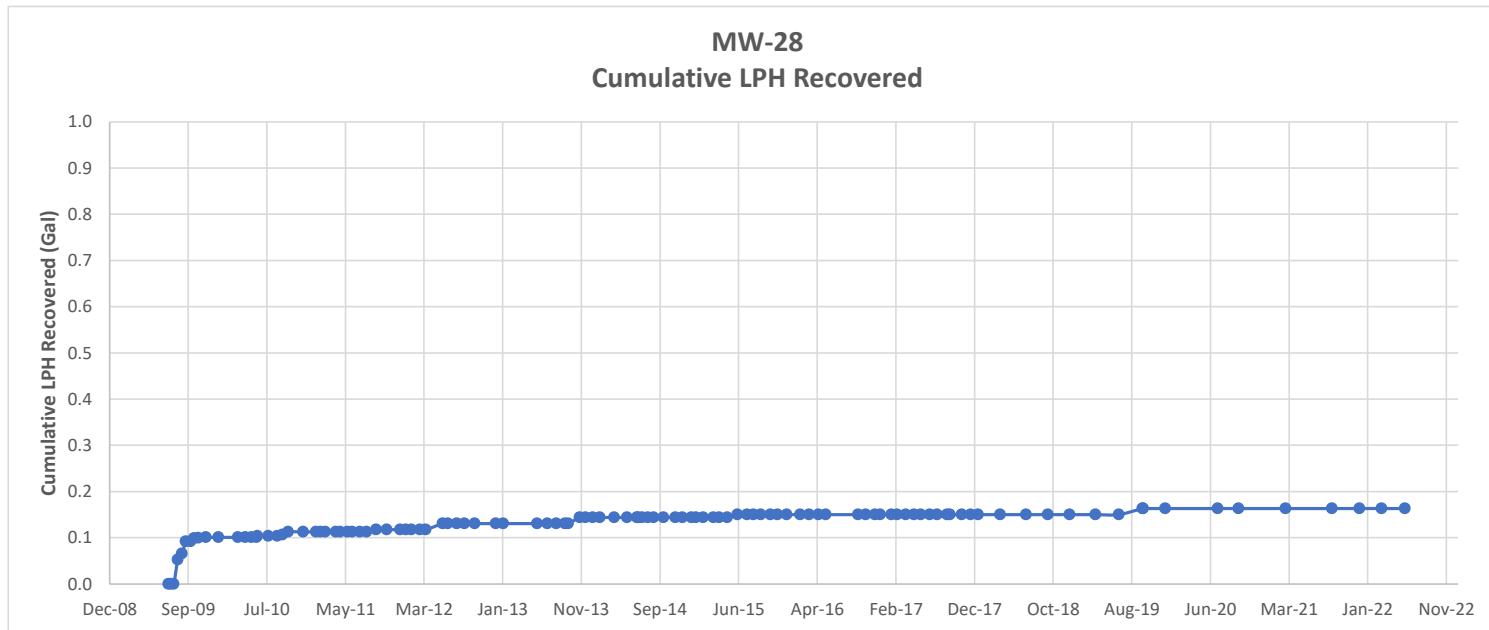
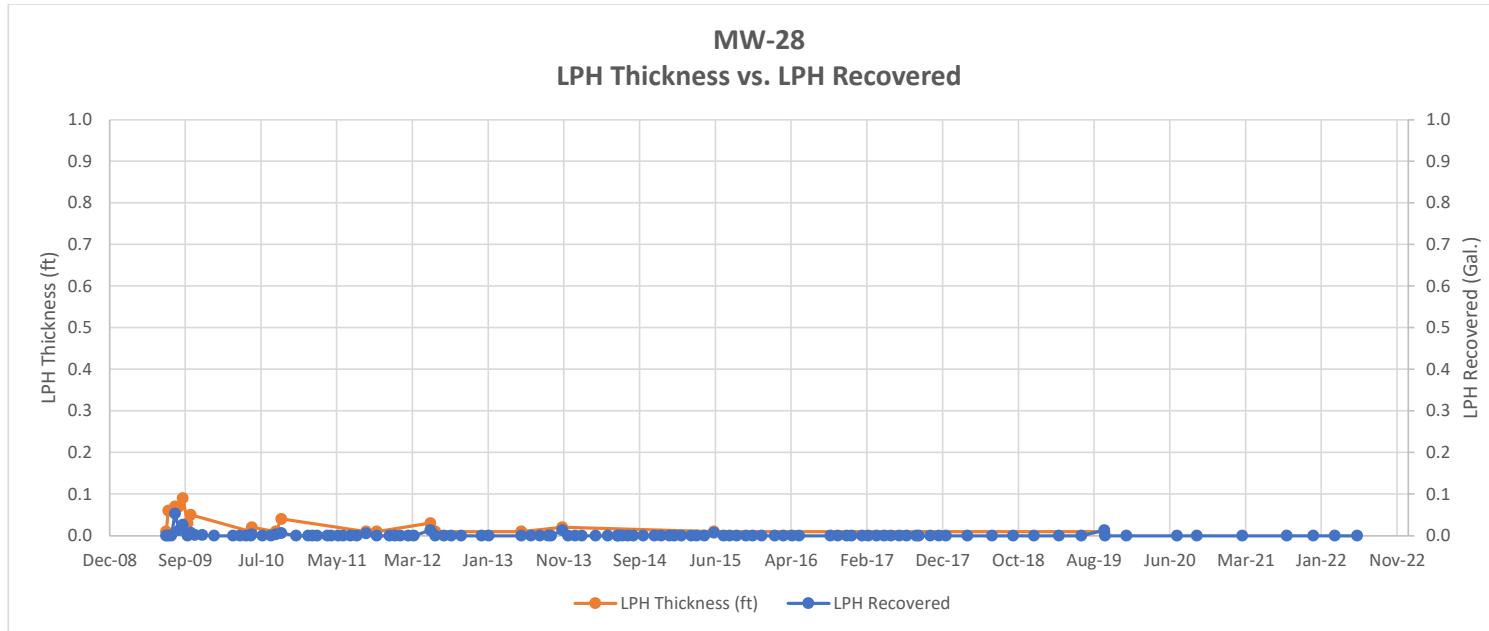
# **Attachment 2**

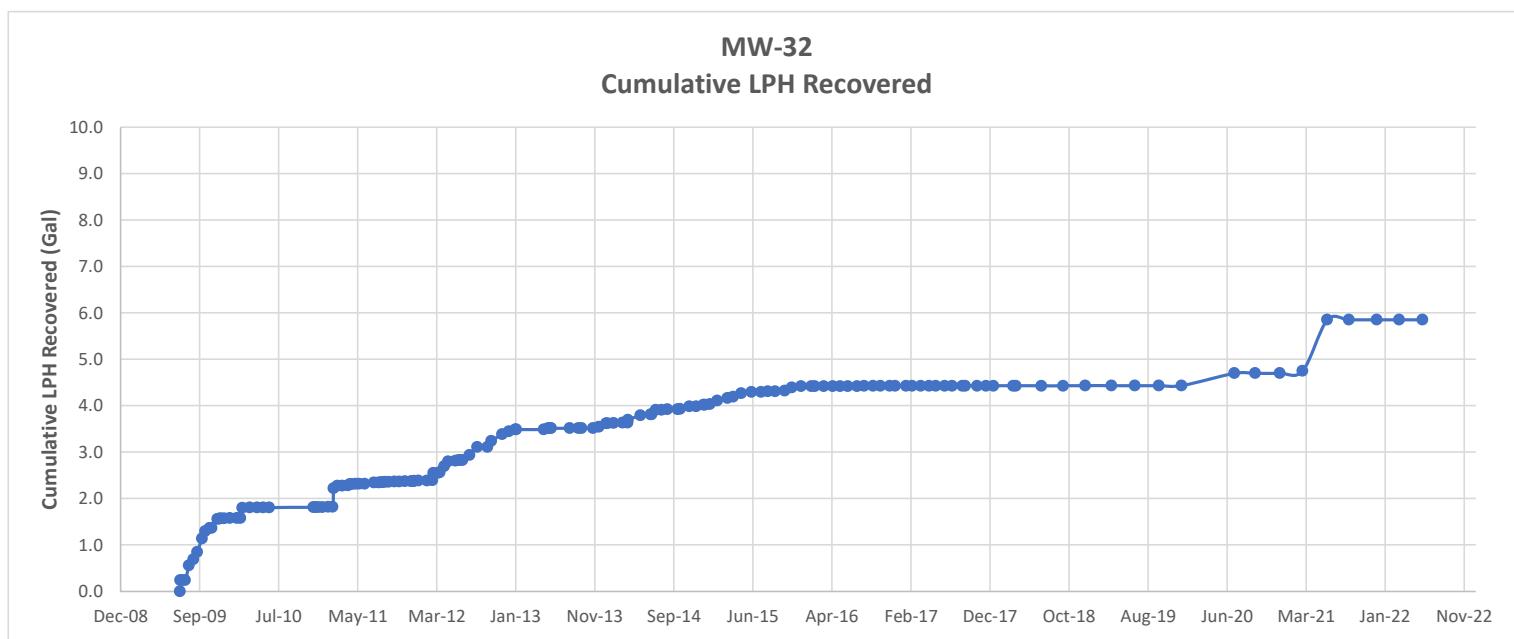
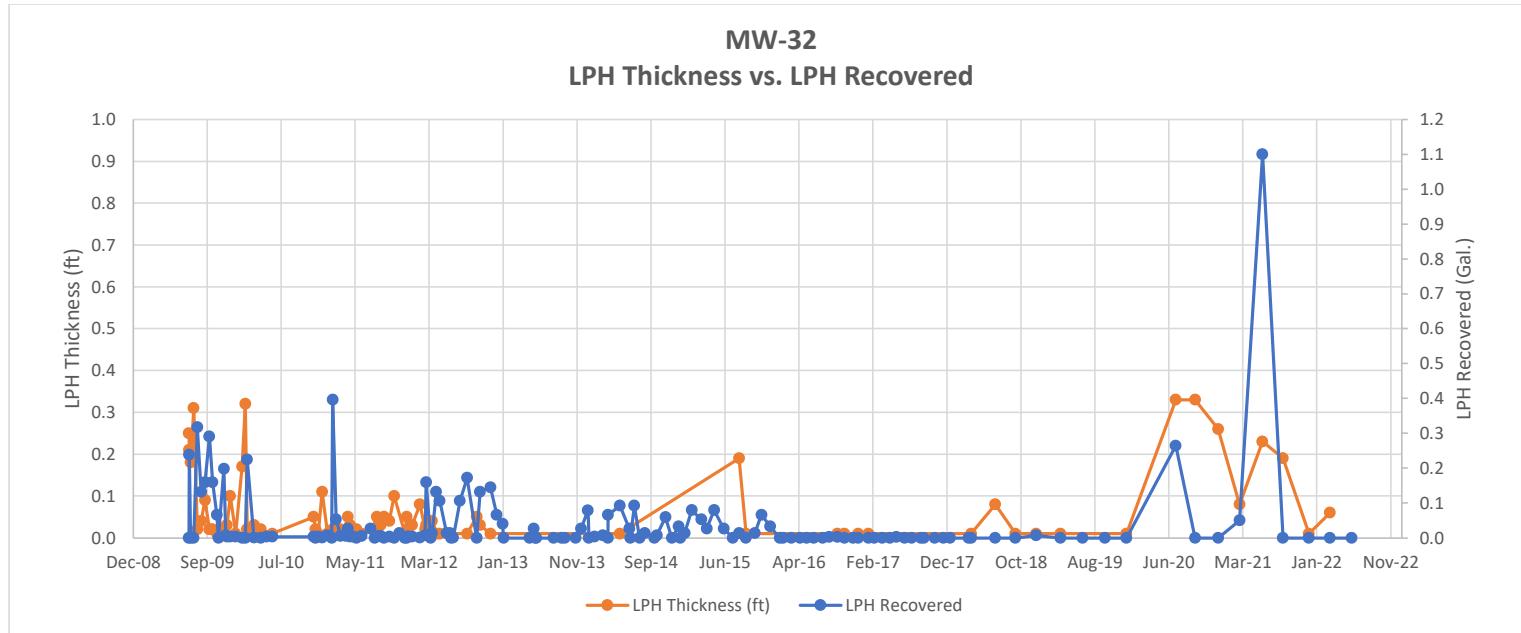
**LPH Recovery Data**

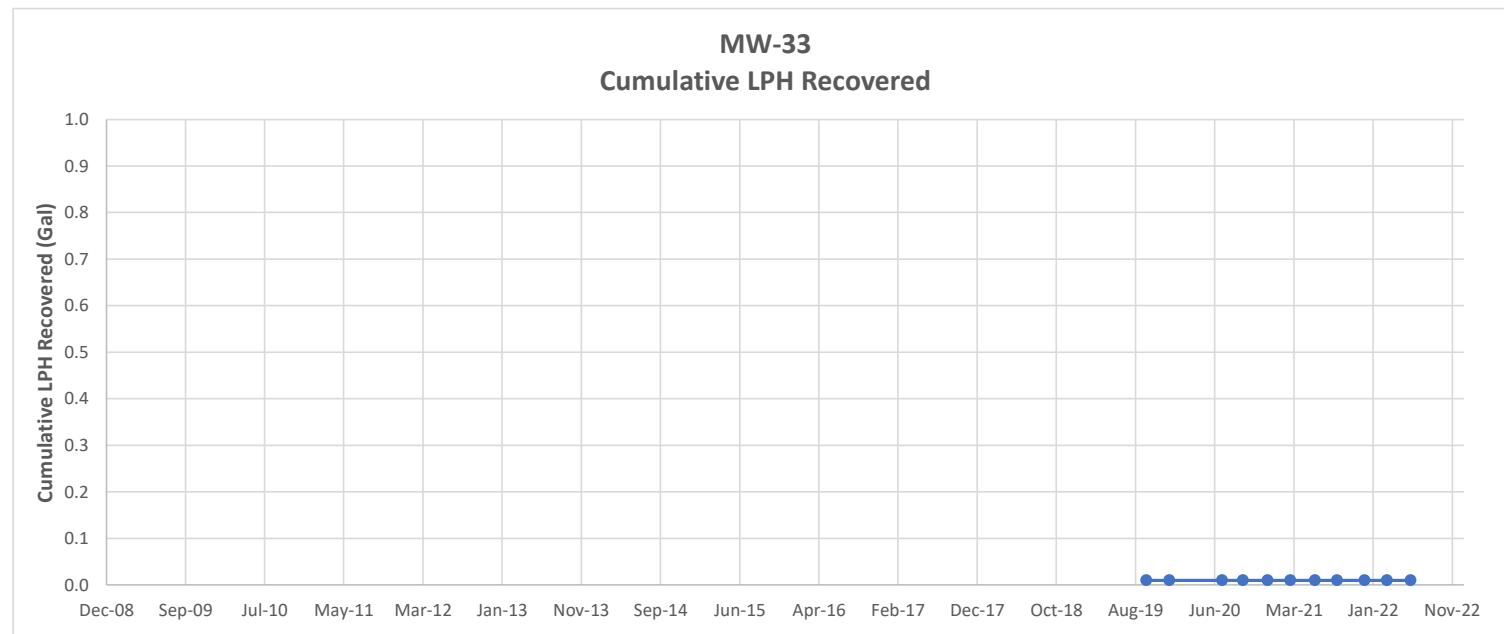
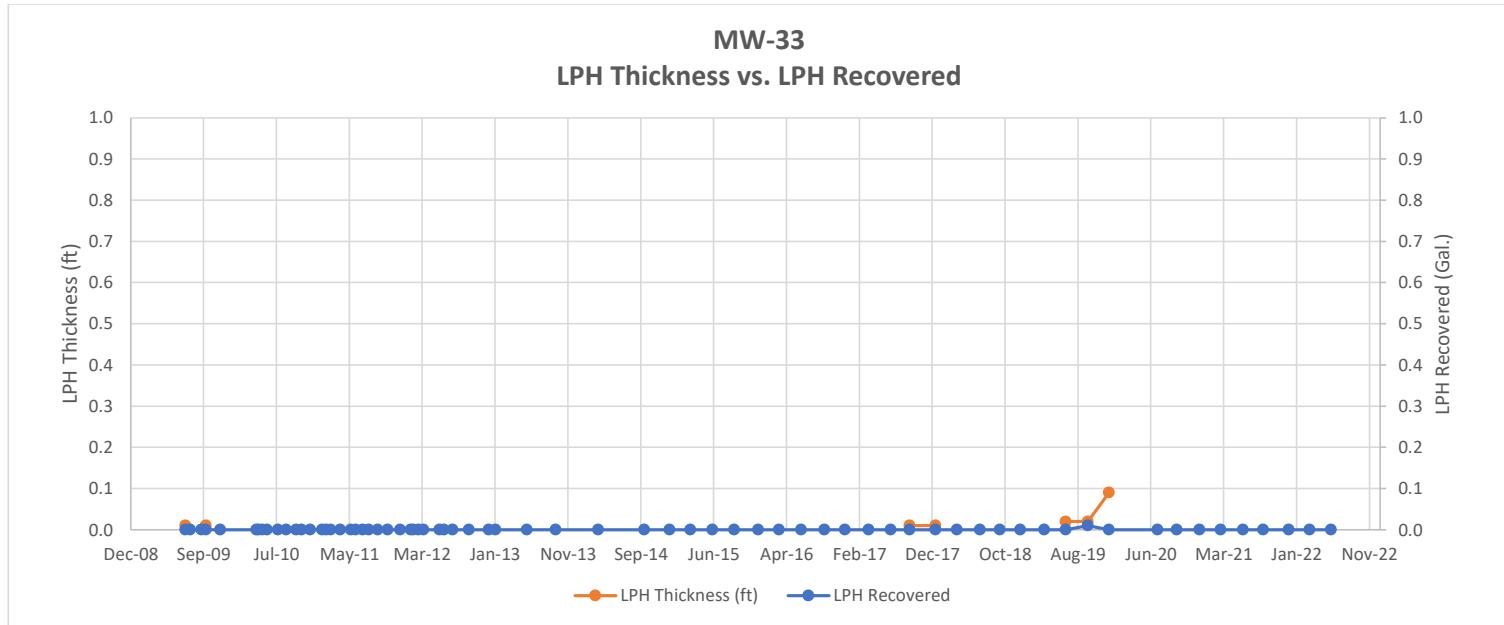


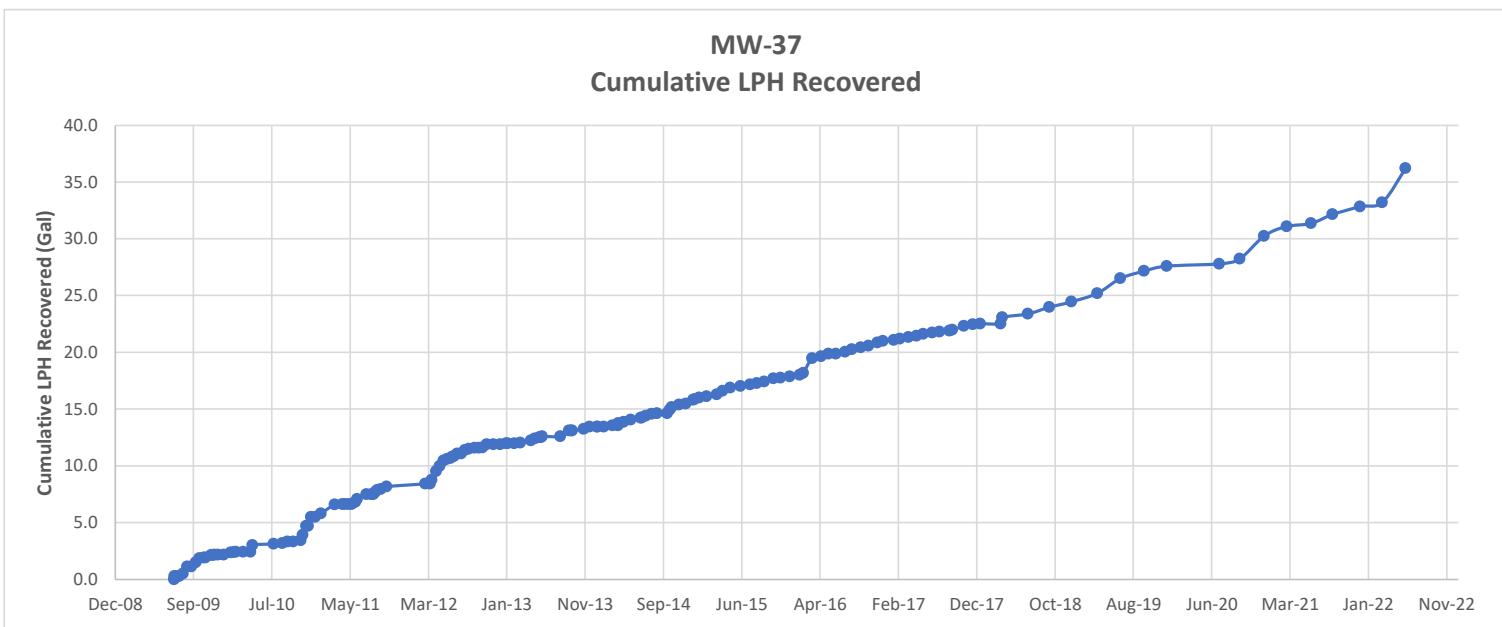
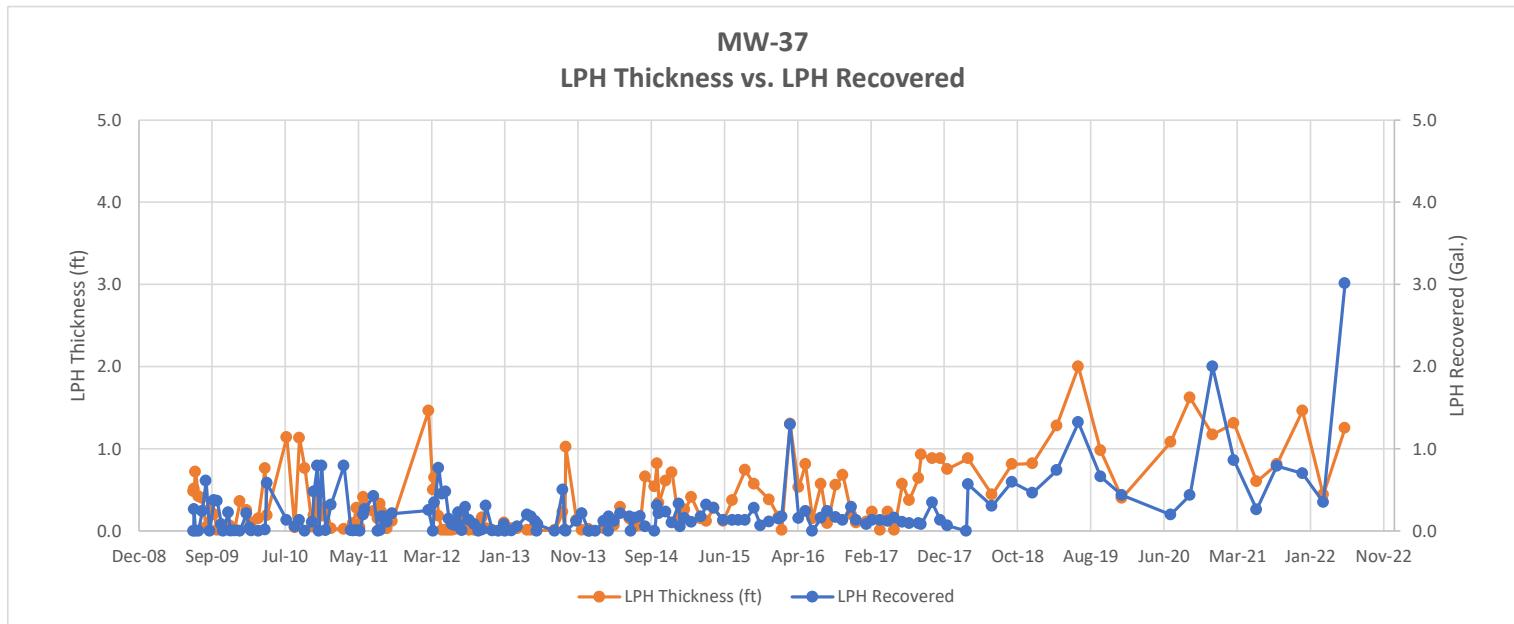


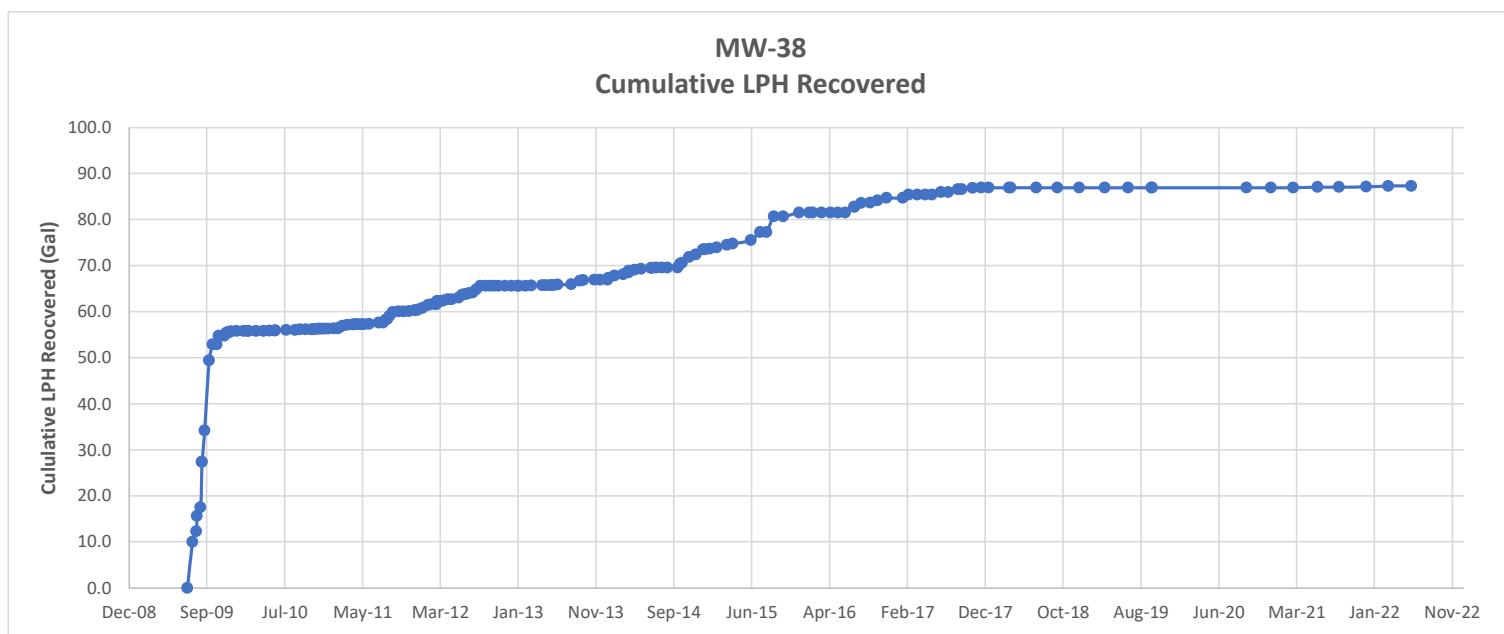
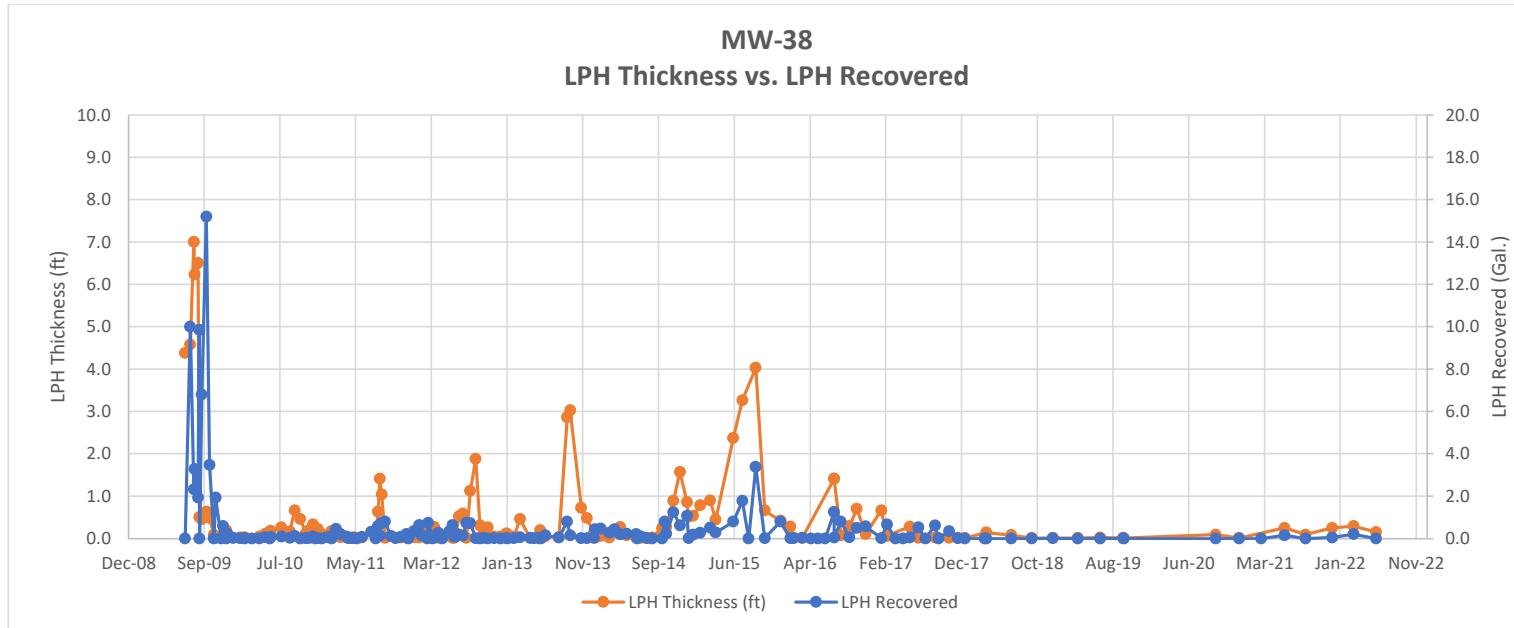


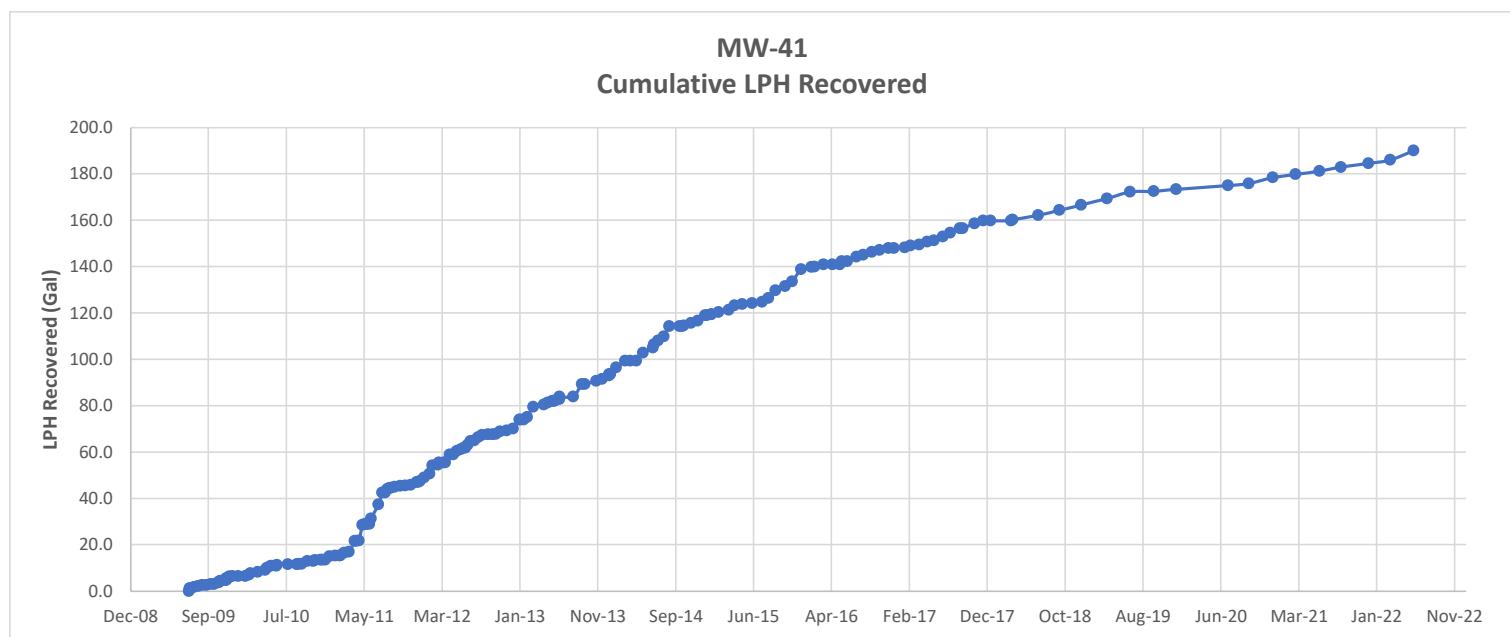
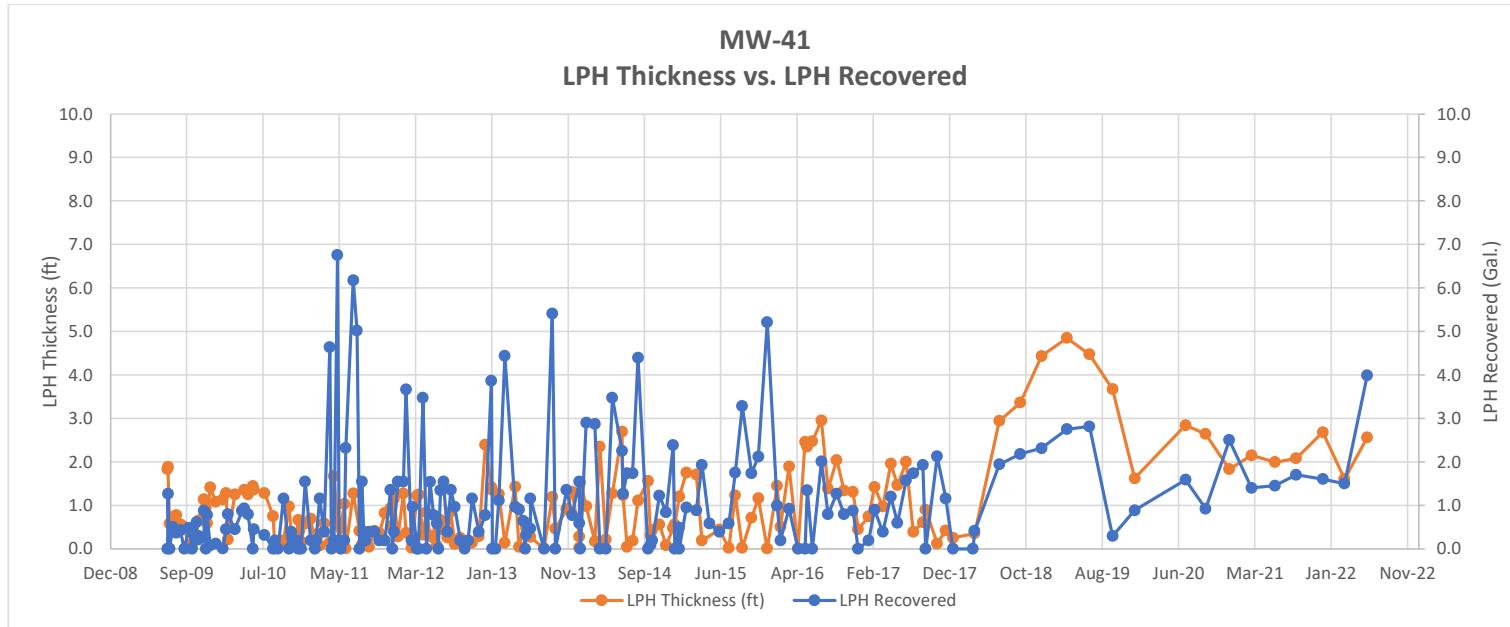


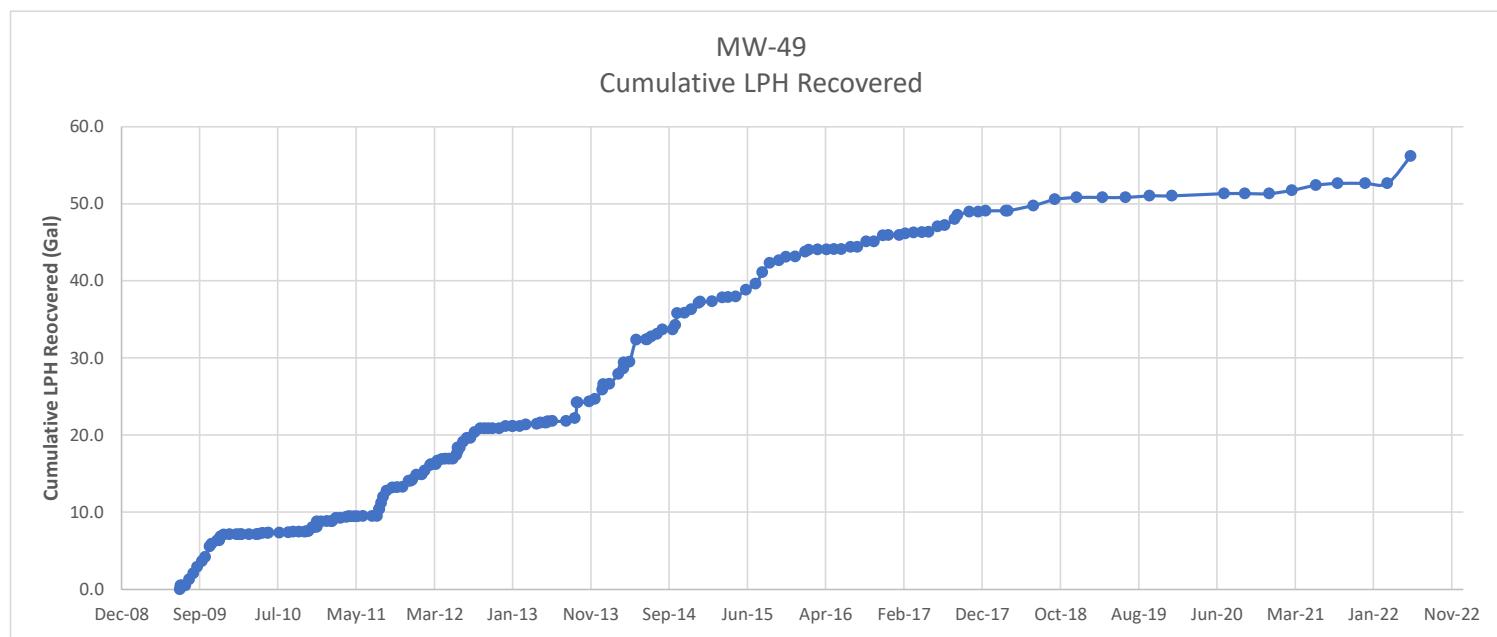
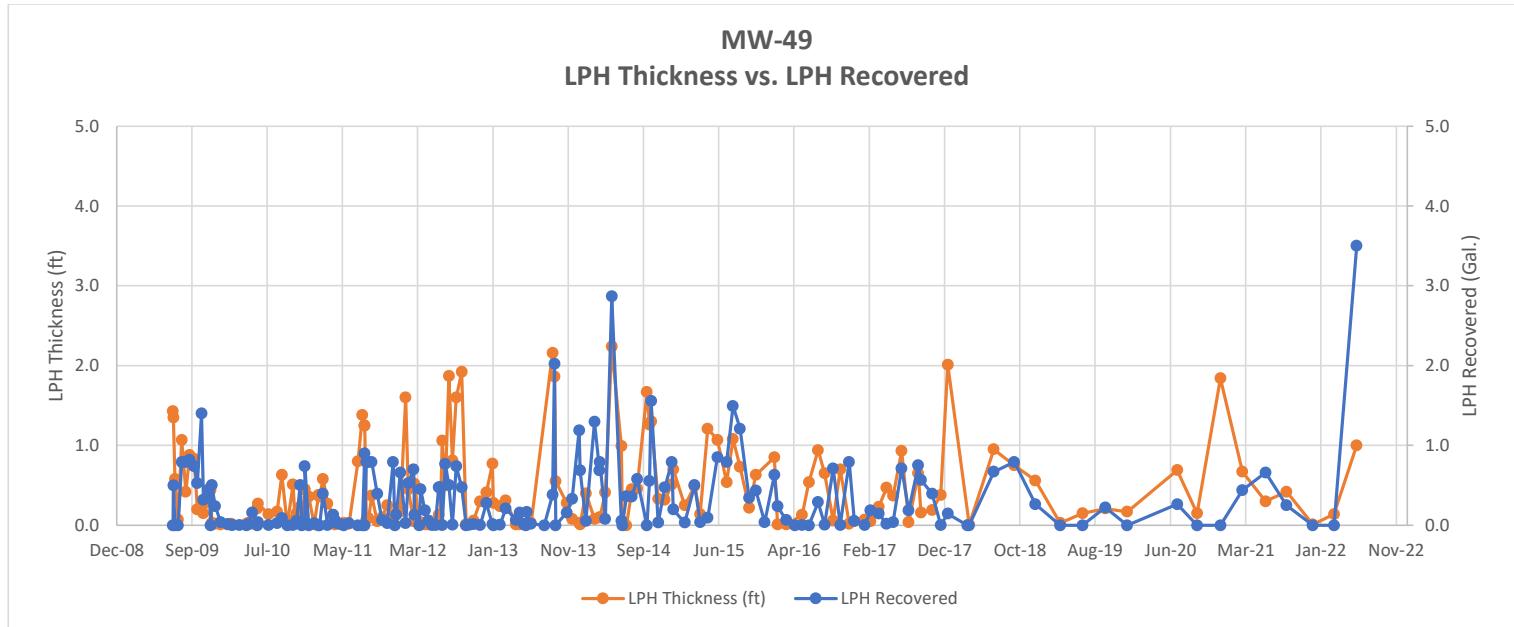


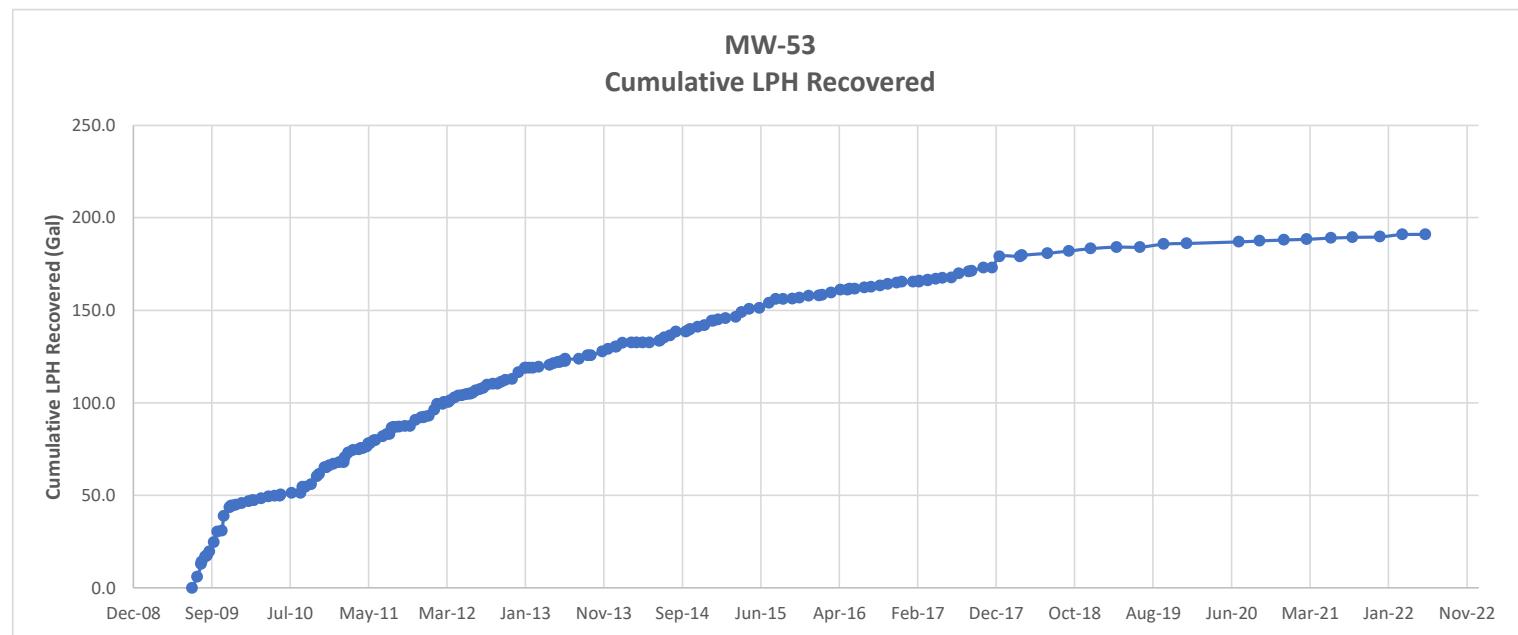
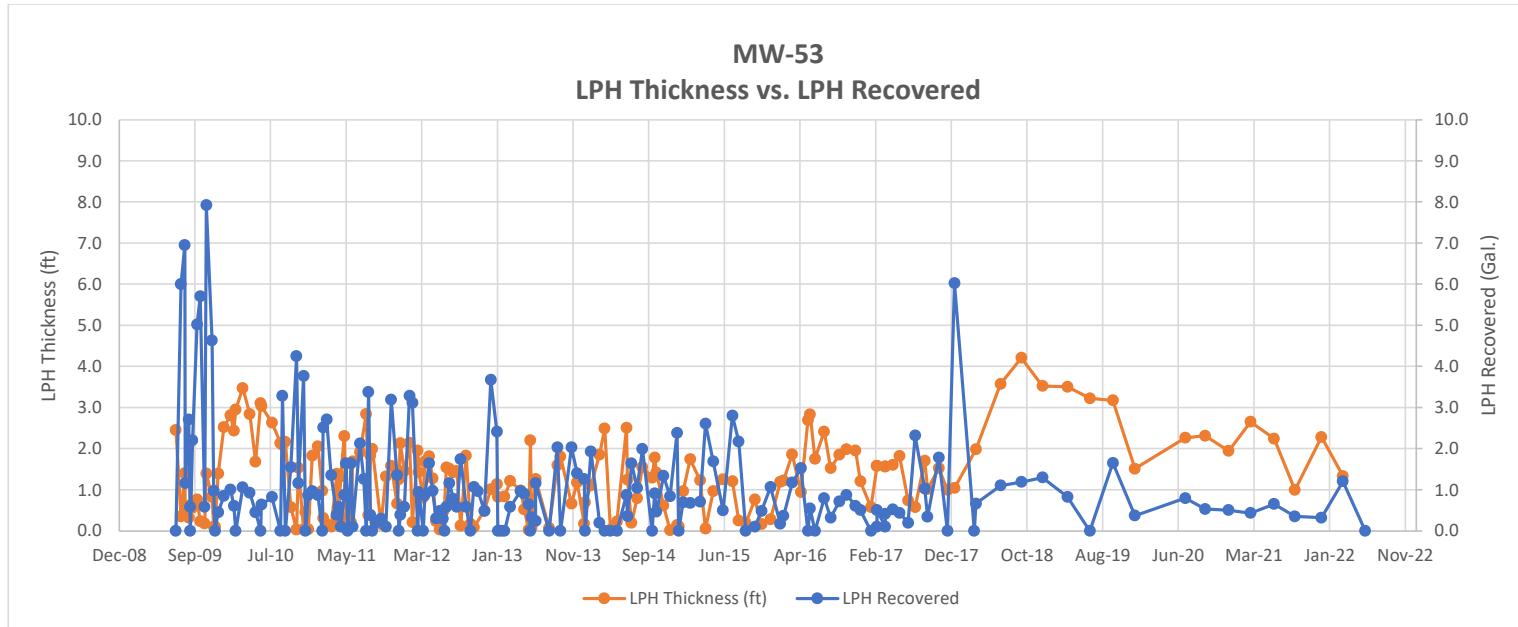


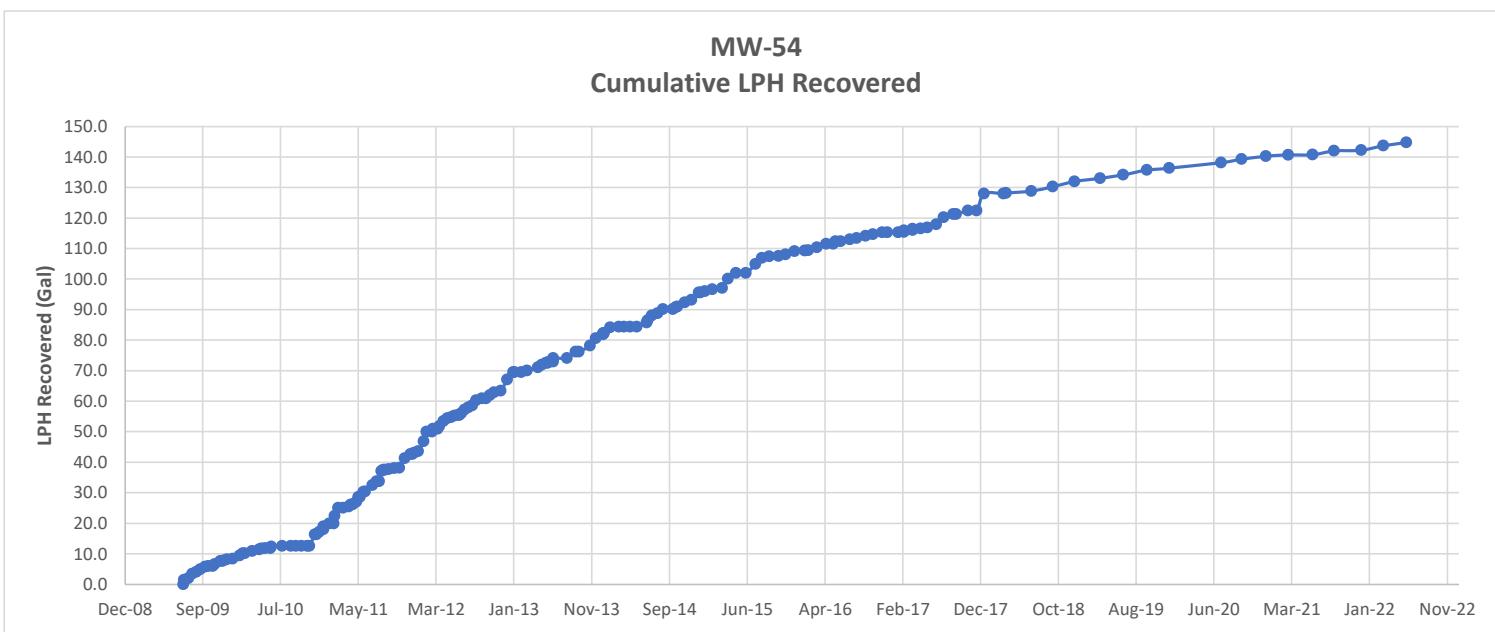
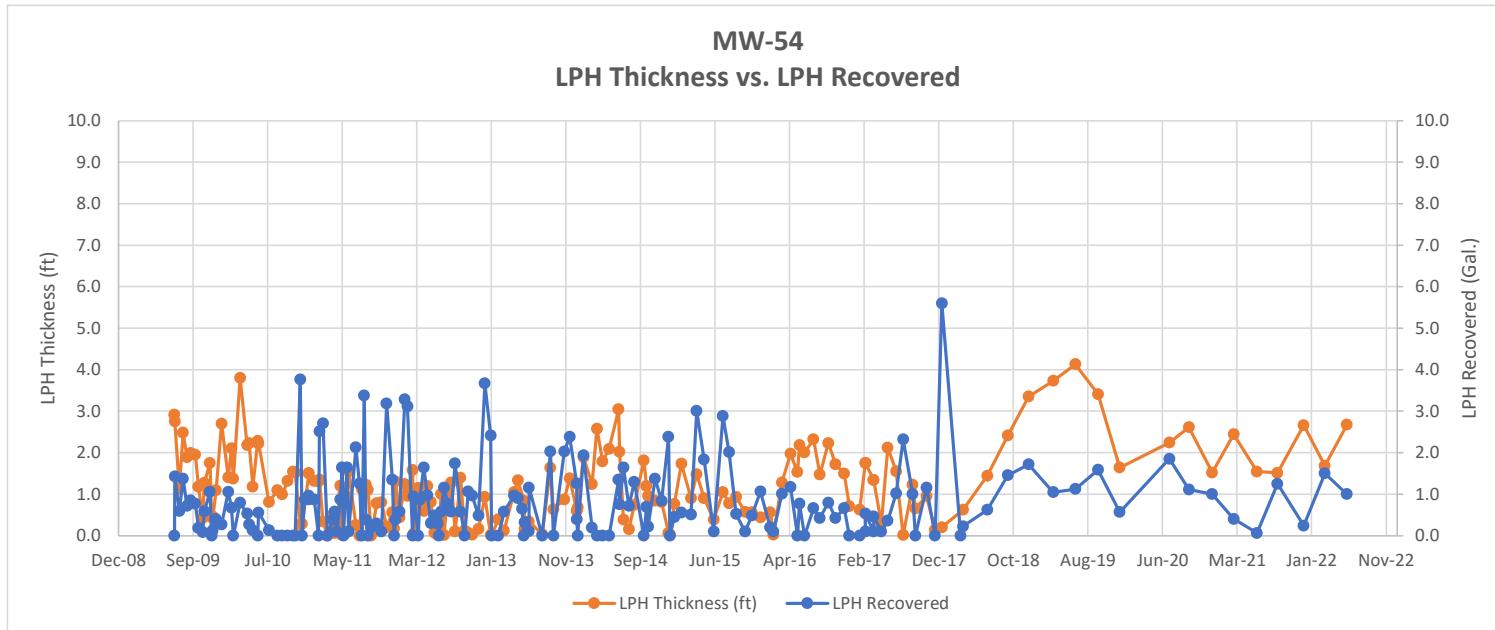


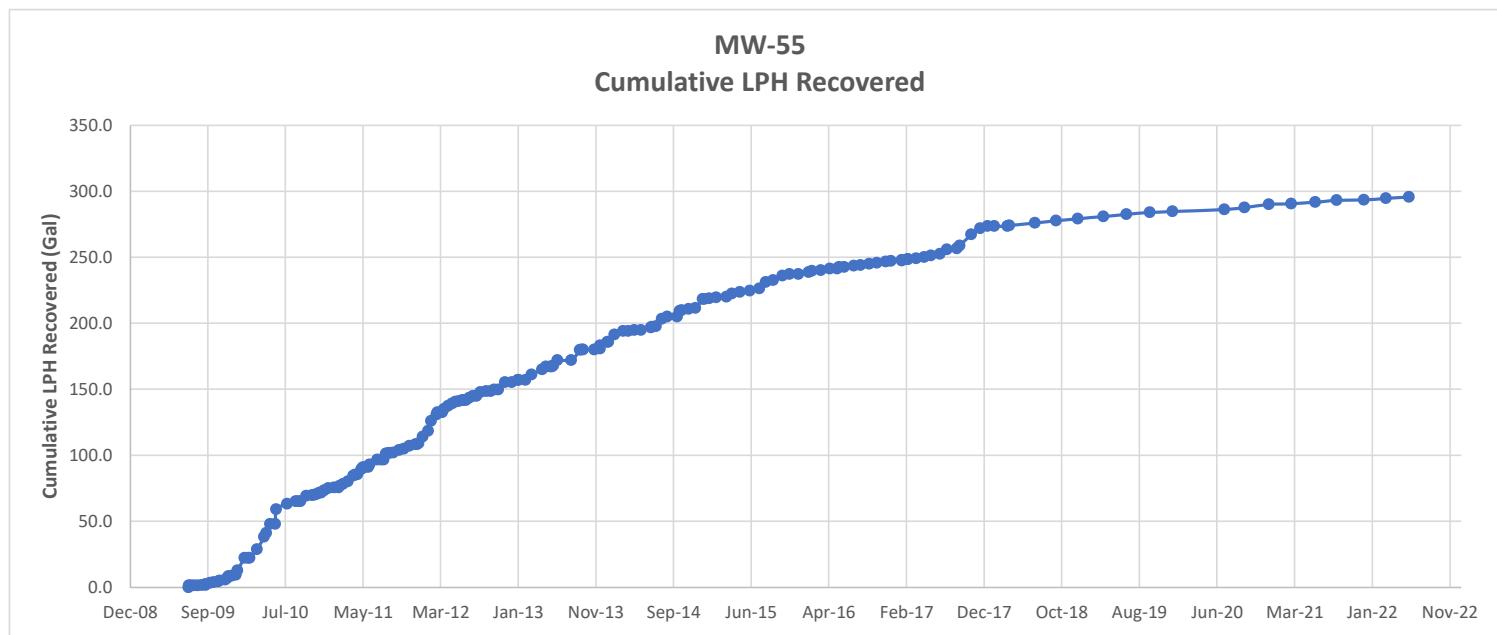
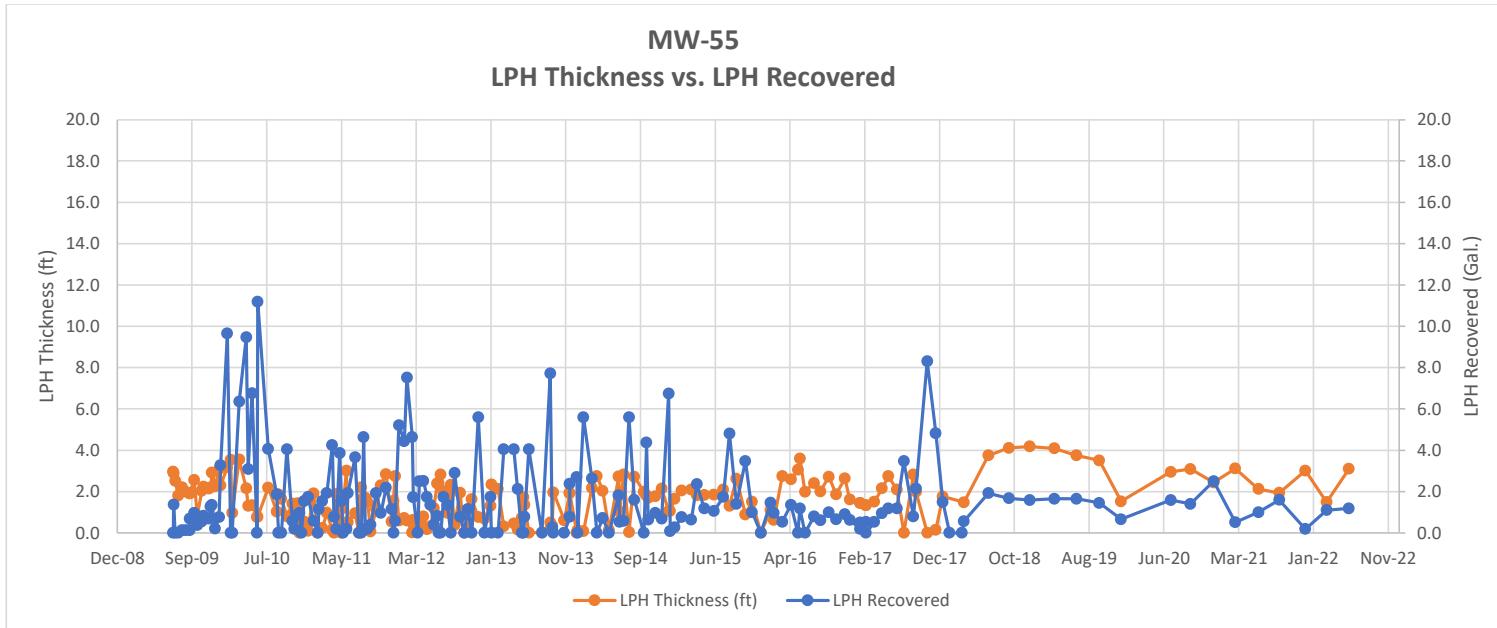


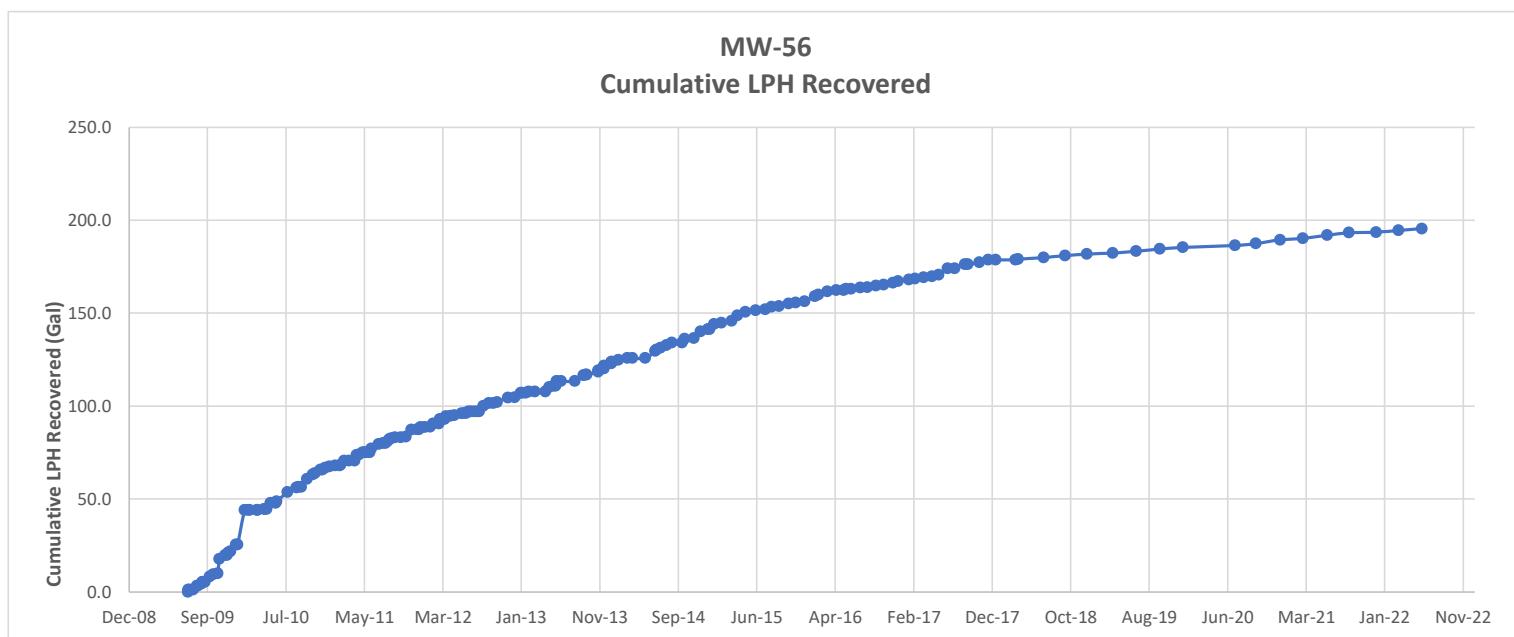
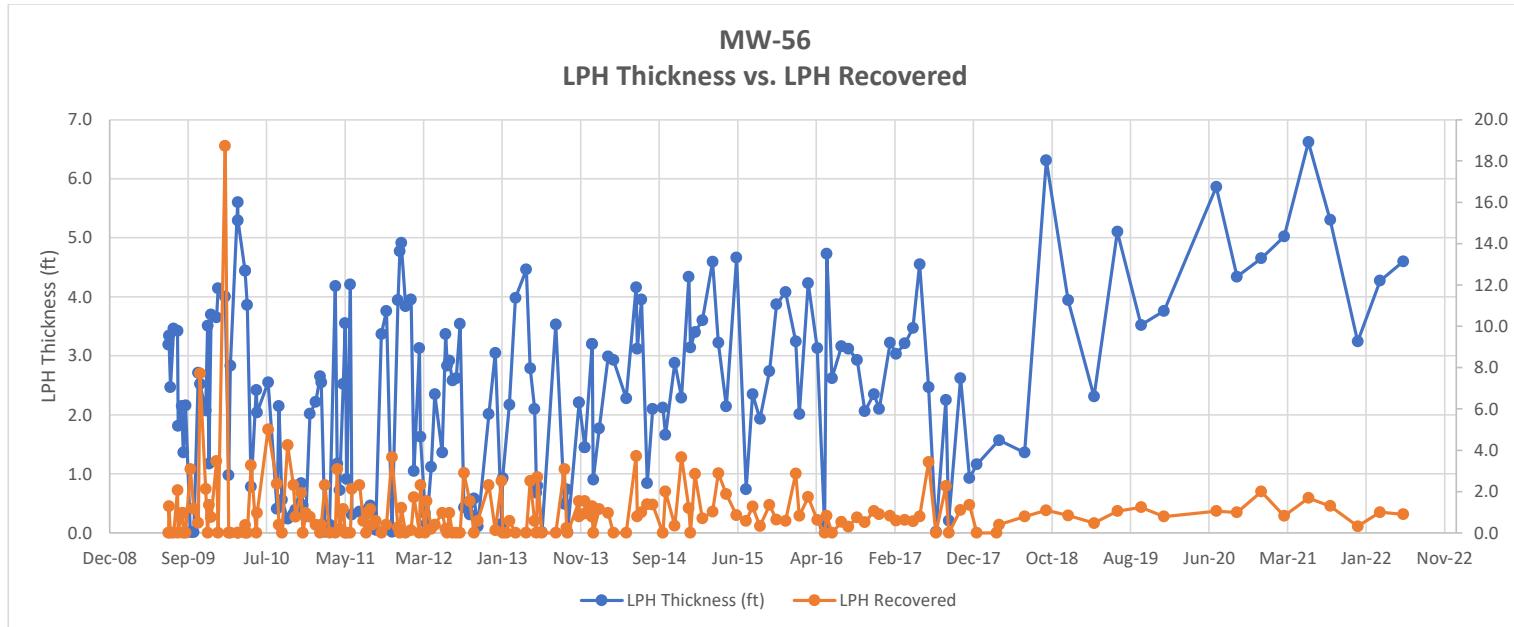


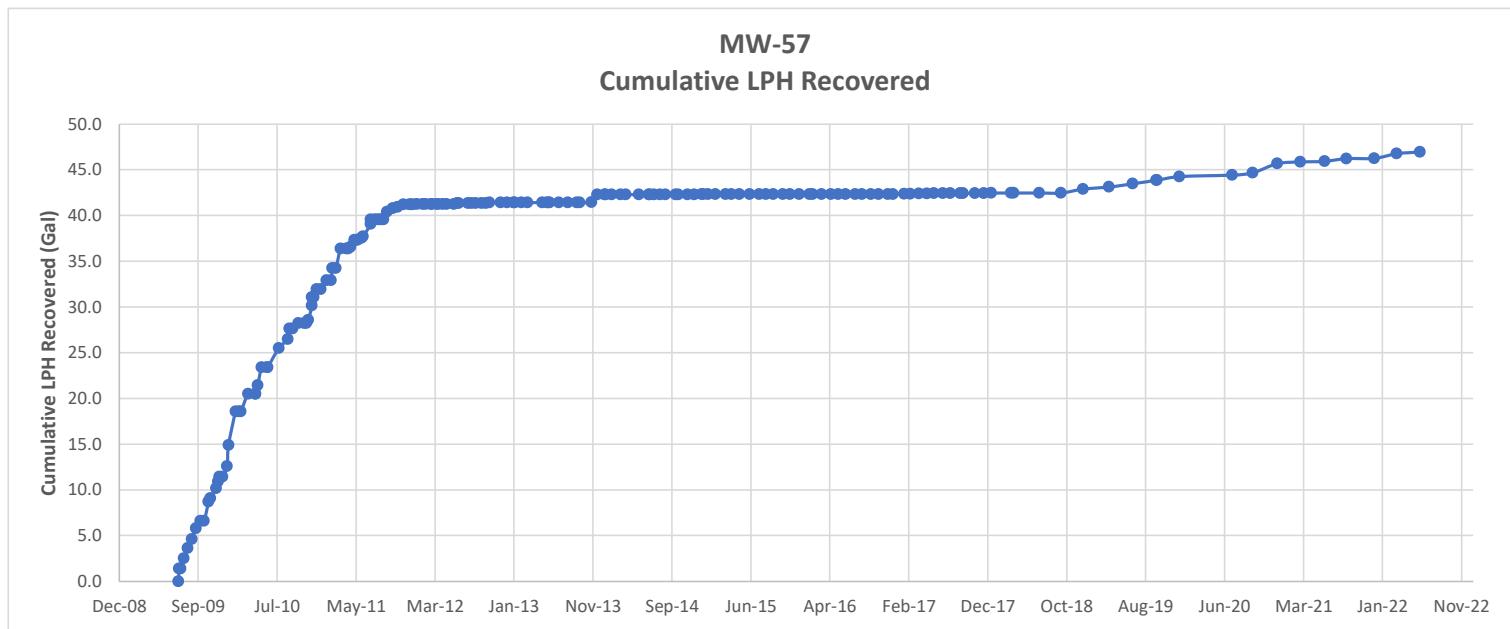
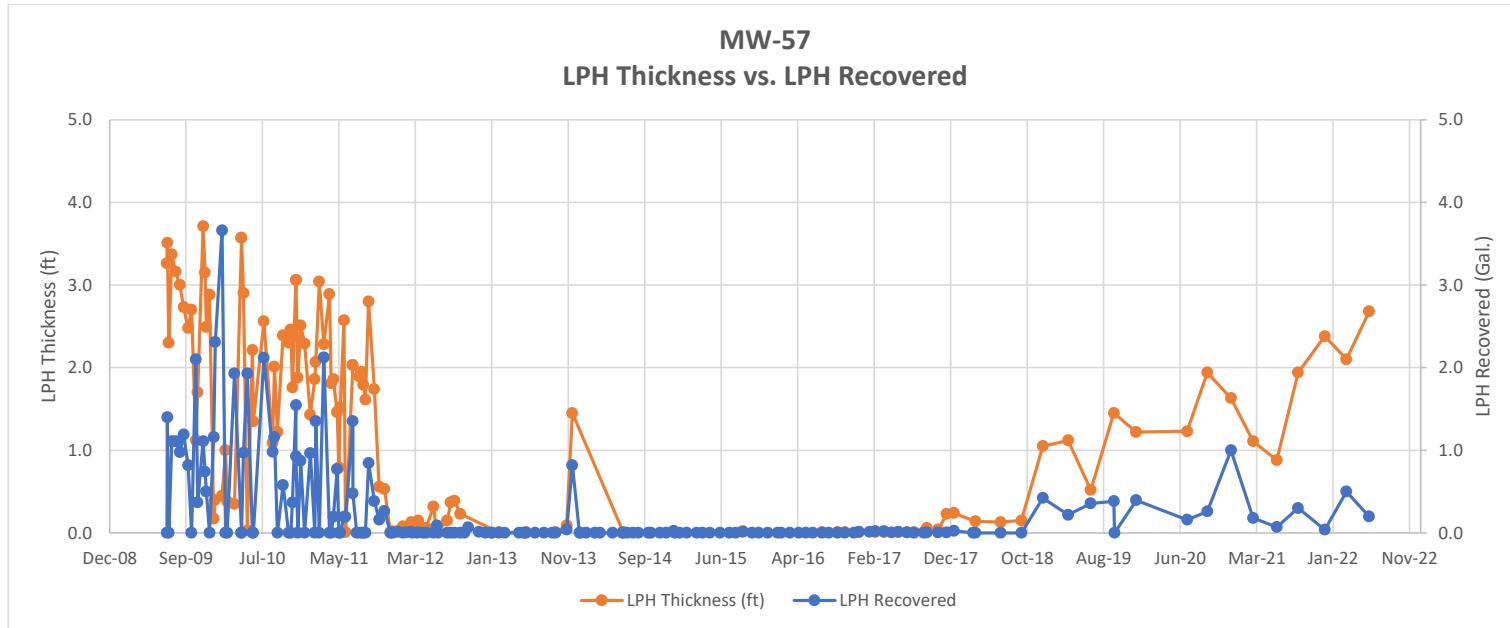


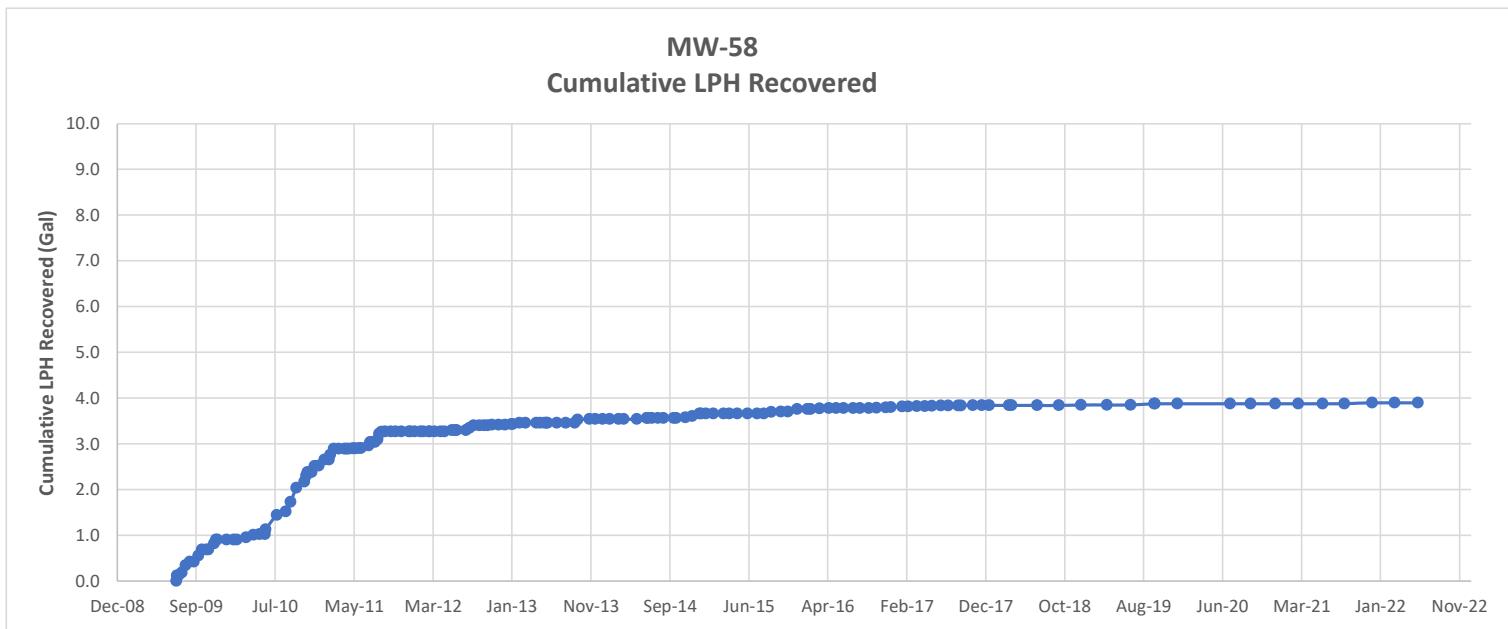
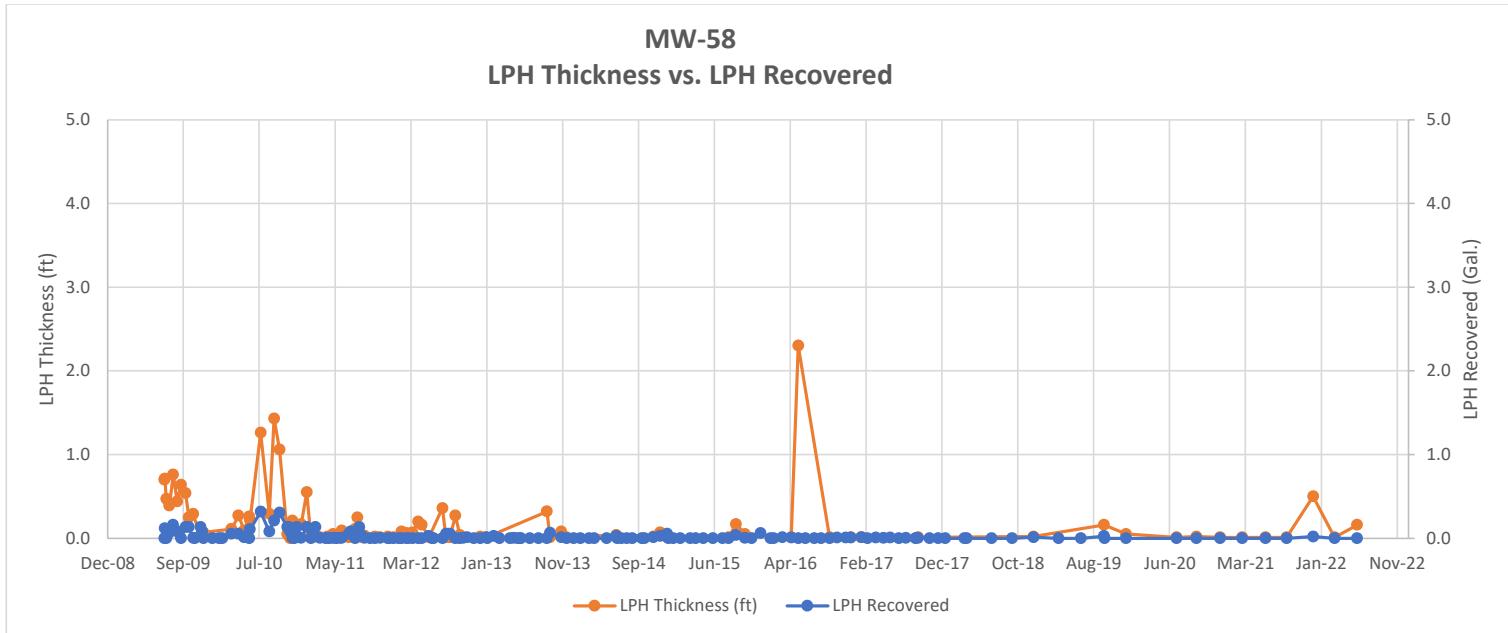


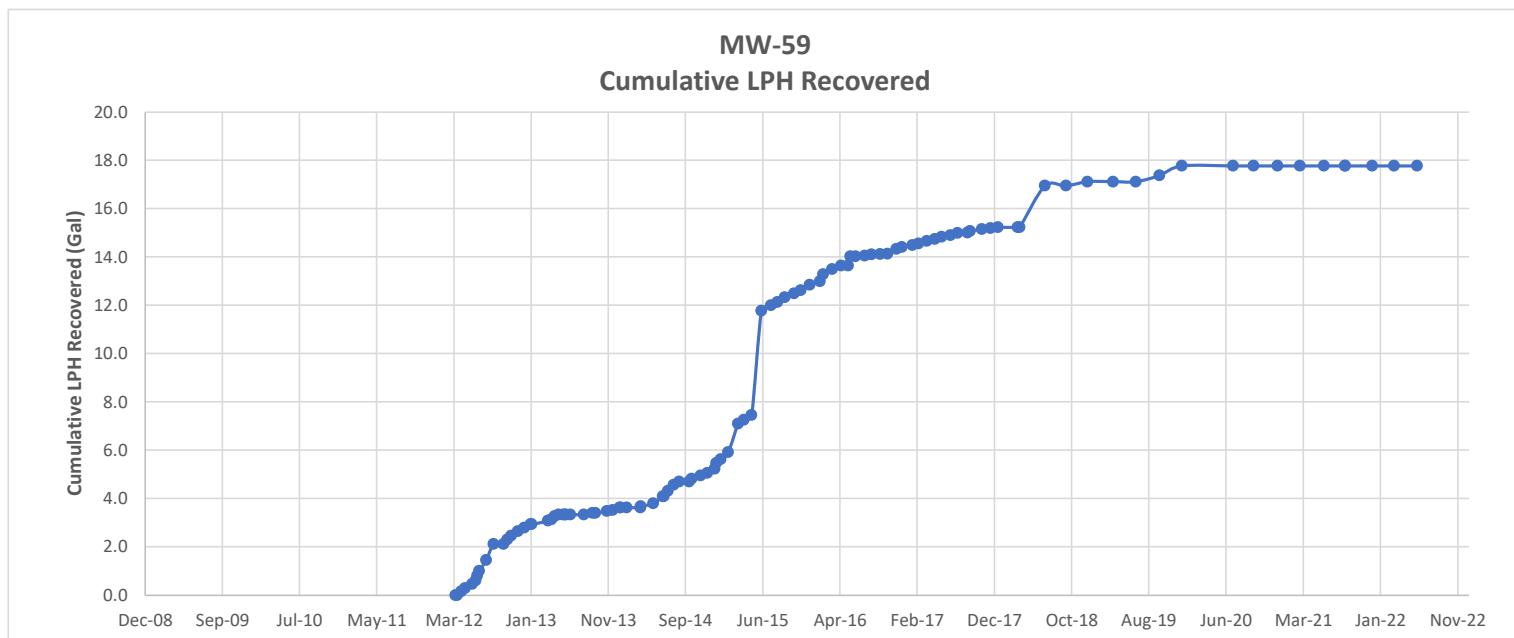
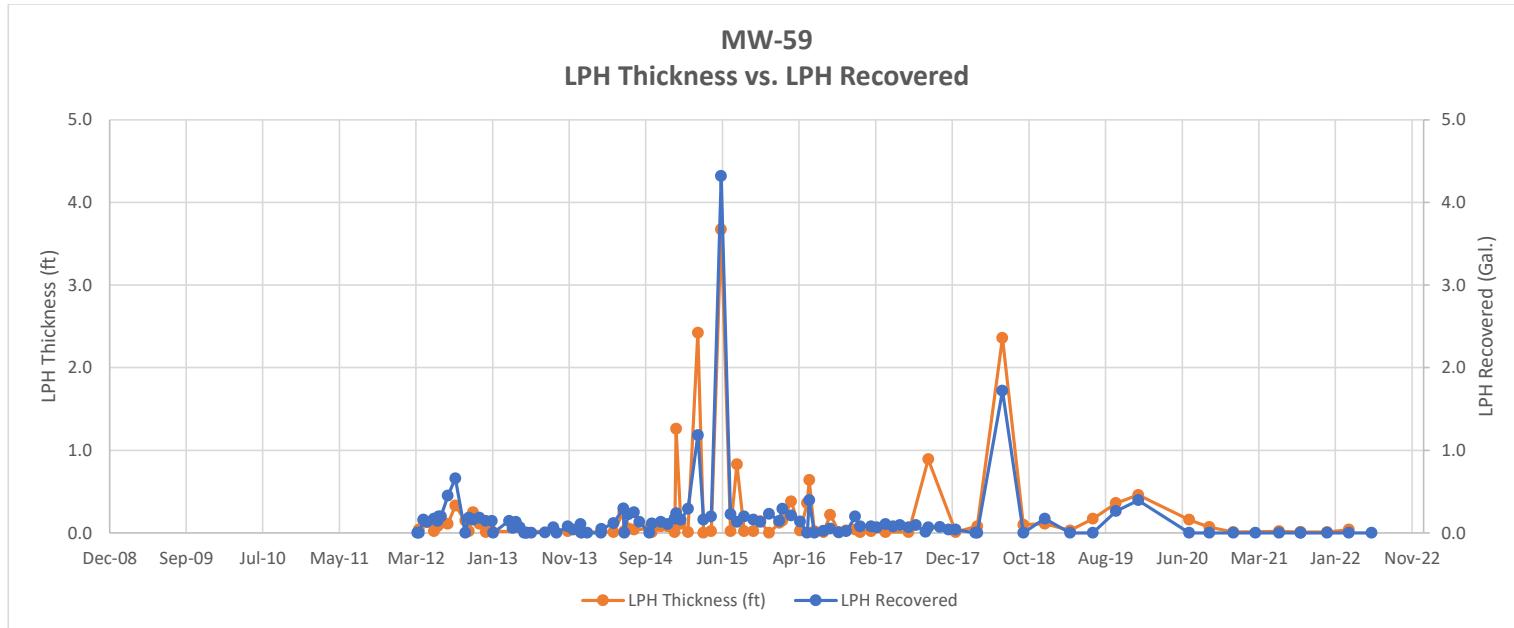


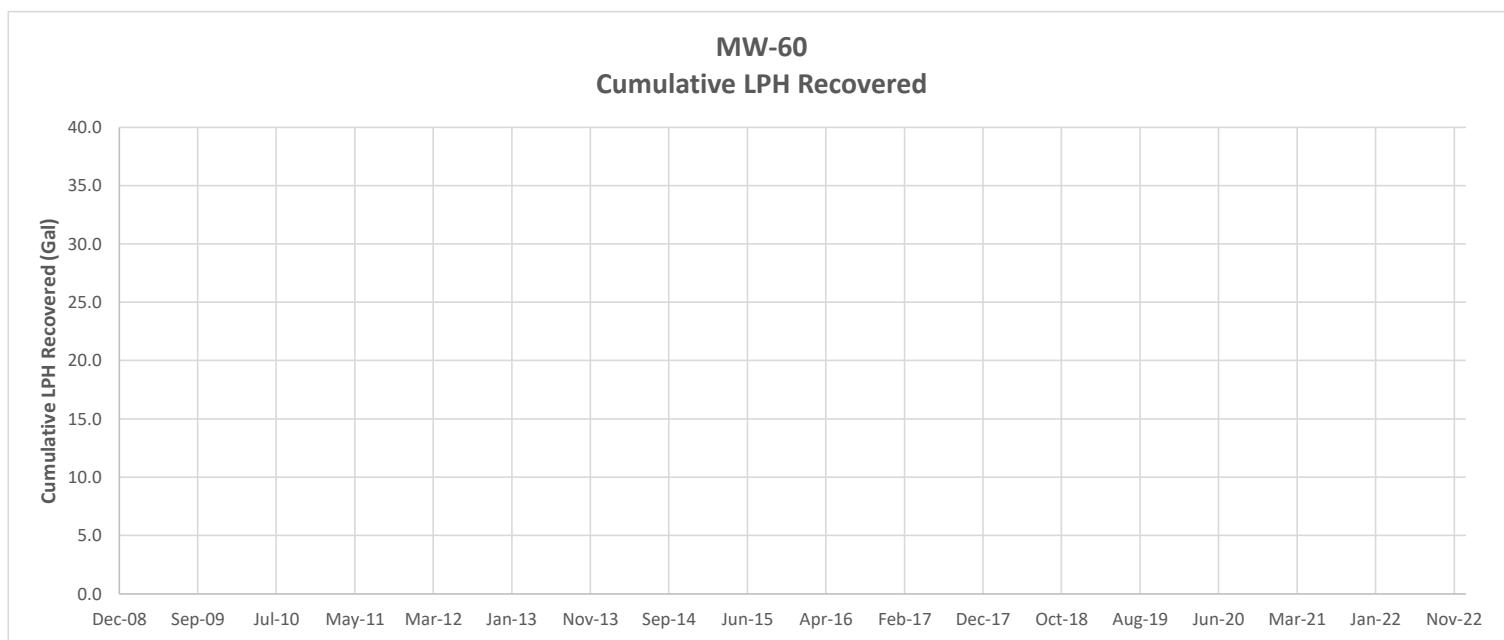
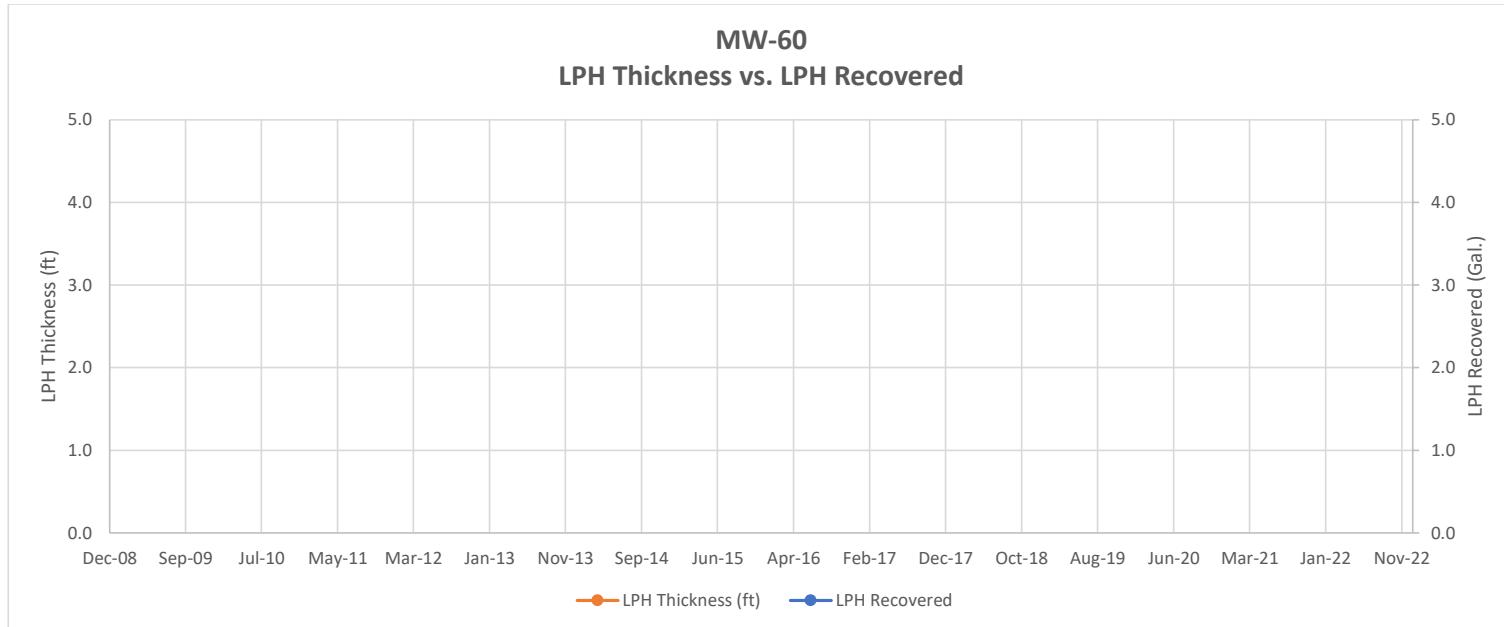


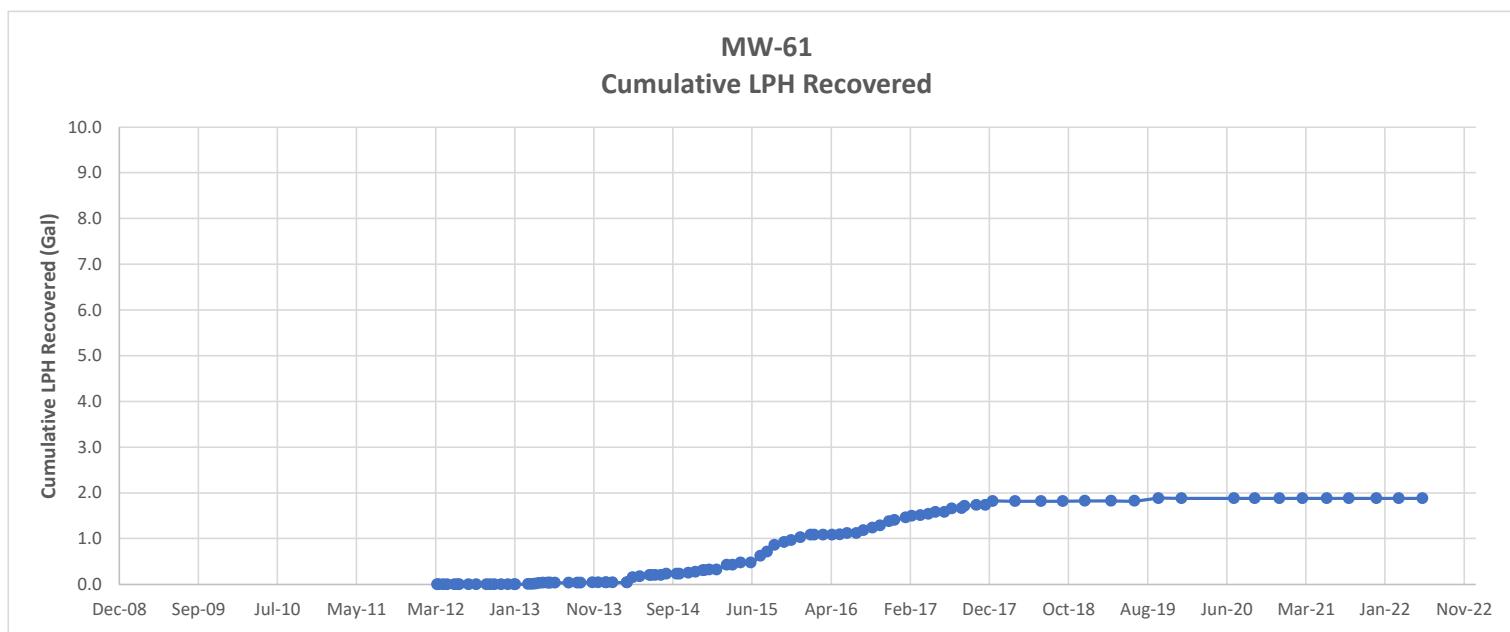
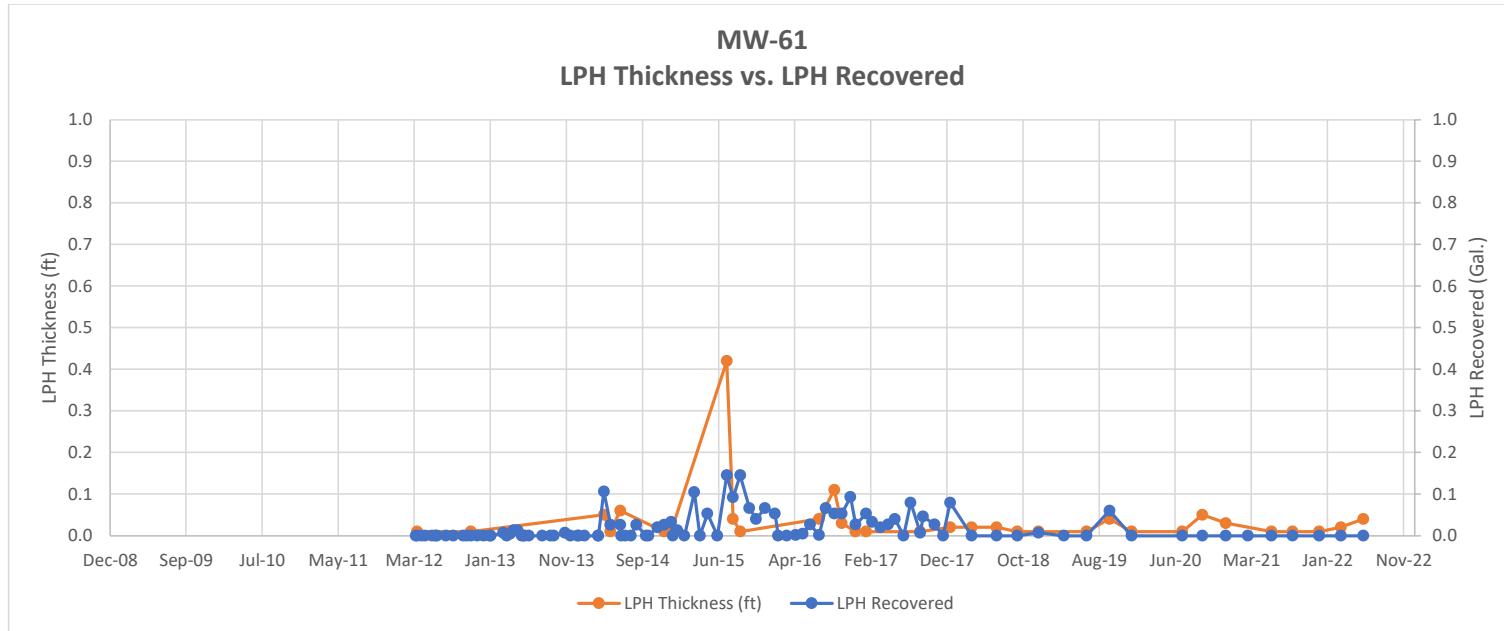


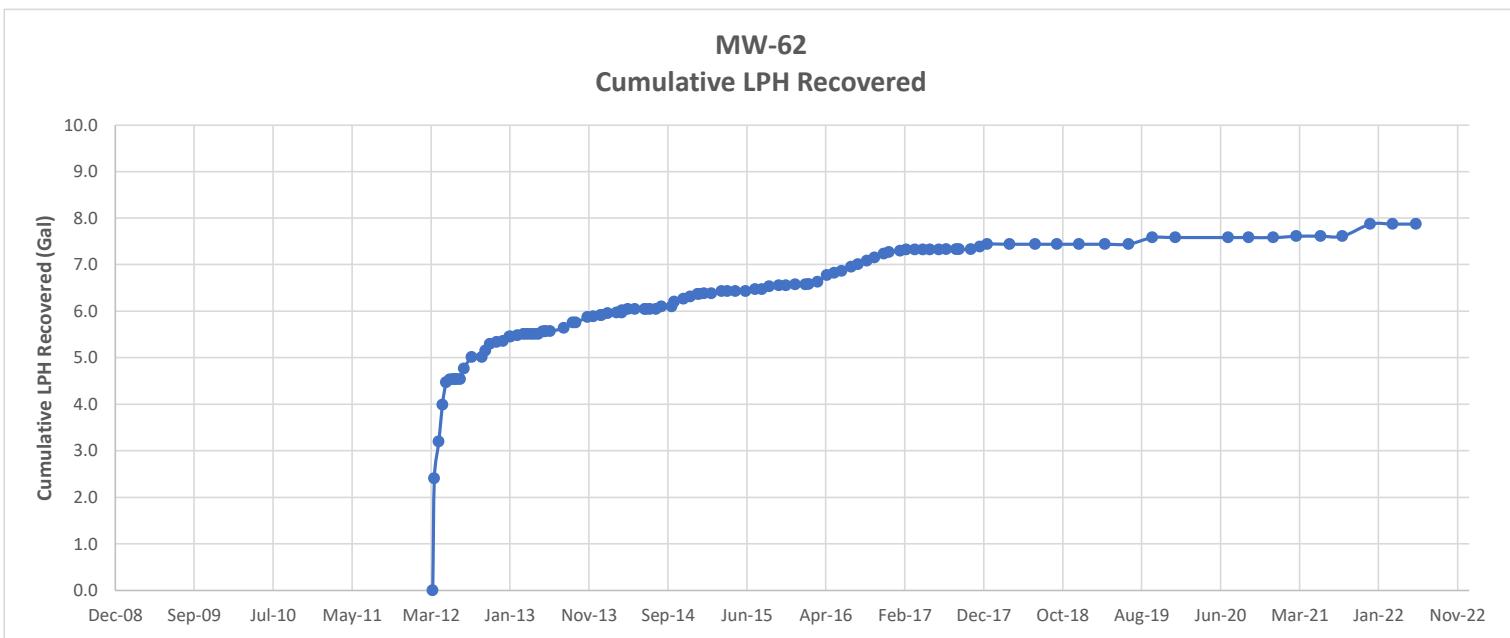
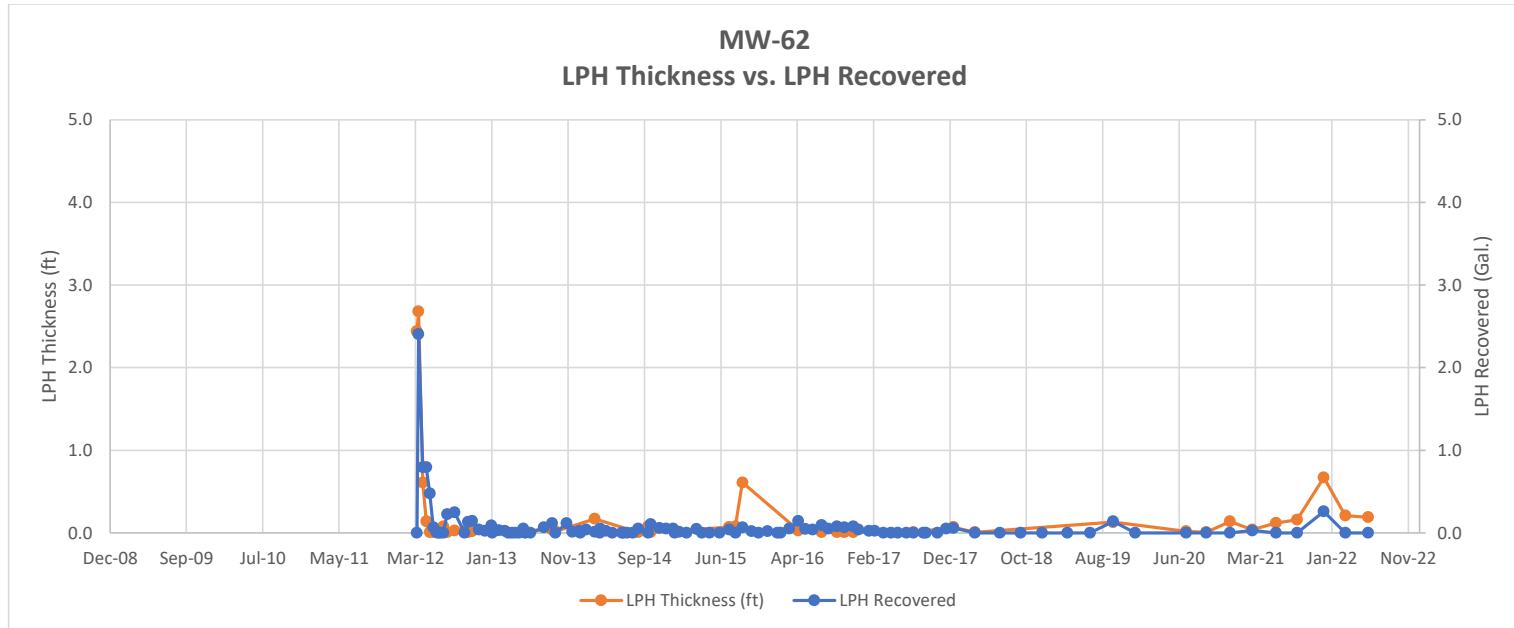


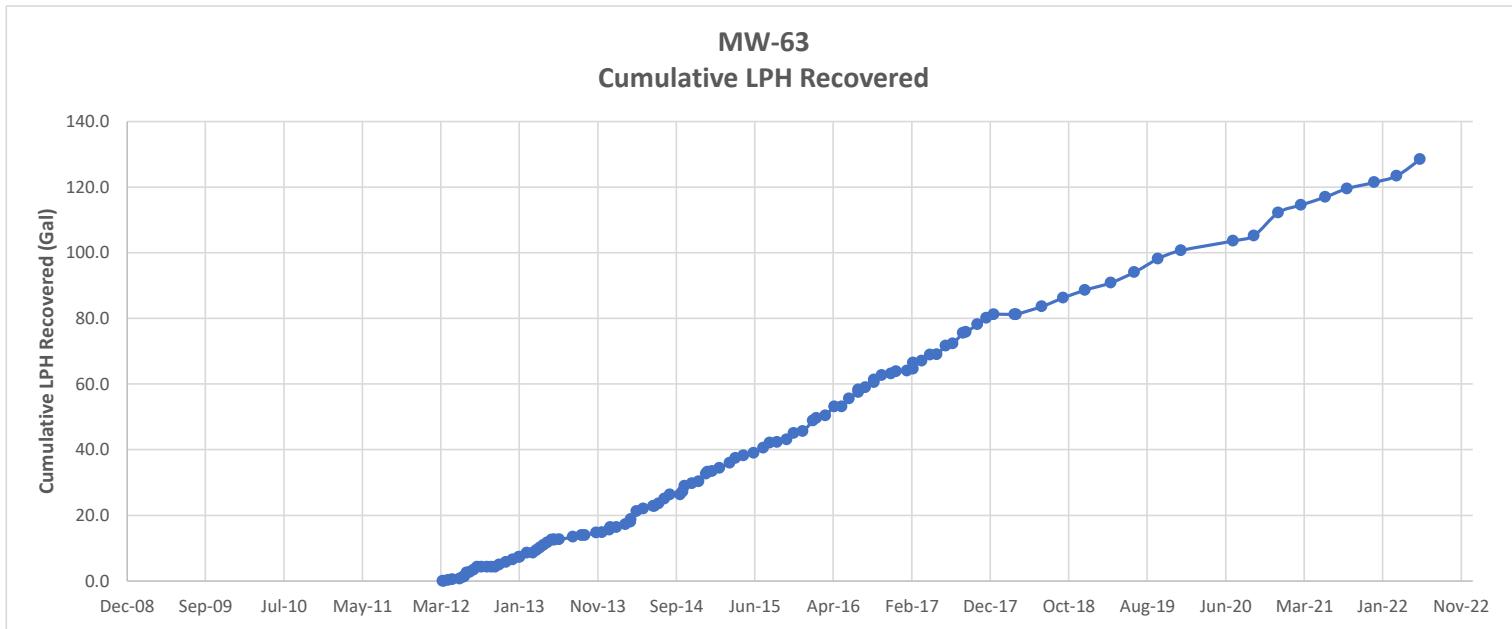
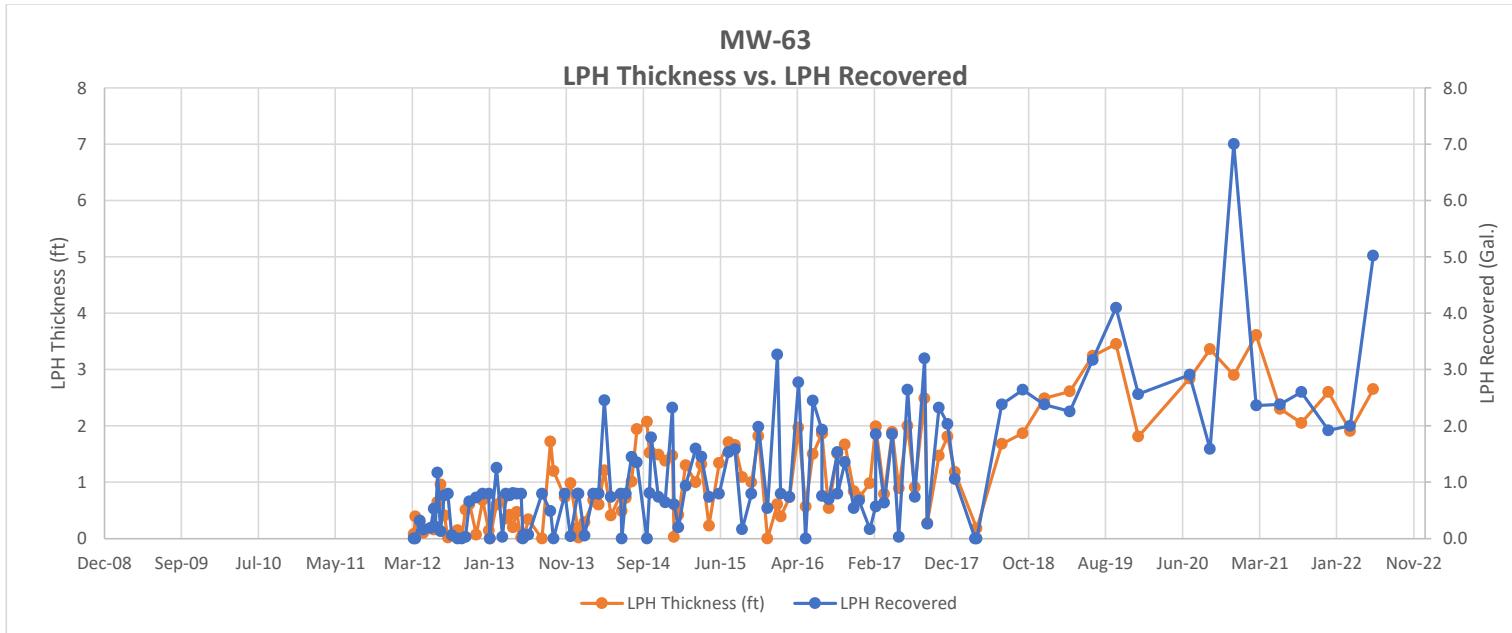


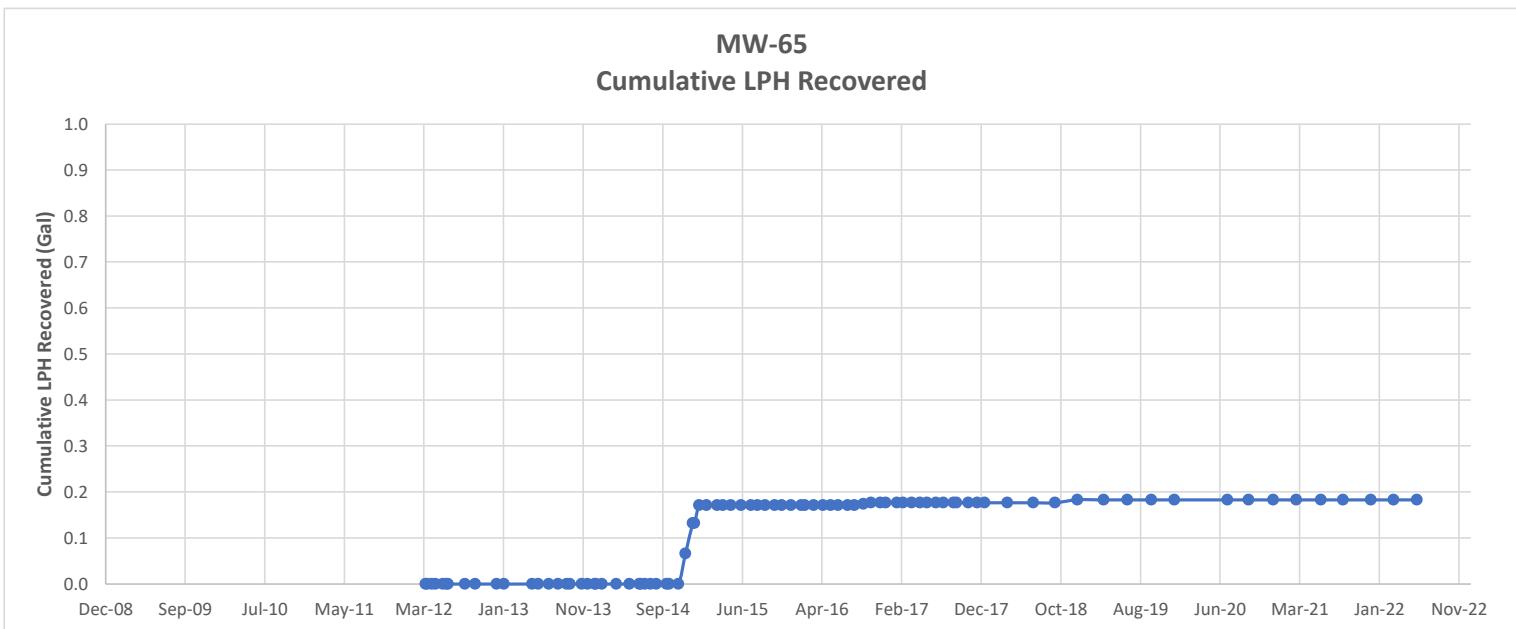
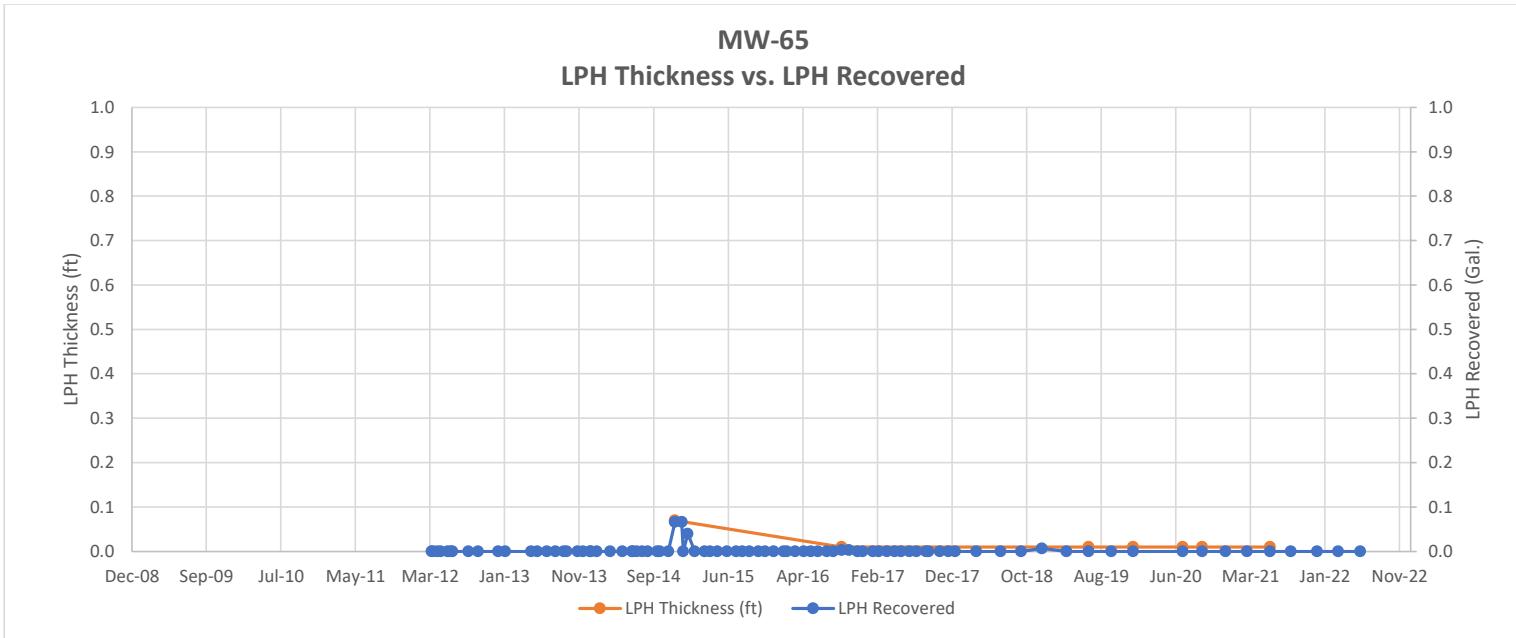


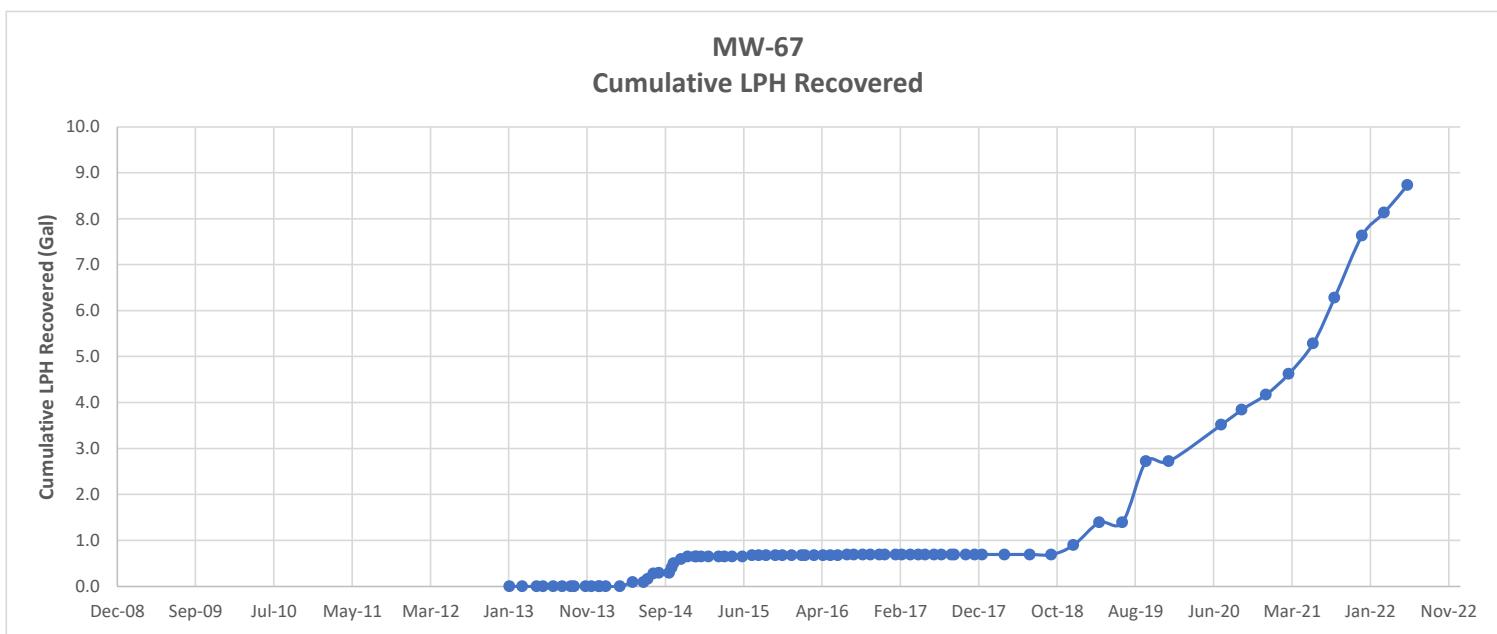
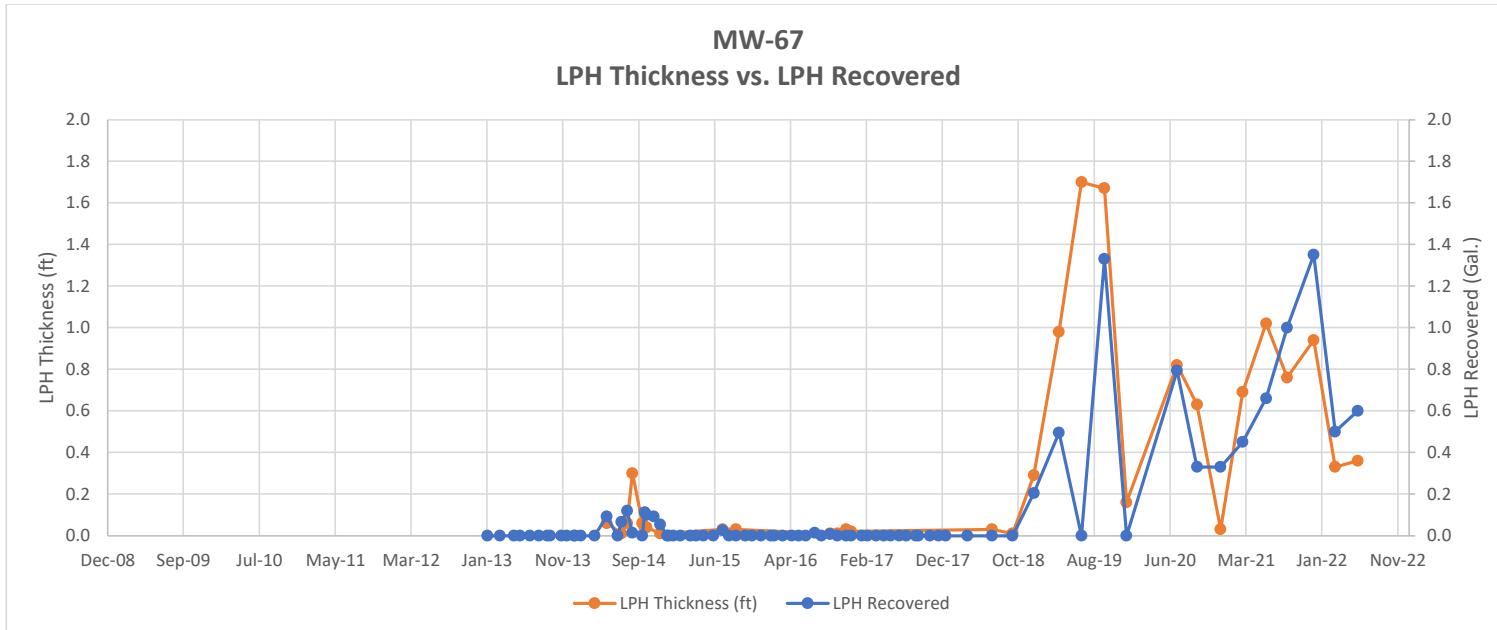


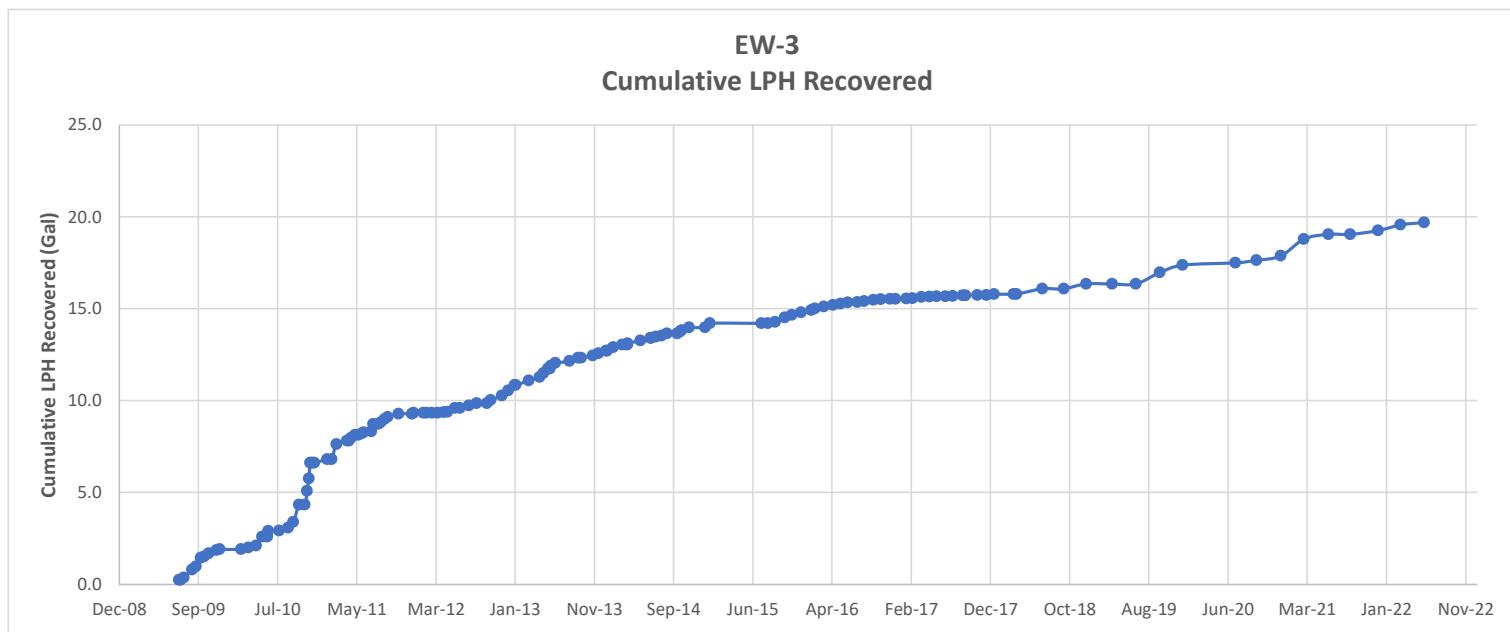
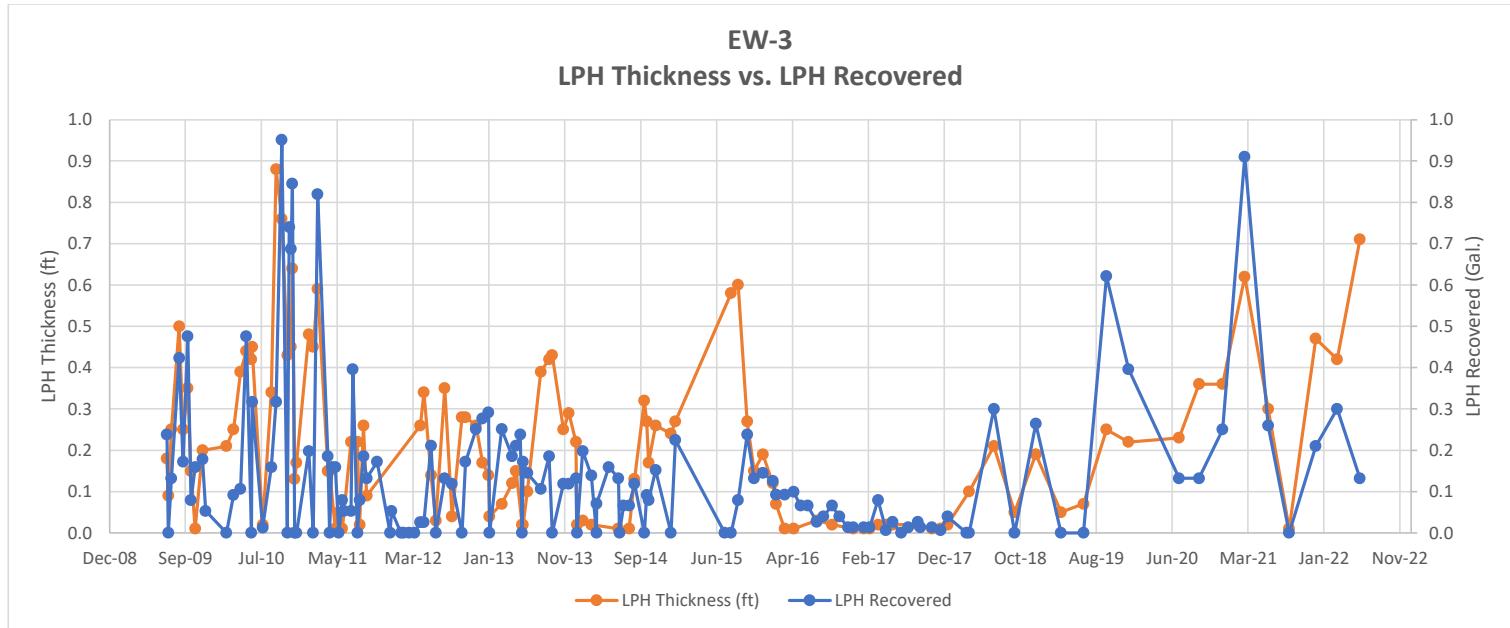


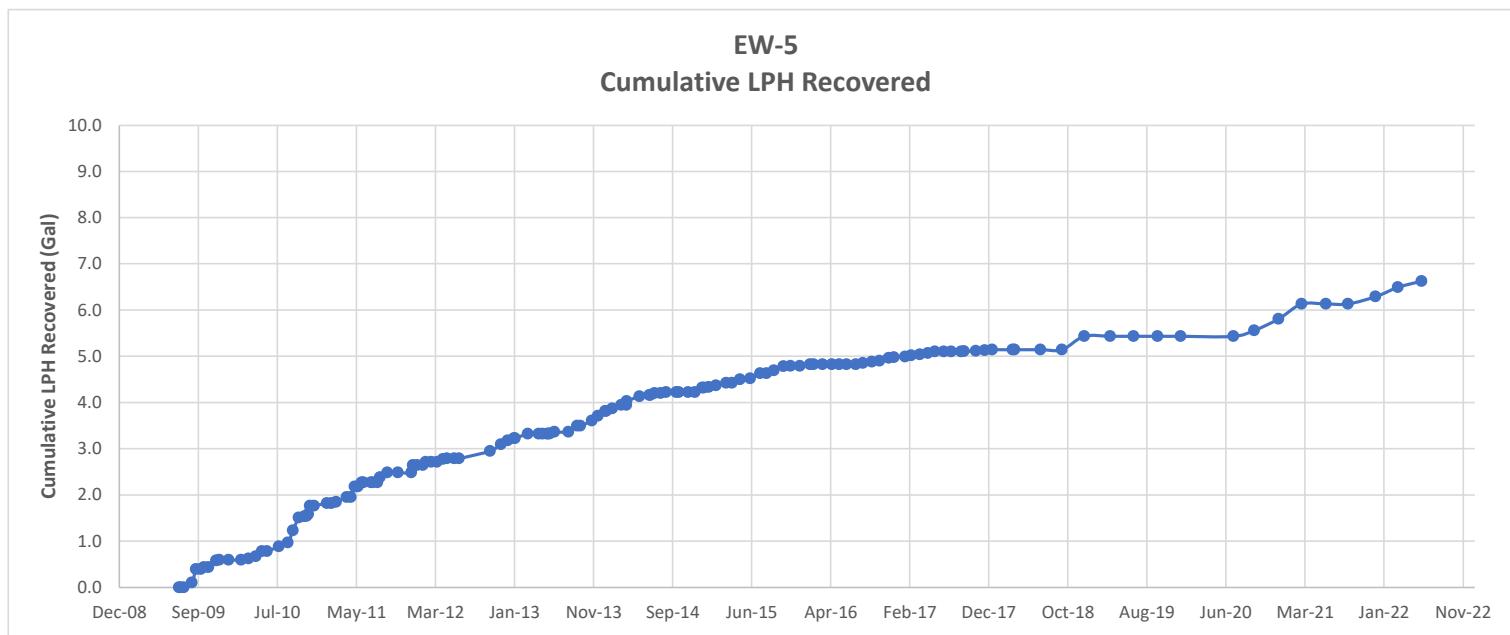
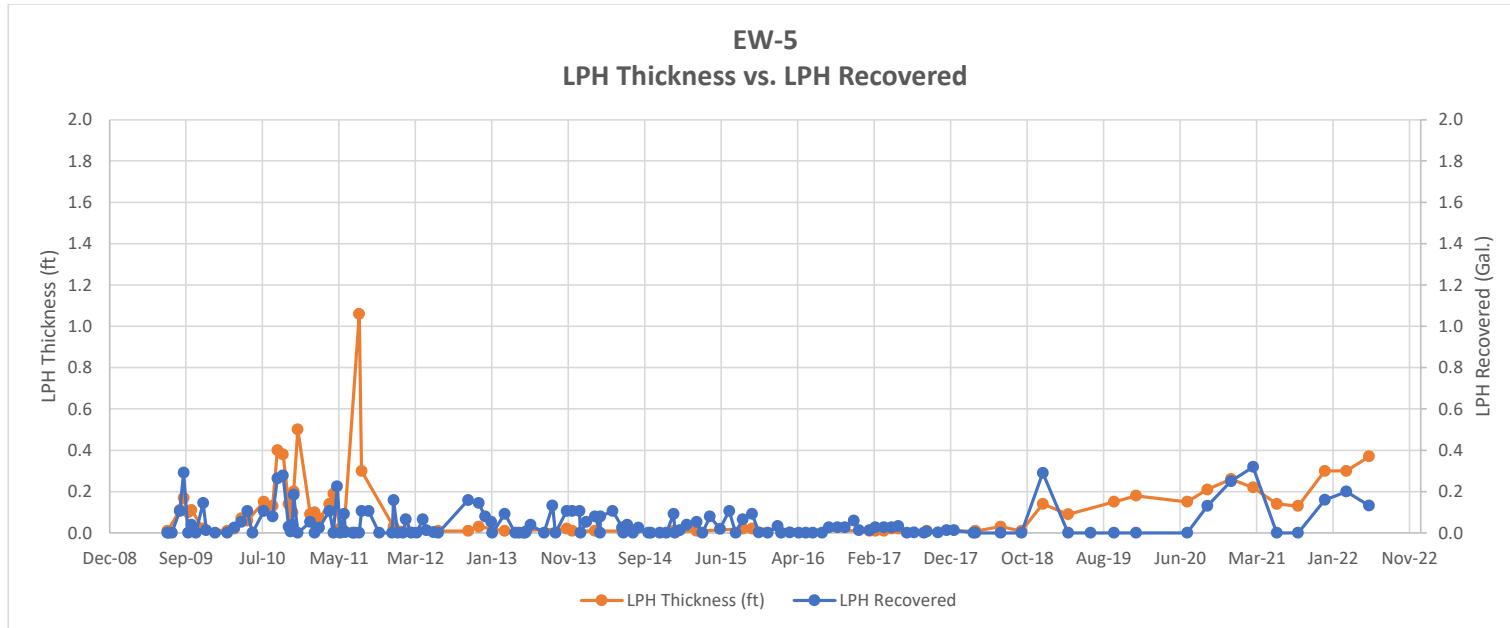


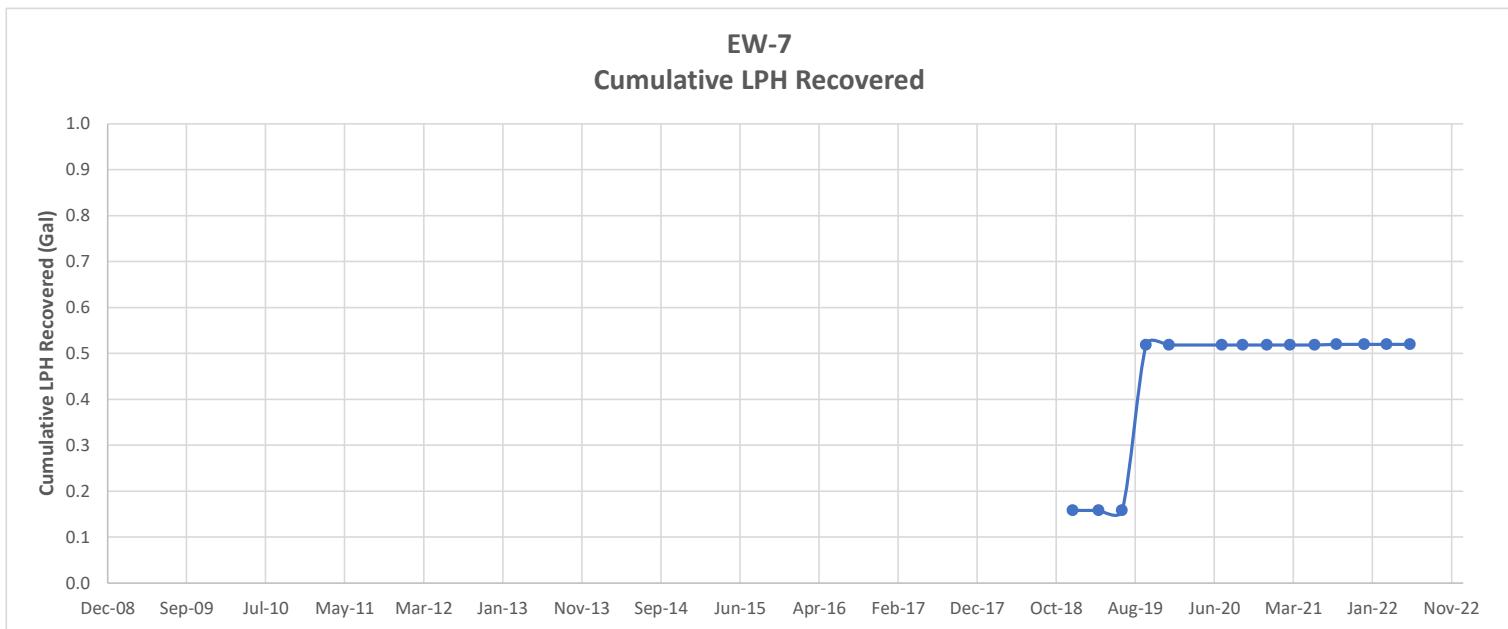
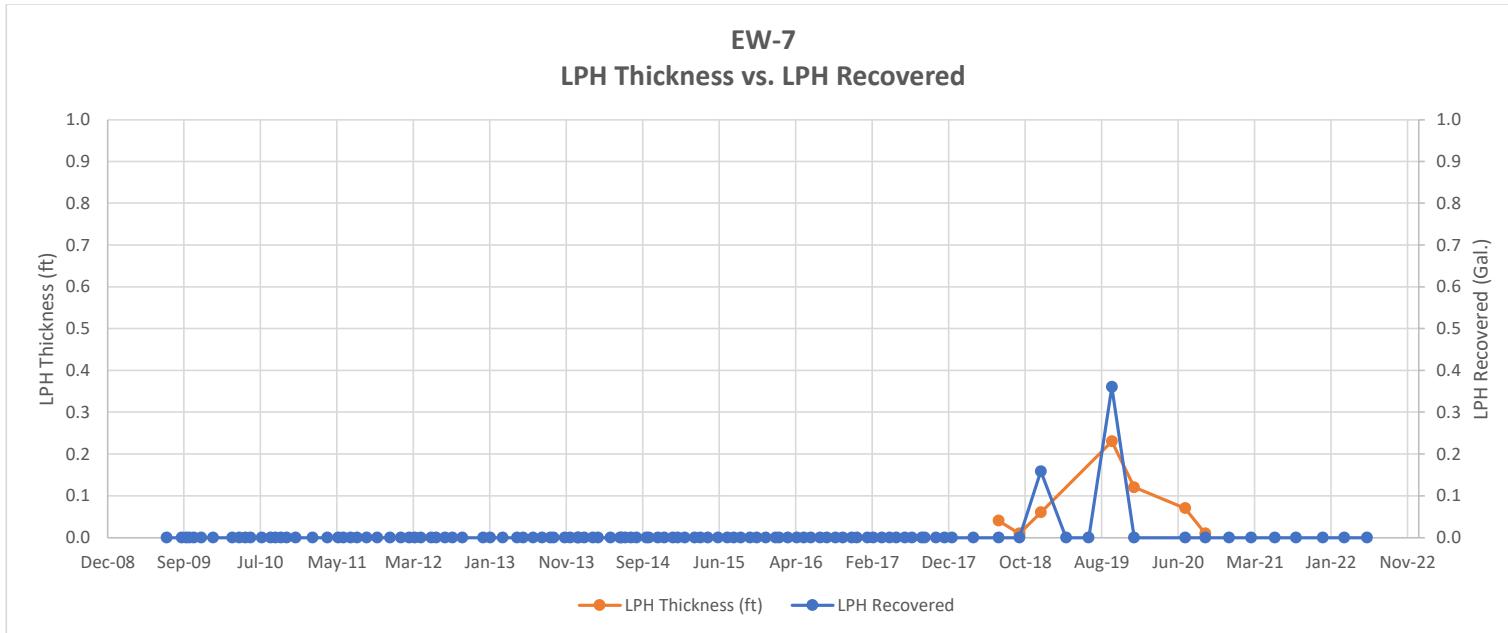












# **Attachment 3**

## **Sample Logs**

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-22      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing		<b>MP Elevation</b>	Casing Diameter (in)		4	<b>Well Casing Material</b> PVC
<b>Static Water Level (ft-bmp)</b>	12.88		<b>Total Depth (ft-bmp)</b>	18.18		Water Column (ft) 5.3	<b>Gallons in Well</b> 3.44
<b>Purge Start</b>	10:48		<b>Pump Intake (ft-bmp)</b>	18		<b>Purge Method</b> Volumetric	<b>Purge Equipment</b> Bailer
<b>Purge End</b>	10:59		<b>Volumes Purged</b>	1.45		<b>Sample ID</b> CSXT MW-22(061422)	<b>Sampled by</b> Andrew Feild
<b>Sample Time</b>	11:00		<b>Gallons Purged</b>	5.00		<b>Replicate/Code No.</b> NA	<b>Sample Type</b> Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
10:48	0	0		13.83	--	6.84	0.524	71.2	1.39	18.2	-110	--	--
10:52	4	4		16.26	--	6.66	0.531	871	1.14	17.01	-98	--	--
10:58	6	10		17.25	--	6.72	0.514		1.32	18.23	-96	Grayish Brown	None

<b>Constituent Sampled</b>	<b>Container</b>	<b>Number</b>
----------------------------	------------------	---------------

**Comments:**
**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-24      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Sunny, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing		<b>MP Elevation</b>	<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	8.78		<b>Total Depth (ft-bmp)</b>	14	<b>Water Column (ft)</b>	5.22	<b>Gallons in Well</b>
<b>Purge Start</b>	11:10		<b>Pump Intake (ft-bmp)</b>	14	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	11:30		<b>Volumes Purged</b>	3.54	<b>Sample ID</b>	CSXT MW-24(061422)	<b>Sampled by</b>
<b>Sample Time</b>	11:25		<b>Gallons Purged</b>	12.00	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
11:12	0	0	1	3.11	--	7.08	0.198	295	5.2	26.44	39	--	--
11:14	2	2	1	6.9	--	7.4	0.179	0.1	4.61	24.47	54	--	--
11:16	2	4	1	9.09	--	7.46	0.177	0.1	4.51	22.94	76	--	--
11:19	3	7	1	9	--	7.42	0.175	550	3.3	20.93	73	Black	Mild

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-25      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing		<b>MP Elevation</b>	<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	13.3		<b>Total Depth (ft-bmp)</b>	18.81	<b>Water Column (ft)</b>	5.51	<b>Gallons in Well</b>
<b>Purge Start</b>	07:57		<b>Pump Intake (ft-bmp)</b>	18	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	08:15		<b>Volumes Purged</b>	3.35	<b>Sample ID</b>	CSXT MW-25(061422)	<b>Sampled by</b>
<b>Sample Time</b>	08:20		<b>Gallons Purged</b>	12.00	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
07:59	0	0	1	13.89	0.00	6.74	0.473	190	3.86	17.51	-15	--	--
08:03	4	4	1	14.9	--	6.64	0.636	980	1.52	16.86	-111	--	--
08:07	4	8	1	15.81	--	6.73	0.681	0.1	1.73	16.21	-115	--	--
08:13	6	14	1	15.72	--	6.83	0.667	0.1	1.74	16.28	-110	Brown	None

## Comments:

### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-29      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.		
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>
<b>Static Water Level (ft-bmp)</b>	13.25	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	9.75	<b>Gallons in Well</b>
<b>Purge Start</b>	11:37	<b>Pump Intake (ft-bmp)</b>		<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	11:53	<b>Volumes Purged</b>		<b>Sample ID</b>	CSXT MW-29(061422)	<b>Sampled by</b>
<b>Sample Time</b>	11:55	<b>Gallons Purged</b>		<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance	
											Color	Odor
11:43	0	0		13.51	--	6.64	3.31	821	1.86	21.27	-2	--
11:46	3	3		18.3	--	6.64	4.31	509	2.03	18.04	-13	--
11:51	5	8		21.35	--	6.69	4.4		0.93	17.64	-53	Black
												None

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-3      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	15.9	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	9.9	<b>Gallons in Well</b>	6.43
<b>Purge Start</b>	08:35	<b>Pump Intake (ft-bmp)</b>		25	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	08:53	<b>Volumes Purged</b>		3.00	<b>Sample ID</b>	CSXT MW-3(061422)	<b>Sampled by</b>
<b>Sample Time</b>	08:55	<b>Gallons Purged</b>		19.30	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
08:36	0	0		16.28	--	7.01	0.75	707	3.9	17.24	107	--	--
08:41	5	5		17.08	--	6.34	1.54		1.55	16.35	156	--	--
08:46	5	10		17.19	--	6.49	2.36		2.21	16.51	159	--	--
08:52	6	16		17.5	--	6.65	3.57		2.76	16.59	150	Brown	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Stick-up

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-43      **Date** 06/15/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Sunny, winds at mph.		
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>
<b>Static Water Level (ft-bmp)</b>	7	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	8.71	<b>Gallons in Well</b>
<b>Purge Start</b>	08:52	<b>Pump Intake (ft-bmp)</b>		<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	09:08	<b>Volumes Purged</b>		<b>Sample ID</b>	CSXT MW-43(061522)	<b>Sampled by</b>
<b>Sample Time</b>	09:10	<b>Gallons Purged</b>		<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
08:54	0	0		7.46	--	7.7	0.87	308	6.41	18.24	114	--	--
08:57	3	3		9.41	--	7.11	0.416	446	2.16	15.4	-14	--	--
09:02	5	8		11.79	--	6.86	0.427	240	2.19	15.2	-22	--	--
09:07	5	13		13.3	--	6.8	0.423	472	2.4	15.39	-6	Grayish Brown	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-51      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.		
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>
<b>Static Water Level (ft-bmp)</b>	12.74	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	11.84	<b>Gallons in Well</b>
<b>Purge Start</b>	12:13	<b>Pump Intake (ft-bmp)</b>		<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	12:29	<b>Volumes Purged</b>		<b>Sample ID</b>	CSXT MW-51(061422)	<b>Sampled by</b>
<b>Sample Time</b>	12:30	<b>Gallons Purged</b>		<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
12:13	0	0		13.41	--	7.02	0.457	138	1.94	17.53	108	--	--
12:17	4	4		18.42	--	6.65	0.382	410	2.17	17.44	126	--	--
12:22	5	9		20.89	--	6.73	0.405	632	3.1	16.38	131	--	--
12:28	6	15		22.84	--	6.28	0.402		2.24	15.9	166	Brown	None

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-64      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing		<b>MP Elevation</b>	<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	4.32		<b>Total Depth (ft-bmp)</b>	22.32	<b>Water Column (ft)</b>	18	<b>Gallons in Well</b>
<b>Purge Start</b>	10:01		<b>Pump Intake (ft-bmp)</b>	22	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	10:19		<b>Volumes Purged</b>	2.97	<b>Sample ID</b>	CSXT MW-64(061422)	<b>Sampled by</b>
<b>Sample Time</b>	10:20		<b>Gallons Purged</b>	34.70	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
10:02	0	0		4.52	--	6.71	1.625	428	1.25	19.85	106	--	--
10:07	5	5		5.7	--	6.62	0.625	344	1.88	19.1	106	--	--
10:14	7	12		6.98	--	6.56	0.635	214	1.76	19.01	124	--	--
10:20	6	18		6.16	--	6.61	0.633	278	1.97	18.68	136	Brown	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-69      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	13	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	9.44	<b>Gallons in Well</b>	6.14
<b>Purge Start</b>	09:12	<b>Pump Intake (ft-bmp)</b>		22	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	09:40	<b>Volumes Purged</b>		3.01	<b>Sample ID</b>	CSXT MW-69(061422)	<b>Sampled by</b>
<b>Sample Time</b>	09:35	<b>Gallons Purged</b>		18.50	<b>Replicate/Code No.</b>	DUP-01(061422)	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
09:14	0	0	1	13.1	--	7.15	0.451	0.1	2.22	19.27	-94	--	--
09:22	8	8	1	13.1	--	7.01	0.485	0.1	1.24	17.2	-123	--	--
09:26	4	12	1	13.66	--	6.99	0.528	0.1	1.63	16.5	-101	--	--
09:31	5	17	1	14	--	7.02	0.527	0.1	1.76	16.56	-93	Grayish Brown	Mild

## Comments:

### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-6R      **Date** 06/15/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	90 °F, Sunny, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing		<b>MP Elevation</b>	<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	5.7		<b>Total Depth (ft-bmp)</b>	14.32	<b>Water Column (ft)</b>	8.62	<b>Gallons in Well</b>
<b>Purge Start</b>	10:02		<b>Pump Intake (ft-bmp)</b>	14	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	10:18		<b>Volumes Purged</b>	3.00	<b>Sample ID</b>	CSXT MW-6R(061522)	<b>Sampled by</b>
<b>Sample Time</b>	10:20		<b>Gallons Purged</b>	16.80	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance	
											Color	Odor
10:03	0	0		6.1	--	6.6	0.462	42.1	1.45	17	-84	--
10:07	4	4		7.91	--	6.63	0.647	871	1.58	15.03	-91	--
10:11	4	8		8.65	--	6.7	0.687		2.42	14.1	-93	--
10:17	6	14		7.5	--	6.7	0.71		1.46	14.08	-88	Gray
												Mild

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** CSXT MW-71      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	13.85	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	4.87	<b>Gallons in Well</b>	3.17
<b>Purge Start</b>	07:25	<b>Pump Intake (ft-bmp)</b>		18	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	07:36	<b>Volumes Purged</b>		2.97	<b>Sample ID</b>	CSXT MW-71(061422)	<b>Sampled by</b>
<b>Sample Time</b>	07:40	<b>Gallons Purged</b>		9.40	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
07:26	0	0		14.15	0.00	6.14	1.28	275	2.83	19.82	156	--	--
07:30	4	4		15.2	--	6.26	1.33	931	2.57	17.9	158	--	--
07:34	4	8		15.99	--	6.41	1.29		1.93	17.34	170	--	--
07:36	2	10		16.8	--	6.38	1.29		3	16.75	178	Brown	None

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-1      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	6.4	<b>Total Depth (ft-bmp)</b>		18.29	<b>Water Column (ft)</b>	11.89	<b>Gallons in Well</b>
<b>Purge Start</b>	13:13	<b>Pump Intake (ft-bmp)</b>		18	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	13:36	<b>Volumes Purged</b>		2.20	<b>Sample ID</b>	NPS MW-1(061422)	<b>Sampled by</b>
<b>Sample Time</b>	13:35	<b>Gallons Purged</b>		17.00	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
13:17	0	0		8	--	6.77	0.663		2.39	17.57	-1	--	--
13:21	4	4		11.5	--	6.85	0.635		2.45	14.8	-29	--	--
13:27	6	10		14.15	--	6.65	0.643		1.58	14.3	-40	--	--
13:35	8	18		16.5	--	6.81	0.645		2.17	13.16	-60	Gray	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot       $1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47$   
 $1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65$

**Well Information**

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-13      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	2	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	11.35	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	9.61	<b>Gallons in Well</b>	1.56
<b>Purge Start</b>	15:14	<b>Pump Intake (ft-bmp)</b>		22	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	15:26	<b>Volumes Purged</b>		3.01	<b>Sample ID</b>	NPS MW-13(061422)	<b>Sampled by</b>
<b>Sample Time</b>	15:30	<b>Gallons Purged</b>		4.70	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
15:16	0	0		11.9	--	7.55	0.237	180	3.55	15.77	60	--	--
15:19	3	3		13	--	14.37	0.625		1.82	14.44	91	--	--
15:22	3	6		13	--	6.5	0.643		1.49	14.18	85	--	--
15:26	4	10		13	--	6.65	0.624		3.18	14.8	76	Brown	None

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-14      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Sunny, winds at mph.		
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	2	<b>Well Casing Material</b>
<b>Static Water Level (ft-bmp)</b>	5.8	<b>Total Depth (ft-bmp)</b>		<b>Water Column (ft)</b>	19.9	<b>Gallons in Well</b>
<b>Purge Start</b>	14:40	<b>Pump Intake (ft-bmp)</b>		<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	14:58	<b>Volumes Purged</b>		<b>Sample ID</b>	NPS MW-14(061422)	<b>Sampled by</b>
<b>Sample Time</b>	15:00	<b>Gallons Purged</b>		<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
14:40	0	0		6.6	--	7.15	0.566		3.12	2.99	-82	--	--
14:46	6	6		8	--	7.11	0.562		1.82	19.68	-75	--	--
14:51	5	11		9	--	7.1	0.567		2.35	19.26	-80	--	--
14:58	7	18		9.1	--	7.05	0.565		1.44	18.8	-77	Gray	None

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-16      **Date** 06/15/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	45 °F, Sunny, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Outer Casing	<b>MP Elevation</b>	<b>Casing Diameter (in)</b>		2	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	9.44	<b>Total Depth (ft-bmp)</b>	24.18	<b>Water Column (ft)</b>	14.74	<b>Gallons in Well</b>	2.4
<b>Purge Start</b>	08:53	<b>Pump Intake (ft-bmp)</b>	15	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>	Bailer
<b>Purge End</b>	09:20	<b>Volumes Purged</b>	3.13	<b>Sample ID</b>	NPS MW-16(061522)	<b>Sampled by</b>	Brian Keh
<b>Sample Time</b>	09:15	<b>Gallons Purged</b>	7.50	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
08:53	0	0	150	9.9	--	7.34	0.497	28.2	3.89	16.77	110	--	--
09:00	7	7	150	10.8	--	7.28	0.504	399	2.04	15.84	109	--	--
09:05	5	12	150	10.91	--	7.2	0.51	547	1.61	15.32	109	--	--
09:11	6	18	150	10.51	--	7.23	0.506	847	1.1	15.4	109	Brown	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Woods

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-18      **Date** 06/15/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Sunny, winds at mph.		
<b>Measuring Pt. Description</b>	Top of Inner Casing		<b>MP Elevation</b>	Casing Diameter (in)	4	Well Casing Material
<b>Static Water Level (ft-bmp)</b>	2.28		<b>Total Depth (ft-bmp)</b>	14.61	Water Column (ft)	12.33
<b>Purge Start</b>	07:51		<b>Pump Intake (ft-bmp)</b>	14	<b>Purge Method</b>	Volumetric
<b>Purge End</b>	08:09		<b>Volumes Purged</b>	3.00	<b>Sample ID</b>	NPS MW-18(061522) Sampled by Andrew Feild
<b>Sample Time</b>	08:10		<b>Gallons Purged</b>	24.00	<b>Replicate/Code No.</b>	NA
<b>Sample Type</b> Grab						

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
07:52	0	0		3.78	--	7.17	0.626	16	1.82	20.04	123	--	--
07:57	5	5		8.78	--	6.67	0.689		1.92	15.52	144	--	--
08:01	4	9		11.46	--	6.78	0.692		3.64	14.65	151	--	--
08:11	10	19		11.89	--	6.62	0.703		2.15	14.71	111	Grayish Brown	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-2      **Date** 06/15/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	45 °F, Sunny, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Outer Casing		<b>MP Elevation</b>	<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	5.38		<b>Total Depth (ft-bmp)</b>	21.23	<b>Water Column (ft)</b>	15.85	<b>Gallons in Well</b>
<b>Purge Start</b>	07:49		<b>Pump Intake (ft-bmp)</b>	24	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	08:20		<b>Volumes Purged</b>	3.01	<b>Sample ID</b>	NPS-MW-2(061522)	<b>Sampled by</b>
<b>Sample Time</b>	08:15		<b>Gallons Purged</b>	31.00	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
07:54	0	0	150	4.22	--	7.04	0.69	85	1.34	17.37	175	--	--
07:59	5	5	150	8.99	--	6.57	0.737	171	1.55	15.71	52	--	--
08:05	6	11	150	9	--	6.59	0.746	218	1.82	15.11	35	--	--
08:13	8	19	150	8.1	--	6.65	0.746	199	2	15.05	28	Brown	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Woods

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Stick-up

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-4      **Date** 06/15/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	45 °F, Sunny, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Outer Casing	<b>MP Elevation</b>	<b>Casing Diameter (in)</b>		4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	7	<b>Total Depth (ft-bmp)</b>	13.3	<b>Water Column (ft)</b>	6.3	<b>Gallons in Well</b>	4.09
<b>Purge Start</b>	09:58	<b>Pump Intake (ft-bmp)</b>	10	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>	Bailer
<b>Purge End</b>	10:20	<b>Volumes Purged</b>	2.44	<b>Sample ID</b>	NPS MW-4(061522)	<b>Sampled by</b>	Brian Keh
<b>Sample Time</b>	10:15	<b>Gallons Purged</b>	10.00	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>	Grab

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
09:58	0	0	150	7.8	--	7.14	0.152	79.6	9.06	19.85	-51	--	--
10:04	6	6	150	9.89	--	7.4	0.428	432	2.29	16.3	-86	--	--
10:07	3	9	150	11.8	--	7.31	0.432	1000	2.03	14.97	-85	--	--
10:11	4	13	150	12.3	--	7.31	0.427	958	1.91	14.76	-80	Brown	None

**Comments:**

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

**Well Information**

Well Location: Woods

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Stick-up

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# Groundwater Sampling Form



**Project Number** 30128305      **Well ID** NPS MW-5      **Date** 06/14/2022

<b>Project Name/Location</b>	CSX Brunswick Activities 2022		<b>Weather(°F)</b>	75 °F, Overcast, winds at mph.			
<b>Measuring Pt. Description</b>	Top of Inner Casing	<b>MP Elevation</b>		<b>Casing Diameter (in)</b>	4	<b>Well Casing Material</b>	PVC
<b>Static Water Level (ft-bmp)</b>	8.21	<b>Total Depth (ft-bmp)</b>		22.59	<b>Water Column (ft)</b>	14.38	<b>Gallons in Well</b>
<b>Purge Start</b>	13:50	<b>Pump Intake (ft-bmp)</b>		22	<b>Purge Method</b>	Volumetric	<b>Purge Equipment</b>
<b>Purge End</b>	14:11	<b>Volumes Purged</b>		2.14	<b>Sample ID</b>	NPS MW-5(061422)	<b>Sampled by</b>
<b>Sample Time</b>	14:15	<b>Gallons Purged</b>		20.00	<b>Replicate/Code No.</b>	NA	<b>Sample Type</b>

Time	Minutes Elapsed	Total Elapsed Minutes	Rate mL/min	Depth to Water (ft)	Gallons Purged	pH (standard units)	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature °C	Appearance		
											Color	Odor	
13:51	0	0		9.11	--	7.19	0.395	912	1.56	15.98	72	--	--
13:59	8	8		17	--	7.15	0.458	625	1.29	14.35	-41	--	--
14:10	11	19		21.5	--	7.08	0.471	0.1	2.34	14.09	-65	Gray	None

#### Comments:

#### Well Casing Volume Conversion

Well diameter (inches) = gallons per foot  
 1 = 0.04; 1.5 = 0.09; 2.5 = 0.26; 3.5 = 0.50; 6 = 1.47  
 1.25 = 0.06; 2 = 0.16; 3 = 0.37; 4 = 0.65

#### Well Information

Well Location: Verified by map

Well Locked at Arrival: yes

Condition of Well: Good condition

Well Locked at Departure: yes

Well Completion: Flush mount

Key Number To Well: NA

ft-bmp = feet below measuring point

in = inches

ft = feet

mL/min = milliliters per minute

mS/cm = millisiemens per centimeter

NTU = Nephelometric Turbidity Unit

mg/L = milligrams per liter

mV = milliv

# **Attachment 4**

## **Lab Report**



Environment Testing  
America



## ANALYTICAL REPORT

Eurofins Savannah  
5102 LaRoche Avenue  
Savannah, GA 31404  
Tel: (912)354-7858

Laboratory Job ID: 680-217040-1

Client Project/Site: CSXT Brunswick Yard

For:

ARCADIS U.S., Inc.  
7550 Teague Road  
Suite 210  
Hanover, Maryland 21076

Attn: Jonathan Gerdes

*Mike DelMonico*

Authorized for release by:

7/5/2022 1:54:16 PM

Michael DelMonico, Project Manager I  
(330)497-9396

[Michael.DelMonico@et.eurofinsus.com](mailto:Michael.DelMonico@et.eurofinsus.com)

### LINKS

Review your project  
results through



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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

# Case Narrative

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Job ID: 680-217040-1

### Laboratory: Eurofins Savannah

#### Narrative

#### Job Narrative 680-217040-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 6/16/2022 3:34 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 3.9° C and 5.4° C.

#### GC/MS VOA

Method 8260B: The matrix spike duplicate (MSD) recoveries for analytical batch 400-582554 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8260B: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 400-582554 was outside control limits. Sample matrix interference is suspected.

Method 8260B: The continuing calibration verification (CCV) associated with batch 400-582554 and 400-582694 recovered above the upper control limit for Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC VOA

Method 8015C: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 400-582806 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

Method 8015C: Surrogate recovery for the following sample was outside control limits: NPS MW- 4 (061522) (680-217040-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8015C: The following sample was re-prepared outside of preparation holding time due to no surrogate in initial run: NPS MW- 13 (061422) (680-217040-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Sample Summary

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
680-217040-1	CSXT MW-71 (061422)	Water	06/14/22 07:40	06/16/22 15:34	1
680-217040-2	NPS MW- 1 (061422)	Water	06/14/22 13:40	06/16/22 15:34	2
680-217040-3	NPS MW- 2 (061522)	Water	06/15/22 08:15	06/16/22 15:34	3
680-217040-4	NPS MW- 4 (061522)	Water	06/15/22 10:15	06/16/22 15:34	4
680-217040-5	NPS MW- 5 (061422)	Water	06/14/22 14:15	06/16/22 15:34	5
680-217040-6	NPS MW- 13 (061422)	Water	06/14/22 15:30	06/16/22 15:34	6
680-217040-7	NPS MW- 14 (061422)	Water	06/14/22 15:00	06/16/22 15:34	7
680-217040-8	NPS MW- 16 (061522)	Water	06/15/22 09:01	06/16/22 15:34	8
680-217040-9	NPS MW- 18 (061522)	Water	06/15/22 08:10	06/16/22 15:34	9
680-217040-10	CSXT MW- 3 (061422)	Water	06/14/22 08:55	06/16/22 15:34	10
680-217040-11	CSXT MW- 6R (061522)	Water	06/15/22 10:20	06/16/22 15:34	11
680-217040-12	CSXT MW- 22 (061422)	Water	06/14/22 11:00	06/16/22 15:34	12
680-217040-13	CSXT MW- 24(061422)	Water	06/14/22 11:25	06/16/22 15:34	
680-217040-14	CSXT MW- 25(061422)	Water	06/14/22 08:20	06/16/22 15:34	
680-217040-15	CSXT MW- 29(061422)	Water	06/14/22 11:55	06/16/22 15:34	
680-217040-16	CSXT MW- 43 (061522)	Water	06/15/22 09:10	06/16/22 15:34	
680-217040-17	CSXT MW- 51 (061422)	Water	06/14/22 12:30	06/16/22 15:34	
680-217040-18	CSXT MW- 64(061422)	Water	06/14/22 10:20	06/16/22 15:34	
680-217040-19	CSXT MW- 69(061422)	Water	06/14/22 09:35	06/16/22 15:34	
680-217040-20	DUP- 01 (061422)	Water	06/14/22 12:00	06/16/22 15:34	
680-217040-21	TRIP BLANK	Water	06/14/22 12:00	06/16/22 15:34	

## Method Summary

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN
8015C	Gasoline Range Organics (GRO) (GC)	SW846	TAL PEN
8015C	Diesel Range Organics (DRO) (GC)	EPA	TAL PEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL PEN
5030B	Purge and Trap	SW846	TAL PEN
5030C	Purge and Trap	SW846	TAL PEN

### Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

### Laboratory References:

TAL PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Definitions/Glossary

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

### GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

### GC Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

## Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

☒	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW-71 (061422)**

**Lab Sample ID: 680-217040-1**

**Matrix: Water**

Date Collected: 06/14/22 07:40

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 16:39	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 16:39	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 16:39	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 16:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 16:39	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 16:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 16:39	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 16:39	1
Acetone	25	U	25	10	ug/L			06/24/22 16:39	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 16:39	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 16:39	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 16:39	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 16:39	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 16:39	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 16:39	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 16:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 16:39	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 16:39	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 16:39	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 16:39	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 16:39	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 16:39	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 16:39	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 16:39	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 16:39	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 16:39	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 16:39	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 16:39	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 16:39	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 16:39	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 16:39	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 16:39	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 16:39	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 16:39	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 16:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 16:39	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 16:39	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW-71 (061422)**

**Lab Sample ID: 680-217040-1**

**Matrix: Water**

Date Collected: 06/14/22 07:40

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 16:39	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 16:39	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 16:39	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		72 - 119		06/24/22 16:39	1
Dibromofluoromethane	110		75 - 126		06/24/22 16:39	1
Toluene-d8 (Surr)	93		64 - 132		06/24/22 16:39	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/25/22 18:12	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	91		69 - 147		06/25/22 18:12	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	130	U	130	110	ug/L		06/21/22 09:00	06/22/22 01:57	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	89		21 - 150		06/21/22 09:00	06/22/22 01:57

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 1 (061422)**

Date Collected: 06/14/22 13:40

Date Received: 06/16/22 15:34

**Lab Sample ID: 680-217040-2**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 17:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 17:05	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 17:05	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 17:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 17:05	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 17:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 17:05	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 17:05	1
Acetone	25	U	25	10	ug/L			06/24/22 17:05	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 17:05	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 17:05	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 17:05	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 17:05	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 17:05	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 17:05	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 17:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 17:05	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 17:05	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 17:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 17:05	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 17:05	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 17:05	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 17:05	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 17:05	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 17:05	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 17:05	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 17:05	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 17:05	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 17:05	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 17:05	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 17:05	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 17:05	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 17:05	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 17:05	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 17:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 17:05	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 17:05	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 1 (061422)**

**Lab Sample ID: 680-217040-2**

**Matrix: Water**

Date Collected: 06/14/22 13:40

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 17:05	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 17:05	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 17:05	1
<b>Surrogate</b>									
4-Bromofluorobenzene	94	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				72 - 119				06/24/22 17:05	1
Dibromofluoromethane	108			75 - 126				06/24/22 17:05	1
Toluene-d8 (Surr)	92			64 - 132				06/24/22 17:05	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/25/22 18:43	1
<b>Surrogate</b>									
a,a,a-Trifluorotoluene (fid)	94	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				69 - 147				06/25/22 18:43	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	140	U	140	110	ug/L		06/21/22 09:00	06/22/22 02:13	1
<b>Surrogate</b>									
o-Terphenyl (Surr)	96	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				21 - 150				06/21/22 09:00	06/22/22 02:13

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 2 (061522)**

**Lab Sample ID: 680-217040-3**

**Matrix: Water**

Date Collected: 06/15/22 08:15

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 17:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 17:32	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 17:32	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 17:32	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 17:32	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 17:32	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 17:32	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 17:32	1
Acetone	25	U	25	10	ug/L			06/24/22 17:32	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 17:32	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 17:32	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 17:32	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 17:32	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 17:32	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 17:32	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 17:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 17:32	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 17:32	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 17:32	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 17:32	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 17:32	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 17:32	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 17:32	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 17:32	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 17:32	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 17:32	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 17:32	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 17:32	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 17:32	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 17:32	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 17:32	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 17:32	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 17:32	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 17:32	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 17:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 17:32	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 17:32	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 2 (061522)**

**Lab Sample ID: 680-217040-3**

**Matrix: Water**

Date Collected: 06/15/22 08:15  
Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 17:32	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 17:32	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 17:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		72 - 119		06/24/22 17:32	1
Dibromofluoromethane	110		75 - 126		06/24/22 17:32	1
Toluene-d8 (Surr)	93		64 - 132		06/24/22 17:32	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/25/22 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	92		69 - 147		06/25/22 19:14	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	230		120	93	ug/L		06/22/22 13:16	06/22/22 22:12	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
o-Terphenyl (Surr)	94		21 - 150	06/22/22 13:16	06/22/22 22:12	1			

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 4 (061522)**

Date Collected: 06/15/22 10:15

Date Received: 06/16/22 15:34

**Lab Sample ID: 680-217040-4**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 17:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 17:58	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 17:58	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 17:58	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 17:58	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 17:58	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 17:58	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 17:58	1
Acetone	25	U	25	10	ug/L			06/24/22 17:58	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 17:58	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 17:58	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 17:58	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 17:58	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 17:58	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 17:58	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 17:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 17:58	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 17:58	1
<b>Cyclohexane</b>	<b>2.3</b>		1.0	0.50	ug/L			06/24/22 17:58	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 17:58	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 17:58	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 17:58	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 17:58	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 17:58	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 17:58	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 17:58	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 17:58	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 17:58	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 17:58	1
<b>Methylcyclohexane</b>	<b>3.3</b>		1.0	0.50	ug/L			06/24/22 17:58	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 17:58	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 17:58	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 17:58	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 17:58	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 17:58	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 17:58	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 17:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 17:58	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 17:58	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 4 (061522)**

**Lab Sample ID: 680-217040-4**

**Matrix: Water**

Date Collected: 06/15/22 10:15  
Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 17:58	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 17:58	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 17:58	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		72 - 119		06/24/22 17:58	1
Dibromofluoromethane	107		75 - 126		06/24/22 17:58	1
Toluene-d8 (Surr)	92		64 - 132		06/24/22 17:58	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	1200		100	47	ug/L			06/25/22 19:45	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	98		69 - 147		06/25/22 19:45	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	5200		120	95	ug/L		06/22/22 13:16	06/22/22 22:29	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	189	S1+	21 - 150		06/22/22 13:16	06/22/22 22:29

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 5 (061422)**

Date Collected: 06/14/22 14:15

Date Received: 06/16/22 15:34

**Lab Sample ID: 680-217040-5**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 18:24	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 18:24	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 18:24	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 18:24	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 18:24	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 18:24	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 18:24	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 18:24	1
Acetone	25	U	25	10	ug/L			06/24/22 18:24	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 18:24	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 18:24	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 18:24	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 18:24	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 18:24	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 18:24	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 18:24	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 18:24	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 18:24	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 18:24	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 18:24	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 18:24	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 18:24	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 18:24	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 18:24	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 18:24	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 18:24	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 18:24	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 18:24	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 18:24	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 18:24	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 18:24	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 18:24	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 18:24	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 18:24	1
Toluene	1.6		1.0	0.41	ug/L			06/24/22 18:24	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 18:24	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 18:24	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 5 (061422)**

**Lab Sample ID: 680-217040-5**

**Matrix: Water**

Date Collected: 06/14/22 14:15

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 18:24	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 18:24	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 18:24	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		72 - 119		06/24/22 18:24	1
Dibromofluoromethane	107		75 - 126		06/24/22 18:24	1
Toluene-d8 (Surr)	93		64 - 132		06/24/22 18:24	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/25/22 20:16	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	91		69 - 147		06/25/22 20:16	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	250		130	100	ug/L		06/21/22 09:00	06/22/22 02:29	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	93		21 - 150		06/21/22 09:00	06/22/22 02:29

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 13 (061422)**

Date Collected: 06/14/22 15:30

Date Received: 06/16/22 15:34

**Lab Sample ID: 680-217040-6**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 18:50	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 18:50	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 18:50	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 18:50	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 18:50	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 18:50	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 18:50	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 18:50	1
Acetone	25	U	25	10	ug/L			06/24/22 18:50	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 18:50	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 18:50	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 18:50	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 18:50	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 18:50	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 18:50	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 18:50	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 18:50	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 18:50	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 18:50	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 18:50	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 18:50	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 18:50	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 18:50	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 18:50	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 18:50	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 18:50	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 18:50	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 18:50	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 18:50	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 18:50	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 18:50	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 18:50	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 18:50	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 18:50	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 18:50	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 18:50	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 18:50	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 13 (061422)**

**Lab Sample ID: 680-217040-6**

**Matrix: Water**

Date Collected: 06/14/22 15:30

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 18:50	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 18:50	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 18:50	1
<b>Surrogate</b>									
4-Bromofluorobenzene	94		72 - 119				Prepared	06/24/22 18:50	1
Dibromofluoromethane	107		75 - 126					06/24/22 18:50	1
Toluene-d8 (Surr)	92		64 - 132					06/24/22 18:50	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/25/22 20:48	1
<b>Surrogate</b>									
a,a,a-Trifluorotoluene (fid)	90		69 - 147				Prepared	06/25/22 20:48	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	130	U	130	100	ug/L		06/21/22 09:00	06/23/22 13:11	1
<b>Surrogate</b>									
o-Terphenyl (Surr)	0.01	S1-	21 - 150				Prepared	06/21/22 09:00	06/23/22 13:11

## Method: 8015C - Diesel Range Organics (DRO) (GC) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>C10-C28</b>	<b>130</b>	<b>H</b>	<b>130</b>	<b>100</b>	<b>ug/L</b>	<b>D</b>	<b>06/29/22 09:03</b>	<b>06/29/22 21:57</b>	<b>1</b>
<b>Surrogate</b>									
o-Terphenyl (Surr)	84		21 - 150				Prepared	06/29/22 09:03	06/29/22 21:57

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 14 (061422)**

**Lab Sample ID: 680-217040-7**

**Matrix: Water**

Date Collected: 06/14/22 15:00

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 19:16	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 19:16	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 19:16	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 19:16	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 19:16	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 19:16	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 19:16	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 19:16	1
Acetone	25	U	25	10	ug/L			06/24/22 19:16	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 19:16	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 19:16	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 19:16	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 19:16	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 19:16	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 19:16	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 19:16	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 19:16	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 19:16	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 19:16	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 19:16	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 19:16	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 19:16	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 19:16	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 19:16	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 19:16	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 19:16	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 19:16	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 19:16	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 19:16	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 19:16	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 19:16	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 19:16	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 19:16	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 19:16	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 19:16	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 19:16	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 19:16	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 14 (061422)**

**Lab Sample ID: 680-217040-7**

**Matrix: Water**

Date Collected: 06/14/22 15:00

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 19:16	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 19:16	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 19:16	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		72 - 119		06/24/22 19:16	1
Dibromofluoromethane	106		75 - 126		06/24/22 19:16	1
Toluene-d8 (Surr)	93		64 - 132		06/24/22 19:16	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/25/22 22:52	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	94		69 - 147		06/25/22 22:52	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	130	U	130	100	ug/L		06/21/22 09:00	06/22/22 03:00	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	98		21 - 150		06/21/22 09:00	06/22/22 03:00

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 16 (061522)**

**Lab Sample ID: 680-217040-8**

**Matrix: Water**

Date Collected: 06/15/22 09:01

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 19:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 19:43	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 19:43	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 19:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 19:43	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 19:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 19:43	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 19:43	1
Acetone	25	U	25	10	ug/L			06/24/22 19:43	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 19:43	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 19:43	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 19:43	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 19:43	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 19:43	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 19:43	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 19:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 19:43	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 19:43	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 19:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 19:43	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 19:43	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 19:43	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 19:43	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 19:43	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 19:43	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 19:43	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 19:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 19:43	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 19:43	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 19:43	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 19:43	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 19:43	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 19:43	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 19:43	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 19:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 19:43	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 19:43	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 16 (061522)**

**Lab Sample ID: 680-217040-8**

**Matrix: Water**

Date Collected: 06/15/22 09:01

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 19:43	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 19:43	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 19:43	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		72 - 119		06/24/22 19:43	1
Dibromofluoromethane	108		75 - 126		06/24/22 19:43	1
Toluene-d8 (Surr)	92		64 - 132		06/24/22 19:43	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/27/22 13:05	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	97		69 - 147		06/27/22 13:05	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	870		120	96	ug/L		06/22/22 13:16	06/22/22 22:45	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	93		21 - 150		06/22/22 13:16	06/22/22 22:45

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 18 (061522)**

**Lab Sample ID: 680-217040-9**

**Matrix: Water**

Date Collected: 06/15/22 08:10

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 20:09	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 20:09	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 20:09	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 20:09	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 20:09	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 20:09	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 20:09	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 20:09	1
Acetone	25	U	25	10	ug/L			06/24/22 20:09	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 20:09	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 20:09	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 20:09	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 20:09	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 20:09	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 20:09	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 20:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 20:09	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 20:09	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 20:09	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 20:09	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 20:09	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 20:09	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 20:09	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 20:09	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 20:09	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 20:09	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 20:09	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 20:09	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 20:09	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 20:09	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 20:09	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 20:09	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 20:09	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 20:09	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 20:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 20:09	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 20:09	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 18 (061522)**

**Lab Sample ID: 680-217040-9**

**Matrix: Water**

Date Collected: 06/15/22 08:10

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 20:09	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 20:09	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 20:09	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		72 - 119		06/24/22 20:09	1
Dibromofluoromethane	104		75 - 126		06/24/22 20:09	1
Toluene-d8 (Surr)	93		64 - 132		06/24/22 20:09	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	48	J	100	47	ug/L			06/27/22 13:32	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	99		69 - 147		06/27/22 13:32	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	130	U	130	110	ug/L		06/22/22 13:16	06/22/22 23:01	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	90		21 - 150		06/22/22 13:16	06/22/22 23:01

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 3 (061422)**

**Lab Sample ID: 680-217040-10**

**Matrix: Water**

Date Collected: 06/14/22 08:55

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 20:35	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 20:35	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 20:35	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 20:35	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 20:35	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 20:35	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 20:35	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 20:35	1
Acetone	25	U	25	10	ug/L			06/24/22 20:35	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 20:35	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 20:35	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 20:35	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 20:35	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 20:35	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 20:35	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 20:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 20:35	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 20:35	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 20:35	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 20:35	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 20:35	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 20:35	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 20:35	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 20:35	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 20:35	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 20:35	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 20:35	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 20:35	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 20:35	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 20:35	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 20:35	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 20:35	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 20:35	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 20:35	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 20:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 20:35	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 20:35	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 3 (061422)**

**Lab Sample ID: 680-217040-10**

**Matrix: Water**

Date Collected: 06/14/22 08:55  
Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 20:35	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 20:35	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 20:35	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		72 - 119		06/24/22 20:35	1
Dibromofluoromethane	107		75 - 126		06/24/22 20:35	1
Toluene-d8 (Surr)	95		64 - 132		06/24/22 20:35	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/27/22 13:57	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	93		69 - 147		06/27/22 13:57	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	130	U	130	110	ug/L		06/21/22 09:00	06/22/22 03:16	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	87		21 - 150		06/21/22 09:00	06/22/22 03:16

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 6R (061522)**

**Lab Sample ID: 680-217040-11**

**Matrix: Water**

Date Collected: 06/15/22 10:20

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 21:01	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 21:01	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 21:01	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 21:01	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 21:01	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 21:01	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 21:01	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 21:01	1
Acetone	25	U	25	10	ug/L			06/24/22 21:01	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 21:01	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 21:01	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 21:01	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 21:01	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 21:01	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 21:01	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 21:01	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 21:01	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 21:01	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 21:01	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 21:01	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 21:01	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 21:01	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 21:01	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 21:01	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 21:01	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 21:01	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 21:01	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 21:01	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 21:01	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 21:01	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 21:01	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 21:01	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 21:01	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 21:01	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 21:01	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 21:01	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 21:01	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 6R (061522)**

**Lab Sample ID: 680-217040-11**

**Matrix: Water**

Date Collected: 06/15/22 10:20

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 21:01	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 21:01	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 21:01	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	89		72 - 119		06/24/22 21:01	1
Dibromofluoromethane	105		75 - 126		06/24/22 21:01	1
Toluene-d8 (Surr)	91		64 - 132		06/24/22 21:01	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	630		100	47	ug/L			06/27/22 14:50	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	100		69 - 147		06/27/22 14:50	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	2100		120	99	ug/L		06/22/22 13:16	06/22/22 23:17	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	89		21 - 150		06/22/22 13:16	06/22/22 23:17

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 22 (061422)**  
**Date Collected: 06/14/22 11:00**  
**Date Received: 06/16/22 15:34**

**Lab Sample ID: 680-217040-12**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 11:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 11:55	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 11:55	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 11:55	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 11:55	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 11:55	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 11:55	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 11:55	1
Acetone	25	U	25	10	ug/L			06/25/22 11:55	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 11:55	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 11:55	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 11:55	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 11:55	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 11:55	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 11:55	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 11:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 11:55	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 11:55	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 11:55	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 11:55	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 11:55	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 11:55	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 11:55	1
<b>Isopropylbenzene</b>	<b>0.61</b>	<b>J</b>	1.0	0.53	ug/L			06/25/22 11:55	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 11:55	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 11:55	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 11:55	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 11:55	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 11:55	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 11:55	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 11:55	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 11:55	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 11:55	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 11:55	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 11:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 11:55	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 11:55	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 22 (061422)**

**Lab Sample ID: 680-217040-12**

**Matrix: Water**

Date Collected: 06/14/22 11:00

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 11:55	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 11:55	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 11:55	1
<b>Surrogate</b>									
4-Bromofluorobenzene	91		72 - 119				Prepared	06/25/22 11:55	1
Dibromofluoromethane	105		75 - 126					06/25/22 11:55	1
Toluene-d8 (Surr)	93		64 - 132					06/25/22 11:55	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	440		100	47	ug/L			06/27/22 17:47	1
<b>Surrogate</b>									
a,a,a-Trifluorotoluene (fid)	99		69 - 147				Prepared	06/27/22 17:47	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	23000		120	100	ug/L		06/21/22 09:00	06/22/22 03:32	1
<b>Surrogate</b>									
o-Terphenyl (Surr)	76		21 - 150				Prepared	06/21/22 09:00	06/22/22 03:32

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 24(061422)**

**Lab Sample ID: 680-217040-13**

**Matrix: Water**

Date Collected: 06/14/22 11:25

Date Received: 06/16/22 15:34

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 14:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 14:05	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 14:05	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 14:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 14:05	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 14:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 14:05	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 14:05	1
Acetone	25	U	25	10	ug/L			06/25/22 14:05	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 14:05	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 14:05	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 14:05	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 14:05	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 14:05	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 14:05	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 14:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 14:05	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 14:05	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 14:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 14:05	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 14:05	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 14:05	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 14:05	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 14:05	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 14:05	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 14:05	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 14:05	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 14:05	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 14:05	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 14:05	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 14:05	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 14:05	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 14:05	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 14:05	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 14:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 14:05	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 14:05	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 24(061422)**

**Lab Sample ID: 680-217040-13**

**Matrix: Water**

Date Collected: 06/14/22 11:25

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 14:05	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 14:05	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 14:05	1
<b>Surrogate</b>									
4-Bromofluorobenzene	96	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				72 - 119				06/25/22 14:05	1
Dibromofluoromethane	104			75 - 126				06/25/22 14:05	1
Toluene-d8 (Surr)	92			64 - 132				06/25/22 14:05	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/27/22 18:13	1
<b>Surrogate</b>									
a,a,a-Trifluorotoluene (fid)	98	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				69 - 147				06/27/22 18:13	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	540		150	120	ug/L		06/21/22 09:00	06/22/22 03:48	1
<b>Surrogate</b>									
o-Terphenyl (Surr)	94	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				21 - 150				06/21/22 09:00	06/22/22 03:48

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 25(061422)**

**Lab Sample ID: 680-217040-14**

**Matrix: Water**

Date Collected: 06/14/22 08:20

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 14:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 14:31	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 14:31	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 14:31	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 14:31	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 14:31	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 14:31	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 14:31	1
Acetone	25	U	25	10	ug/L			06/25/22 14:31	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 14:31	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 14:31	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 14:31	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 14:31	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 14:31	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 14:31	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 14:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 14:31	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 14:31	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 14:31	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 14:31	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 14:31	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 14:31	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 14:31	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 14:31	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 14:31	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 14:31	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 14:31	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 14:31	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 14:31	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 14:31	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 14:31	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 14:31	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 14:31	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 14:31	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 14:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 14:31	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 14:31	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 25(061422)**

**Lab Sample ID: 680-217040-14**

**Matrix: Water**

Date Collected: 06/14/22 08:20

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 14:31	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 14:31	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 14:31	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		72 - 119		06/25/22 14:31	1
Dibromofluoromethane	105		75 - 126		06/25/22 14:31	1
Toluene-d8 (Surr)	91		64 - 132		06/25/22 14:31	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	180		100	47	ug/L			06/27/22 18:40	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	100		69 - 147		06/27/22 18:40	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	760		130	110	ug/L		06/21/22 09:00	06/22/22 04:20	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	58		21 - 150		06/21/22 09:00	06/22/22 04:20

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 29(061422)**

**Lab Sample ID: 680-217040-15**

**Matrix: Water**

Date Collected: 06/14/22 11:55

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 14:57	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 14:57	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 14:57	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 14:57	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 14:57	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 14:57	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 14:57	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 14:57	1
Acetone	25	U	25	10	ug/L			06/25/22 14:57	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 14:57	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 14:57	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 14:57	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 14:57	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 14:57	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 14:57	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 14:57	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 14:57	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 14:57	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 14:57	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 14:57	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 14:57	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 14:57	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 14:57	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 14:57	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 14:57	1
<b>Methyl Ethyl Ketone</b>	<b>3.1</b>	<b>J</b>	25	2.6	ug/L			06/25/22 14:57	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 14:57	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 14:57	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 14:57	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 14:57	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 14:57	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 14:57	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 14:57	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 14:57	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 14:57	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 14:57	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 14:57	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 29(061422)**

**Lab Sample ID: 680-217040-15**

**Matrix: Water**

Date Collected: 06/14/22 11:55

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 14:57	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 14:57	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 14:57	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		72 - 119		06/25/22 14:57	1
Dibromofluoromethane	104		75 - 126		06/25/22 14:57	1
Toluene-d8 (Surr)	91		64 - 132		06/25/22 14:57	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	240		100	47	ug/L			06/27/22 19:06	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	98		69 - 147		06/27/22 19:06	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	1000		130	100	ug/L		06/21/22 09:00	06/22/22 04:36	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	96		21 - 150		06/21/22 09:00	06/22/22 04:36

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 43 (061522)**

**Lab Sample ID: 680-217040-16**

**Matrix: Water**

Date Collected: 06/15/22 09:10

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 15:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 15:23	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 15:23	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 15:23	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 15:23	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 15:23	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 15:23	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 15:23	1
Acetone	25	U	25	10	ug/L			06/25/22 15:23	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 15:23	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 15:23	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 15:23	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 15:23	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 15:23	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 15:23	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 15:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 15:23	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 15:23	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 15:23	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 15:23	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 15:23	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 15:23	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 15:23	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 15:23	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 15:23	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 15:23	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 15:23	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 15:23	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 15:23	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 15:23	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 15:23	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 15:23	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 15:23	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 15:23	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 15:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 15:23	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 15:23	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 43 (061522)**

**Lab Sample ID: 680-217040-16**

**Matrix: Water**

Date Collected: 06/15/22 09:10  
Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 15:23	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 15:23	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 15:23	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	95		72 - 119					06/25/22 15:23	1
Dibromofluoromethane	104		75 - 126					06/25/22 15:23	1
Toluene-d8 (Surr)	92		64 - 132					06/25/22 15:23	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	69	J	100	47	ug/L			06/27/22 19:32	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene (fid)	99		69 - 147					06/27/22 19:32	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	440		130	100	ug/L		06/22/22 13:16	06/22/22 23:34	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl (Surr)	97		21 - 150				06/22/22 13:16	06/22/22 23:34	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 51 (061422)**

**Lab Sample ID: 680-217040-17**

**Matrix: Water**

Date Collected: 06/14/22 12:30

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 15:49	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 15:49	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 15:49	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 15:49	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 15:49	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 15:49	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 15:49	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 15:49	1
<b>Acetone</b>	<b>10</b>	<b>J</b>	25	10	ug/L			06/25/22 15:49	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 15:49	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 15:49	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 15:49	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 15:49	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 15:49	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 15:49	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 15:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 15:49	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 15:49	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 15:49	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 15:49	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 15:49	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 15:49	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 15:49	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 15:49	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 15:49	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 15:49	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 15:49	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 15:49	1
<b>Methylcyclohexane</b>	<b>0.86</b>	<b>J</b>	1.0	0.50	ug/L			06/25/22 15:49	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 15:49	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 15:49	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 15:49	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 15:49	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 15:49	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 15:49	1
<b>Toluene</b>	<b>0.51</b>	<b>J</b>	1.0	0.41	ug/L			06/25/22 15:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 15:49	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 15:49	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 51 (061422)**

**Lab Sample ID: 680-217040-17**

**Matrix: Water**

Date Collected: 06/14/22 12:30

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 15:49	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 15:49	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 15:49	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene	92		72 - 119					06/25/22 15:49	1
Dibromofluoromethane	104		75 - 126					06/25/22 15:49	1
Toluene-d8 (Surr)	93		64 - 132					06/25/22 15:49	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	520		100	47	ug/L			06/27/22 19:58	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
a,a,a-Trifluorotoluene (fid)	100		69 - 147					06/27/22 19:58	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	130	U	130	100	ug/L		06/21/22 09:00	06/22/22 04:52	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl (Surr)	96		21 - 150				06/21/22 09:00	06/22/22 04:52	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 64(061422)**

**Lab Sample ID: 680-217040-18**

**Matrix: Water**

Date Collected: 06/14/22 10:20

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 16:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 16:15	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 16:15	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 16:15	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 16:15	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 16:15	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 16:15	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 16:15	1
Acetone	25	U	25	10	ug/L			06/25/22 16:15	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 16:15	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 16:15	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 16:15	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 16:15	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 16:15	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 16:15	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 16:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 16:15	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 16:15	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 16:15	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 16:15	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 16:15	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 16:15	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 16:15	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 16:15	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 16:15	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 16:15	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 16:15	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 16:15	1
<b>Methylcyclohexane</b>	<b>0.70</b>	<b>J</b>	1.0	0.50	ug/L			06/25/22 16:15	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 16:15	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 16:15	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 16:15	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 16:15	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 16:15	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 16:15	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 16:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 16:15	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 16:15	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 64(061422)**

**Lab Sample ID: 680-217040-18**

**Matrix: Water**

Date Collected: 06/14/22 10:20

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 16:15	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 16:15	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 16:15	1
<b>Surrogate</b>									
4-Bromofluorobenzene	94	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				72 - 119				06/25/22 16:15	1
Dibromofluoromethane	105			75 - 126				06/25/22 16:15	1
Toluene-d8 (Surr)	92			64 - 132				06/25/22 16:15	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	340		100	47	ug/L			06/27/22 20:24	1
<b>Surrogate</b>									
a,a,a-Trifluorotoluene (fid)	100	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				69 - 147				06/27/22 20:24	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	540		130	100	ug/L		06/21/22 09:00	06/22/22 05:08	1
<b>Surrogate</b>									
o-Terphenyl (Surr)	97	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				21 - 150			06/21/22 09:00	06/22/22 05:08	1

# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 69(061422)**

**Lab Sample ID: 680-217040-19**

**Matrix: Water**

Date Collected: 06/14/22 09:35

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 16:41	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 16:41	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 16:41	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 16:41	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 16:41	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 16:41	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 16:41	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 16:41	1
Acetone	25	U	25	10	ug/L			06/25/22 16:41	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 16:41	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 16:41	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 16:41	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 16:41	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 16:41	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 16:41	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 16:41	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 16:41	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 16:41	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 16:41	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 16:41	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 16:41	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 16:41	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 16:41	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 16:41	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 16:41	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 16:41	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 16:41	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 16:41	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 16:41	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 16:41	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 16:41	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 16:41	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 16:41	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 16:41	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 16:41	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 16:41	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 16:41	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 69(061422)**

**Lab Sample ID: 680-217040-19**

**Matrix: Water**

Date Collected: 06/14/22 09:35  
Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 16:41	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 16:41	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 16:41	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		72 - 119		06/25/22 16:41	1
Dibromofluoromethane	104		75 - 126		06/25/22 16:41	1
Toluene-d8 (Surr)	93		64 - 132		06/25/22 16:41	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/27/22 20:53	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	95		69 - 147		06/27/22 20:53	1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	7500		130	100	ug/L		06/21/22 09:00	06/22/22 05:24	1

### Surrogate

	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	99		21 - 150		06/21/22 09:00	06/22/22 05:24

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: DUP- 01 (061422)**

**Lab Sample ID: 680-217040-20**

**Matrix: Water**

Date Collected: 06/14/22 12:00

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 17:06	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 17:06	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 17:06	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 17:06	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 17:06	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 17:06	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 17:06	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 17:06	1
Acetone	25	U	25	10	ug/L			06/25/22 17:06	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 17:06	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 17:06	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 17:06	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 17:06	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 17:06	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 17:06	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 17:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 17:06	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 17:06	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 17:06	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 17:06	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 17:06	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 17:06	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 17:06	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 17:06	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 17:06	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 17:06	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 17:06	1
<b>Methyl tert-butyl ether</b>	<b>0.23</b>	<b>J</b>	1.0	0.22	ug/L			06/25/22 17:06	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 17:06	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 17:06	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 17:06	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 17:06	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 17:06	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 17:06	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 17:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 17:06	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 17:06	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: DUP- 01 (061422)**

**Lab Sample ID: 680-217040-20**

**Matrix: Water**

Date Collected: 06/14/22 12:00

Date Received: 06/16/22 15:34

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 17:06	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 17:06	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 17:06	1
<b>Surrogate</b>									
4-Bromofluorobenzene	94	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
				72 - 119				06/25/22 17:06	1
Dibromofluoromethane	105			75 - 126				06/25/22 17:06	1
Toluene-d8 (Surr)	92			64 - 132				06/25/22 17:06	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	50	J	100	47	ug/L			06/27/22 21:18	1
<b>Surrogate</b>									
a,a,a-Trifluorotoluene (fid)	100	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

## Method: 8015C - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	5100		130	110	ug/L		06/21/22 09:00	06/22/22 05:40	1
<b>Surrogate</b>									
o-Terphenyl (Surr)	98	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: TRIP BLANK**

Date Collected: 06/14/22 12:00

Date Received: 06/16/22 15:34

**Lab Sample ID: 680-217040-21**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 13:39	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 13:39	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 13:39	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 13:39	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 13:39	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 13:39	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 13:39	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 13:39	1
Acetone	25	U	25	10	ug/L			06/25/22 13:39	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 13:39	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 13:39	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 13:39	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 13:39	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 13:39	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 13:39	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 13:39	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 13:39	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 13:39	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 13:39	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 13:39	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 13:39	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 13:39	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 13:39	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 13:39	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 13:39	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 13:39	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 13:39	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 13:39	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 13:39	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 13:39	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 13:39	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 13:39	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 13:39	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 13:39	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 13:39	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 13:39	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 13:39	1

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# Client Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: TRIP BLANK**

Date Collected: 06/14/22 12:00

Date Received: 06/16/22 15:34

**Lab Sample ID: 680-217040-21**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 13:39	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 13:39	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		72 - 119		06/25/22 13:39	1
Dibromofluoromethane	103		75 - 126		06/25/22 13:39	1
Toluene-d8 (Surr)	93		64 - 132		06/25/22 13:39	1

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L			06/27/22 17:25	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene (fid)	101		69 - 147		06/27/22 17:25	1			

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 400-582554/4**

**Matrix: Water**

**Analysis Batch: 582554**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/24/22 10:59	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/24/22 10:59	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/24/22 10:59	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/24/22 10:59	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/24/22 10:59	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/24/22 10:59	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/24/22 10:59	1
2-Hexanone	25	U	25	1.4	ug/L			06/24/22 10:59	1
Acetone	25	U	25	10	ug/L			06/24/22 10:59	1
Benzene	1.0	U	1.0	0.13	ug/L			06/24/22 10:59	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/24/22 10:59	1
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/24/22 10:59	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/24/22 10:59	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/24/22 10:59	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/24/22 10:59	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/24/22 10:59	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/24/22 10:59	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/24/22 10:59	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/24/22 10:59	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/24/22 10:59	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/24/22 10:59	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/24/22 10:59	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/24/22 10:59	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/24/22 10:59	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/24/22 10:59	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/24/22 10:59	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/24/22 10:59	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/24/22 10:59	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/24/22 10:59	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/24/22 10:59	1
Styrene	1.0	U	1.0	1.0	ug/L			06/24/22 10:59	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/24/22 10:59	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/24/22 10:59	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/24/22 10:59	1
Toluene	1.0	U	1.0	0.41	ug/L			06/24/22 10:59	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/24/22 10:59	1

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 400-582554/4**

**Matrix: Water**

**Analysis Batch: 582554**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/24/22 10:59	1
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/24/22 10:59	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/24/22 10:59	1
Xylenes, Total	10	U	10	1.6	ug/L			06/24/22 10:59	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	96		72 - 119		06/24/22 10:59	1
Dibromofluoromethane	105		75 - 126		06/24/22 10:59	1
Toluene-d8 (Surr)	93		64 - 132		06/24/22 10:59	1

**Lab Sample ID: LCS 400-582554/1002**

**Matrix: Water**

**Analysis Batch: 582554**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
1,1,1-Trichloroethane	50.0	49.8		ug/L		100	68 - 130
1,1,2,2-Tetrachloroethane	50.0	50.4		ug/L		101	70 - 131
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	45.3		ug/L		91	60 - 139
1,1,2-Trichloroethane	50.0	52.1		ug/L		104	70 - 130
1,1-Dichloroethane	50.0	52.5		ug/L		105	70 - 130
1,1-Dichloroethene	50.0	46.2		ug/L		92	63 - 134
1,2,4-Trichlorobenzene	50.0	45.8		ug/L		92	60 - 140
1,2-Dibromo-3-Chloropropane	50.0	43.8		ug/L		88	54 - 135
1,2-Dichlorobenzene	50.0	49.2		ug/L		98	67 - 130
1,2-Dichloroethane	50.0	48.3		ug/L		97	69 - 130
1,2-Dichloropropane	50.0	55.3		ug/L		111	70 - 130
1,3-Dichlorobenzene	50.0	50.6		ug/L		101	70 - 130
1,4-Dichlorobenzene	50.0	49.9		ug/L		100	70 - 130
2-Hexanone	200	196		ug/L		98	65 - 137
Acetone	200	212		ug/L		106	43 - 160
Benzene	50.0	54.7		ug/L		109	70 - 130
Bromodichloromethane	50.0	51.5		ug/L		103	67 - 133
Bromoform	50.0	48.3		ug/L		97	57 - 140
Carbon disulfide	50.0	47.1		ug/L		94	61 - 137
Carbon tetrachloride	50.0	49.0		ug/L		98	61 - 137
Chlorobenzene	50.0	52.0		ug/L		104	70 - 130
Chloroethane	50.0	62.5		ug/L		125	55 - 141
Chloroform	50.0	51.7		ug/L		103	69 - 130
Chloromethane	50.0	64.2		ug/L		128	58 - 137
cis-1,2-Dichloroethene	50.0	51.6		ug/L		103	68 - 130
cis-1,3-Dichloropropene	50.0	51.1		ug/L		102	69 - 132
Cyclohexane	50.0	51.8		ug/L		104	70 - 130
Dibromochloromethane	50.0	49.1		ug/L		98	67 - 135
Dichlorodifluoromethane	50.0	57.9		ug/L		116	41 - 146
Diisopropyl ether	50.0	52.5		ug/L		105	64 - 132
Ethyl tert-butyl ether	50.0	47.8		ug/L		96	55 - 133
Ethylbenzene	50.0	51.2		ug/L		102	70 - 130
Ethylene Dibromide	50.0	50.1		ug/L		100	70 - 130

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 400-582554/1002**

**Matrix: Water**

**Analysis Batch: 582554**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Isopropylbenzene	50.0	51.1		ug/L		102	70 - 130
Methyl acetate	100	110		ug/L		110	45 - 159
Methyl Ethyl Ketone	200	224		ug/L		112	61 - 145
methyl isobutyl ketone	200	213		ug/L		106	69 - 138
Methyl tert-butyl ether	50.0	47.0		ug/L		94	66 - 130
Methylcyclohexane	50.0	52.9		ug/L		106	70 - 130
Methylene Chloride	50.0	50.3		ug/L		101	66 - 135
Naphthalene	50.0	42.0		ug/L		84	47 - 149
Styrene	50.0	51.4		ug/L		103	70 - 130
Tert-amyl methyl ether	50.0	49.8		ug/L		100	52 - 132
tert-Butyl alcohol	500	576		ug/L		115	46 - 143
Tetrachloroethene	50.0	52.9		ug/L		106	65 - 130
Toluene	50.0	48.8		ug/L		98	70 - 130
trans-1,2-Dichloroethene	50.0	51.4		ug/L		103	70 - 130
trans-1,3-Dichloropropene	50.0	47.7		ug/L		95	63 - 130
Trichloroethene	50.0	54.3		ug/L		109	70 - 130
Trichlorofluoromethane	50.0	55.7		ug/L		111	65 - 138
Vinyl chloride	50.0	60.1		ug/L		120	59 - 136
Xylenes, Total	100	99.0		ug/L		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	97		72 - 119
Dibromofluoromethane	99		75 - 126
Toluene-d8 (Surr)	93		64 - 132

**Lab Sample ID: MB 400-582694/4**

**Matrix: Water**

**Analysis Batch: 582694**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.18	ug/L			06/25/22 11:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
1,1,2-Trichloroethane	5.0	U	5.0	0.21	ug/L			06/25/22 11:03	1
1,1-Dichloroethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
1,1-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.82	ug/L			06/25/22 11:03	1
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	1.5	ug/L			06/25/22 11:03	1
1,2-Dichlorobenzene	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
1,2-Dichloroethane	1.0	U	1.0	0.19	ug/L			06/25/22 11:03	1
1,2-Dichloropropane	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
1,3-Dichlorobenzene	1.0	U	1.0	0.54	ug/L			06/25/22 11:03	1
1,4-Dichlorobenzene	1.0	U	1.0	0.64	ug/L			06/25/22 11:03	1
2-Hexanone	25	U	25	1.4	ug/L			06/25/22 11:03	1
Acetone	25	U	25	10	ug/L			06/25/22 11:03	1
Benzene	1.0	U	1.0	0.13	ug/L			06/25/22 11:03	1
Bromodichloromethane	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
Bromoform	5.0	U	5.0	0.25	ug/L			06/25/22 11:03	1

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** MB 400-582694/4

**Matrix:** Water

**Analysis Batch:** 582694

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Carbon disulfide	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
Carbon tetrachloride	1.0	U	1.0	0.19	ug/L			06/25/22 11:03	1
Chlorobenzene	1.0	U	1.0	0.15	ug/L			06/25/22 11:03	1
Chloroethane	1.0	U	1.0	0.76	ug/L			06/25/22 11:03	1
Chloroform	1.0	U	1.0	1.0	ug/L			06/25/22 11:03	1
Chloromethane	1.0	U	1.0	0.32	ug/L			06/25/22 11:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			06/25/22 11:03	1
cis-1,3-Dichloropropene	5.0	U	5.0	0.50	ug/L			06/25/22 11:03	1
Cyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
Dibromochloromethane	1.0	U	1.0	0.24	ug/L			06/25/22 11:03	1
Dichlorodifluoromethane	1.0	U	1.0	0.85	ug/L			06/25/22 11:03	1
Diisopropyl ether	1.0	U	1.0	0.20	ug/L			06/25/22 11:03	1
Ethyl tert-butyl ether	1.0	U	1.0	0.28	ug/L			06/25/22 11:03	1
Ethylbenzene	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
Ethylene Dibromide	1.0	U	1.0	0.23	ug/L			06/25/22 11:03	1
Isopropylbenzene	1.0	U	1.0	0.53	ug/L			06/25/22 11:03	1
Methyl acetate	5.0	U	5.0	0.61	ug/L			06/25/22 11:03	1
Methyl Ethyl Ketone	25	U	25	2.6	ug/L			06/25/22 11:03	1
methyl isobutyl ketone	25	U	25	1.8	ug/L			06/25/22 11:03	1
Methyl tert-butyl ether	1.0	U	1.0	0.22	ug/L			06/25/22 11:03	1
Methylcyclohexane	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
Methylene Chloride	5.0	U	5.0	3.0	ug/L			06/25/22 11:03	1
Naphthalene	5.0	U	5.0	3.0	ug/L			06/25/22 11:03	1
Styrene	1.0	U	1.0	1.0	ug/L			06/25/22 11:03	1
Tert-amyl methyl ether	1.0	U	1.0	0.23	ug/L			06/25/22 11:03	1
tert-Butyl alcohol	10	U	10	4.9	ug/L			06/25/22 11:03	1
Tetrachloroethene	1.0	U	1.0	0.90	ug/L			06/25/22 11:03	1
Toluene	1.0	U	1.0	0.41	ug/L			06/25/22 11:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
trans-1,3-Dichloropropene	5.0	U	5.0	0.20	ug/L			06/25/22 11:03	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			06/25/22 11:03	1
Trichlorofluoromethane	1.0	U	1.0	0.52	ug/L			06/25/22 11:03	1
Vinyl chloride	1.0	U	1.0	0.50	ug/L			06/25/22 11:03	1
Xylenes, Total	10	U	10	1.6	ug/L			06/25/22 11:03	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	95		72 - 119			1
Dibromofluoromethane	106		75 - 126			1
Toluene-d8 (Surr)	94		64 - 132			1

**Lab Sample ID:** LCS 400-582694/1002

**Matrix:** Water

**Analysis Batch:** 582694

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA

Analyte	Spike Added	LC S	LC S	Unit	D	%Rec	Limits	%Rec
		Result	Qualifier					
1,1,1-Trichloroethane	50.0	52.8		ug/L		106	68 - 130	
1,1,2,2-Tetrachloroethane	50.0	53.6		ug/L		107	70 - 131	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	49.5		ug/L		99	60 - 139	

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 400-582694/1002**

**Matrix: Water**

**Analysis Batch: 582694**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,2-Trichloroethane	50.0	54.2		ug/L		108	70 - 130
1,1-Dichloroethane	50.0	56.1		ug/L		112	70 - 130
1,1-Dichloroethene	50.0	52.5		ug/L		105	63 - 134
1,2,4-Trichlorobenzene	50.0	50.7		ug/L		101	60 - 140
1,2-Dibromo-3-Chloropropane	50.0	45.2		ug/L		90	54 - 135
1,2-Dichlorobenzene	50.0	53.5		ug/L		107	67 - 130
1,2-Dichloroethane	50.0	51.5		ug/L		103	69 - 130
1,2-Dichloropropane	50.0	59.5		ug/L		119	70 - 130
1,3-Dichlorobenzene	50.0	54.3		ug/L		109	70 - 130
1,4-Dichlorobenzene	50.0	53.6		ug/L		107	70 - 130
2-Hexanone	200	204		ug/L		102	65 - 137
Acetone	200	230		ug/L		115	43 - 160
Benzene	50.0	58.5		ug/L		117	70 - 130
Bromodichloromethane	50.0	55.3		ug/L		111	67 - 133
Bromoform	50.0	51.4		ug/L		103	57 - 140
Carbon disulfide	50.0	56.3		ug/L		113	61 - 137
Carbon tetrachloride	50.0	51.6		ug/L		103	61 - 137
Chlorobenzene	50.0	56.0		ug/L		112	70 - 130
Chloroethane	50.0	62.7		ug/L		125	55 - 141
Chloroform	50.0	54.7		ug/L		109	69 - 130
Chloromethane	50.0	65.8		ug/L		132	58 - 137
cis-1,2-Dichloroethene	50.0	55.5		ug/L		111	68 - 130
cis-1,3-Dichloropropene	50.0	55.4		ug/L		111	69 - 132
Cyclohexane	50.0	55.5		ug/L		111	70 - 130
Dibromochloromethane	50.0	52.0		ug/L		104	67 - 135
Dichlorodifluoromethane	50.0	57.2		ug/L		114	41 - 146
Diisopropyl ether	50.0	53.5		ug/L		107	64 - 132
Ethyl tert-butyl ether	50.0	49.2		ug/L		98	55 - 133
Ethylbenzene	50.0	54.3		ug/L		109	70 - 130
Ethylene Dibromide	50.0	53.2		ug/L		106	70 - 130
Isopropylbenzene	50.0	54.3		ug/L		109	70 - 130
Methyl acetate	100	119		ug/L		119	45 - 159
Methyl Ethyl Ketone	200	237		ug/L		119	61 - 145
methyl isobutyl ketone	200	221		ug/L		111	69 - 138
Methyl tert-butyl ether	50.0	50.5		ug/L		101	66 - 130
Methylcyclohexane	50.0	58.1		ug/L		116	70 - 130
Methylene Chloride	50.0	56.1		ug/L		112	66 - 135
Naphthalene	50.0	45.1		ug/L		90	47 - 149
Styrene	50.0	54.6		ug/L		109	70 - 130
Tert-amyl methyl ether	50.0	50.2		ug/L		100	52 - 132
tert-Butyl alcohol	500	601		ug/L		120	46 - 143
Tetrachloroethene	50.0	53.9		ug/L		108	65 - 130
Toluene	50.0	51.4		ug/L		103	70 - 130
trans-1,2-Dichloroethene	50.0	56.3		ug/L		113	70 - 130
trans-1,3-Dichloropropene	50.0	50.6		ug/L		101	63 - 130
Trichloroethene	50.0	57.3		ug/L		115	70 - 130
Trichlorofluoromethane	50.0	54.7		ug/L		109	65 - 138
Vinyl chloride	50.0	60.6		ug/L		121	59 - 136
Xylenes, Total	100	105		ug/L		105	70 - 130

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	97		72 - 119
Dibromofluoromethane	98		75 - 126
Toluene-d8 (Surr)	93		64 - 132

Lab Sample ID: 680-217040-12 MS

Matrix: Water

Analysis Batch: 582694

Client Sample ID: CSXT MW- 22 (061422)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	1.0	U	50.0	52.1		ug/L	104	57 - 142	
1,1,2,2-Tetrachloroethane	1.0	U	50.0	52.0		ug/L	104	66 - 135	
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	50.0	48.1		ug/L	96	55 - 150	
1,1,2-Trichloroethane	5.0	U	50.0	51.4		ug/L	103	66 - 131	
1,1-Dichloroethane	1.0	U	50.0	55.4		ug/L	111	61 - 144	
1,1-Dichloroethene	1.0	U	50.0	50.7		ug/L	101	54 - 147	
1,2,4-Trichlorobenzene	1.0	U	50.0	47.0		ug/L	94	39 - 148	
1,2-Dibromo-3-Chloropropane	5.0	U	50.0	45.2		ug/L	90	45 - 135	
1,2-Dichlorobenzene	1.0	U	50.0	47.7		ug/L	95	52 - 137	
1,2-Dichloroethane	1.0	U	50.0	50.4		ug/L	101	60 - 141	
1,2-Dichloropropane	1.0	U	50.0	58.4		ug/L	117	66 - 137	
1,3-Dichlorobenzene	1.0	U	50.0	48.3		ug/L	97	54 - 135	
1,4-Dichlorobenzene	1.0	U	50.0	47.5		ug/L	95	53 - 135	
2-Hexanone	25	U	200	192		ug/L	96	65 - 140	
Acetone	25	U	200	200		ug/L	100	43 - 150	
Benzene	1.0	U	50.0	58.0		ug/L	116	56 - 142	
Bromodichloromethane	1.0	U	50.0	52.8		ug/L	106	59 - 143	
Bromoform	5.0	U	50.0	48.6		ug/L	97	50 - 140	
Carbon disulfide	1.0	U	50.0	54.7		ug/L	109	48 - 150	
Carbon tetrachloride	1.0	U	50.0	51.7		ug/L	103	55 - 145	
Chlorobenzene	1.0	U	50.0	51.3		ug/L	103	64 - 130	
Chloroethane	1.0	U	50.0	62.7		ug/L	125	50 - 150	
Chloroform	1.0	U	50.0	53.9		ug/L	108	60 - 141	
Chloromethane	1.0	U	50.0	67.6		ug/L	135	49 - 148	
cis-1,2-Dichloroethene	1.0	U	50.0	54.0		ug/L	108	59 - 143	
cis-1,3-Dichloropropene	5.0	U	50.0	53.0		ug/L	106	57 - 140	
Cyclohexane	1.0	U	50.0	56.7		ug/L	113	58 - 141	
Dibromochloromethane	1.0	U	50.0	48.6		ug/L	97	56 - 143	
Dichlorodifluoromethane	1.0	U	50.0	58.5		ug/L	117	16 - 150	
Diisopropyl ether	1.0	U	50.0	51.6		ug/L	103	60 - 144	
Ethyl tert-butyl ether	1.0	U	50.0	47.5		ug/L	95	49 - 137	
Ethylbenzene	1.0	U	50.0	50.1		ug/L	100	58 - 131	
Ethylene Dibromide	1.0	U	50.0	51.1		ug/L	102	64 - 132	
Isopropylbenzene	0.61	J	50.0	50.0		ug/L	99	56 - 133	
Methyl acetate	5.0	U	100	105		ug/L	105	21 - 150	
Methyl Ethyl Ketone	25	U	200	226		ug/L	113	55 - 150	
methyl isobutyl ketone	25	U	200	217		ug/L	109	63 - 146	
Methyl tert-butyl ether	1.0	U	50.0	48.3		ug/L	97	59 - 137	
Methylcyclohexane	1.0	U	50.0	57.5		ug/L	115	62 - 141	
Methylene Chloride	5.0	U	50.0	54.7		ug/L	109	60 - 146	
Naphthalene	5.0	U	50.0	45.7		ug/L	91	25 - 150	
Styrene	1.0	U	50.0	49.7		ug/L	99	58 - 131	

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 680-217040-12 MS**

**Client Sample ID: CSXT MW- 22 (061422)**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 582694**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Tert-amyl methyl ether	1.0	U	50.0	48.6		ug/L	97	43 - 140	
tert-Butyl alcohol	10	U	500	545		ug/L	109	31 - 150	
Tetrachloroethene	1.0	U	50.0	48.7		ug/L	97	52 - 133	
Toluene	1.0	U	50.0	49.5		ug/L	99	65 - 130	
trans-1,2-Dichloroethene	1.0	U	50.0	54.2		ug/L	108	61 - 143	
trans-1,3-Dichloropropene	5.0	U	50.0	47.2		ug/L	94	53 - 133	
Trichloroethene	1.0	U	50.0	55.9		ug/L	112	64 - 136	
Trichlorofluoromethane	1.0	U	50.0	56.3		ug/L	113	54 - 150	
Vinyl chloride	1.0	U	50.0	61.3		ug/L	123	46 - 150	
Xylenes, Total	10	U	100	96.1		ug/L	96	59 - 130	
<hr/>									
Surrogate		MS %Recovery	MS Qualifier	Limits					
4-Bromofluorobenzene		98		72 - 119					
Dibromofluoromethane		97		75 - 126					
Toluene-d8 (Surr)		93		64 - 132					

**Lab Sample ID: 680-217040-12 MSD**

**Client Sample ID: CSXT MW- 22 (061422)**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 582694**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1-Trichloroethane	1.0	U	50.0	51.9		ug/L	104	57 - 142		0	30
1,1,2,2-Tetrachloroethane	1.0	U	50.0	52.0		ug/L	104	66 - 135		0	30
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	50.0	49.6		ug/L	99	55 - 150		3	30
1,1,2-Trichloroethane	5.0	U	50.0	51.3		ug/L	103	66 - 131		0	30
1,1-Dichloroethane	1.0	U	50.0	55.6		ug/L	111	61 - 144		0	30
1,1-Dichloroethene	1.0	U	50.0	51.2		ug/L	102	54 - 147		1	30
1,2,4-Trichlorobenzene	1.0	U	50.0	47.8		ug/L	96	39 - 148		2	30
1,2-Dibromo-3-Chloropropane	5.0	U	50.0	46.6		ug/L	93	45 - 135		3	30
1,2-Dichlorobenzene	1.0	U	50.0	47.8		ug/L	96	52 - 137		0	30
1,2-Dichloroethane	1.0	U	50.0	50.1		ug/L	100	60 - 141		1	30
1,2-Dichloropropane	1.0	U	50.0	58.0		ug/L	116	66 - 137		1	30
1,3-Dichlorobenzene	1.0	U	50.0	48.0		ug/L	96	54 - 135		1	30
1,4-Dichlorobenzene	1.0	U	50.0	47.9		ug/L	96	53 - 135		1	30
2-Hexanone	25	U	200	195		ug/L	98	65 - 140		2	30
Acetone	25	U	200	203		ug/L	101	43 - 150		1	30
Benzene	1.0	U	50.0	57.1		ug/L	114	56 - 142		2	30
Bromodichloromethane	1.0	U	50.0	53.1		ug/L	106	59 - 143		0	30
Bromoform	5.0	U	50.0	48.9		ug/L	98	50 - 140		1	30
Carbon disulfide	1.0	U	50.0	55.4		ug/L	111	48 - 150		1	30
Carbon tetrachloride	1.0	U	50.0	50.9		ug/L	102	55 - 145		2	30
Chlorobenzene	1.0	U	50.0	51.1		ug/L	102	64 - 130		0	30
Chloroethane	1.0	U	50.0	62.4		ug/L	125	50 - 150		0	30
Chloroform	1.0	U	50.0	53.4		ug/L	107	60 - 141		1	30
Chloromethane	1.0	U	50.0	65.8		ug/L	132	49 - 148		3	31
cis-1,2-Dichloroethene	1.0	U	50.0	54.2		ug/L	108	59 - 143		0	30
cis-1,3-Dichloropropene	5.0	U	50.0	52.6		ug/L	105	57 - 140		1	30
Cyclohexane	1.0	U	50.0	56.3		ug/L	113	58 - 141		1	30

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 680-217040-12 MSD**

**Client Sample ID: CSXT MW- 22 (061422)**  
**Prep Type: Total/NA**

**Matrix: Water**

**Analysis Batch: 582694**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Dibromochloromethane	1.0	U	50.0	48.9		ug/L	98	56 - 143		1	30
Dichlorodifluoromethane	1.0	U	50.0	57.0		ug/L	114	16 - 150		3	31
Diisopropyl ether	1.0	U	50.0	55.7		ug/L	111	60 - 144		8	30
Ethyl tert-butyl ether	1.0	U	50.0	52.2		ug/L	104	49 - 137		9	30
Ethylbenzene	1.0	U	50.0	49.6		ug/L	99	58 - 131		1	30
Ethylene Dibromide	1.0	U	50.0	51.2		ug/L	102	64 - 132		0	30
Isopropylbenzene	0.61	J	50.0	50.3		ug/L	99	56 - 133		1	30
Methyl acetate	5.0	U	100	110		ug/L	110	21 - 150		4	30
Methyl Ethyl Ketone	25	U	200	224		ug/L	112	55 - 150		1	30
methyl isobutyl ketone	25	U	200	218		ug/L	109	63 - 146		0	30
Methyl tert-butyl ether	1.0	U	50.0	50.0		ug/L	100	59 - 137		3	30
Methylcyclohexane	1.0	U	50.0	57.2		ug/L	114	62 - 141		1	30
Methylene Chloride	5.0	U	50.0	55.2		ug/L	110	60 - 146		1	32
Naphthalene	5.0	U	50.0	47.4		ug/L	95	25 - 150		4	30
Styrene	1.0	U	50.0	49.5		ug/L	99	58 - 131		0	30
Tert-amyl methyl ether	1.0	U	50.0	52.5		ug/L	105	43 - 140		8	30
tert-Butyl alcohol	10	U	500	572		ug/L	114	31 - 150		5	42
Tetrachloroethene	1.0	U	50.0	49.8		ug/L	100	52 - 133		2	30
Toluene	1.0	U	50.0	49.3		ug/L	99	65 - 130		1	30
trans-1,2-Dichloroethene	1.0	U	50.0	55.4		ug/L	111	61 - 143		2	30
trans-1,3-Dichloropropene	5.0	U	50.0	48.2		ug/L	96	53 - 133		2	30
Trichloroethene	1.0	U	50.0	56.0		ug/L	112	64 - 136		0	30
Trichlorofluoromethane	1.0	U	50.0	54.7		ug/L	109	54 - 150		3	30
Vinyl chloride	1.0	U	50.0	59.9		ug/L	120	46 - 150		2	30
Xylenes, Total	10	U	100	96.0		ug/L	96	59 - 130		0	30

Surrogate	MSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	98		72 - 119
Dibromofluoromethane	97		75 - 126
Toluene-d8 (Surr)	93		64 - 132

## Method: 8015C - Gasoline Range Organics (GRO) (GC)

**Lab Sample ID: MB 400-582714/5**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

**Matrix: Water**

**Analysis Batch: 582714**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
C6--C10	100	U	100	47	ug/L			06/25/22 15:18	1
Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	92		69 - 147						

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8015C - Gasoline Range Organics (GRO) (GC) (Continued)

**Lab Sample ID: LCS 400-582714/1003**

**Matrix: Water**

**Analysis Batch: 582714**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C6--C10	1000	912		ug/L	91		85 - 115
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
a,a,a-Trifluorotoluene (fid)	109	%Recovery	Qualifier	Limits			

**Lab Sample ID: 680-217040-6 MS**

**Matrix: Water**

**Analysis Batch: 582714**

**Client Sample ID: NPS MW- 13 (061422)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
C6--C10	100	U	1000	1010		ug/L	101		35 - 150
<b>Surrogate</b>		<b>MS</b>	<b>MS</b>						
a,a,a-Trifluorotoluene (fid)	96	%Recovery	Qualifier	Limits					

**Lab Sample ID: 680-217040-6 MSD**

**Matrix: Water**

**Analysis Batch: 582714**

**Client Sample ID: NPS MW- 13 (061422)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C6--C10	100	U	1000	1010		ug/L	101		35 - 150	0	15
<b>Surrogate</b>		<b>MSD</b>	<b>MSD</b>								
a,a,a-Trifluorotoluene (fid)	97	%Recovery	Qualifier	Limits							

**Lab Sample ID: MB 400-582806/17**

**Matrix: Water**

**Analysis Batch: 582806**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6--C10	100	U	100	47	ug/L	101		06/27/22 14:24	1
<b>Surrogate</b>		<b>MB</b>	<b>MB</b>						
a,a,a-Trifluorotoluene (fid)	96	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac

**Lab Sample ID: LCS 400-582806/1002**

**Matrix: Water**

**Analysis Batch: 582806**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C6--C10	1000	925		ug/L	92		85 - 115
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
a,a,a-Trifluorotoluene (fid)	98	%Recovery	Qualifier	Limits			

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# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8015C - Diesel Range Organics (DRO) (GC)

**Lab Sample ID: MB 400-582037/1-A**

**Matrix: Water**

**Analysis Batch: 582141**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
C10-C28	130	U	130	100	ug/L		06/21/22 09:00	06/22/22 01:09	1
Surrogate	MB	MB	%Recovery	Qualifier	Limits	D	Prepared	Analyzed	Dil Fac
	o-Terphenyl (Surr)	94			21 - 150				

**Lab Sample ID: LCS 400-582037/2-A**

**Matrix: Water**

**Analysis Batch: 582141**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
C10-C28	16000	14800		ug/L		92	49 - 128
Surrogate	LCS	LCS	%Recovery	Qualifier	Limits	Dil Fac	
	o-Terphenyl (Surr)	93			21 - 150		

**Lab Sample ID: MB 400-582269/2-A**

**Matrix: Water**

**Analysis Batch: 582346**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
C10-C28	250	U	250	200	ug/L		06/22/22 13:16	06/22/22 18:58	1
Surrogate	MB	MB	%Recovery	Qualifier	Limits	D	Prepared	Analyzed	Dil Fac
	o-Terphenyl (Surr)	92			21 - 150				

**Lab Sample ID: LCS 400-582269/3-A**

**Matrix: Water**

**Analysis Batch: 582346**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
C10-C28	16000	16300		ug/L		102	49 - 128
Surrogate	LCS	LCS	%Recovery	Qualifier	Limits	Dil Fac	
	o-Terphenyl (Surr)	97			21 - 150		

**Lab Sample ID: LCSD 400-582269/4-A**

**Matrix: Water**

**Analysis Batch: 582346**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	RPD
	Added	Result	Qualifier				
C10-C28	16000	13100		ug/L		82	49 - 128
Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits	RPD	Limit
	o-Terphenyl (Surr)	80			21 - 150		

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 582037**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 582037**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 582269**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 582269**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 582269**

# QC Sample Results

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Method: 8015C - Diesel Range Organics (DRO) (GC) - RE

**Lab Sample ID:** MB 400-583035/1-A

**Matrix:** Water

**Analysis Batch:** 583203

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 583035

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28 - RE	130	U	130	100	ug/L		06/28/22 16:43	06/29/22 18:14	1
<hr/>									
<b>Surrogate</b>									
<i>o-Terphenyl (Surr) - RE</i>									
<b>Prepared</b>									
<i>06/28/22 16:43</i>									
<b>Analyzed</b>									
<i>06/29/22 18:14</i>									
<b>Dil Fac</b>									
<i>1</i>									

**Lab Sample ID:** LCS 400-583035/2-A

**Matrix:** Water

**Analysis Batch:** 583203

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 583035

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
C10-C28 - RE	16000	13300		ug/L		83	49 - 128
<hr/>							
<b>Surrogate</b>							
<i>o-Terphenyl (Surr) - RE</i>							
<b>Prepared</b>							
<i>06/28/22 16:43</i>							
<b>Analyzed</b>							
<i>06/29/22 18:14</i>							
<b>Dil Fac</b>							
<i>1</i>							

**Lab Sample ID:** LCSD 400-583035/3-A

**Matrix:** Water

**Analysis Batch:** 583203

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 583035

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec	RPD
C10-C28 - RE	16000	12800		ug/L		80	49 - 128	4
<hr/>								
<b>Surrogate</b>								
<i>o-Terphenyl (Surr) - RE</i>								
<b>Prepared</b>								
<i>06/28/22 16:43</i>								
<b>Analyzed</b>								
<i>06/29/22 18:14</i>								
<b>RPD</b>								
<i>50</i>								

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## GC/MS VOA

### Analysis Batch: 582554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-1	CSXT MW-71 (061422)	Total/NA	Water	8260B	
680-217040-2	NPS MW- 1 (061422)	Total/NA	Water	8260B	
680-217040-3	NPS MW- 2 (061522)	Total/NA	Water	8260B	
680-217040-4	NPS MW- 4 (061522)	Total/NA	Water	8260B	
680-217040-5	NPS MW- 5 (061422)	Total/NA	Water	8260B	
680-217040-6	NPS MW- 13 (061422)	Total/NA	Water	8260B	
680-217040-7	NPS MW- 14 (061422)	Total/NA	Water	8260B	
680-217040-8	NPS MW- 16 (061522)	Total/NA	Water	8260B	
680-217040-9	NPS MW- 18 (061522)	Total/NA	Water	8260B	
680-217040-10	CSXT MW- 3 (061422)	Total/NA	Water	8260B	
680-217040-11	CSXT MW- 6R (061522)	Total/NA	Water	8260B	
MB 400-582554/4	Method Blank	Total/NA	Water	8260B	
LCS 400-582554/1002	Lab Control Sample	Total/NA	Water	8260B	

### Analysis Batch: 582694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-12	CSXT MW- 22 (061422)	Total/NA	Water	8260B	
680-217040-13	CSXT MW- 24(061422)	Total/NA	Water	8260B	
680-217040-14	CSXT MW- 25(061422)	Total/NA	Water	8260B	
680-217040-15	CSXT MW- 29(061422)	Total/NA	Water	8260B	
680-217040-16	CSXT MW- 43 (061522)	Total/NA	Water	8260B	
680-217040-17	CSXT MW- 51 (061422)	Total/NA	Water	8260B	
680-217040-18	CSXT MW- 64(061422)	Total/NA	Water	8260B	
680-217040-19	CSXT MW- 69(061422)	Total/NA	Water	8260B	
680-217040-20	DUP- 01 (061422)	Total/NA	Water	8260B	
680-217040-21	TRIP BLANK	Total/NA	Water	8260B	
MB 400-582694/4	Method Blank	Total/NA	Water	8260B	
LCS 400-582694/1002	Lab Control Sample	Total/NA	Water	8260B	
680-217040-12 MS	CSXT MW- 22 (061422)	Total/NA	Water	8260B	
680-217040-12 MSD	CSXT MW- 22 (061422)	Total/NA	Water	8260B	

## GC VOA

### Analysis Batch: 582714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-1	CSXT MW-71 (061422)	Total/NA	Water	8015C	
680-217040-2	NPS MW- 1 (061422)	Total/NA	Water	8015C	
680-217040-3	NPS MW- 2 (061522)	Total/NA	Water	8015C	
680-217040-4	NPS MW- 4 (061522)	Total/NA	Water	8015C	
680-217040-5	NPS MW- 5 (061422)	Total/NA	Water	8015C	
680-217040-6	NPS MW- 13 (061422)	Total/NA	Water	8015C	
680-217040-7	NPS MW- 14 (061422)	Total/NA	Water	8015C	
MB 400-582714/5	Method Blank	Total/NA	Water	8015C	
LCS 400-582714/1003	Lab Control Sample	Total/NA	Water	8015C	
680-217040-6 MS	NPS MW- 13 (061422)	Total/NA	Water	8015C	
680-217040-6 MSD	NPS MW- 13 (061422)	Total/NA	Water	8015C	

### Analysis Batch: 582806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-8	NPS MW- 16 (061522)	Total/NA	Water	8015C	
680-217040-9	NPS MW- 18 (061522)	Total/NA	Water	8015C	

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# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## GC VOA (Continued)

### Analysis Batch: 582806 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-10	CSXT MW- 3 (061422)	Total/NA	Water	8015C	
680-217040-11	CSXT MW- 6R (061522)	Total/NA	Water	8015C	
680-217040-12	CSXT MW- 22 (061422)	Total/NA	Water	8015C	
680-217040-13	CSXT MW- 24(061422)	Total/NA	Water	8015C	
680-217040-14	CSXT MW- 25(061422)	Total/NA	Water	8015C	
680-217040-15	CSXT MW- 29(061422)	Total/NA	Water	8015C	
680-217040-16	CSXT MW- 43 (061522)	Total/NA	Water	8015C	
680-217040-17	CSXT MW- 51 (061422)	Total/NA	Water	8015C	
680-217040-18	CSXT MW- 64(061422)	Total/NA	Water	8015C	
680-217040-19	CSXT MW- 69(061422)	Total/NA	Water	8015C	
680-217040-20	DUP- 01 (061422)	Total/NA	Water	8015C	
680-217040-21	TRIP BLANK	Total/NA	Water	8015C	
MB 400-582806/17	Method Blank	Total/NA	Water	8015C	
LCS 400-582806/1002	Lab Control Sample	Total/NA	Water	8015C	

## GC Semi VOA

### Prep Batch: 582037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-1	CSXT MW-71 (061422)	Total/NA	Water	3510C	
680-217040-2	NPS MW- 1 (061422)	Total/NA	Water	3510C	
680-217040-5	NPS MW- 5 (061422)	Total/NA	Water	3510C	
680-217040-6	NPS MW- 13 (061422)	Total/NA	Water	3510C	
680-217040-7	NPS MW- 14 (061422)	Total/NA	Water	3510C	
680-217040-10	CSXT MW- 3 (061422)	Total/NA	Water	3510C	
680-217040-12	CSXT MW- 22 (061422)	Total/NA	Water	3510C	
680-217040-13	CSXT MW- 24(061422)	Total/NA	Water	3510C	
680-217040-14	CSXT MW- 25(061422)	Total/NA	Water	3510C	
680-217040-15	CSXT MW- 29(061422)	Total/NA	Water	3510C	
680-217040-17	CSXT MW- 51 (061422)	Total/NA	Water	3510C	
680-217040-18	CSXT MW- 64(061422)	Total/NA	Water	3510C	
680-217040-19	CSXT MW- 69(061422)	Total/NA	Water	3510C	
680-217040-20	DUP- 01 (061422)	Total/NA	Water	3510C	
MB 400-582037/1-A	Method Blank	Total/NA	Water	3510C	
LCS 400-582037/2-A	Lab Control Sample	Total/NA	Water	3510C	

### Analysis Batch: 582141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-1	CSXT MW-71 (061422)	Total/NA	Water	8015C	582037
680-217040-2	NPS MW- 1 (061422)	Total/NA	Water	8015C	582037
680-217040-5	NPS MW- 5 (061422)	Total/NA	Water	8015C	582037
680-217040-7	NPS MW- 14 (061422)	Total/NA	Water	8015C	582037
680-217040-10	CSXT MW- 3 (061422)	Total/NA	Water	8015C	582037
680-217040-12	CSXT MW- 22 (061422)	Total/NA	Water	8015C	582037
680-217040-13	CSXT MW- 24(061422)	Total/NA	Water	8015C	582037
680-217040-14	CSXT MW- 25(061422)	Total/NA	Water	8015C	582037
680-217040-15	CSXT MW- 29(061422)	Total/NA	Water	8015C	582037
680-217040-17	CSXT MW- 51 (061422)	Total/NA	Water	8015C	582037
680-217040-18	CSXT MW- 64(061422)	Total/NA	Water	8015C	582037
680-217040-19	CSXT MW- 69(061422)	Total/NA	Water	8015C	582037
680-217040-20	DUP- 01 (061422)	Total/NA	Water	8015C	582037

# QC Association Summary

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## GC Semi VOA (Continued)

### Analysis Batch: 582141 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-582037/1-A	Method Blank	Total/NA	Water	8015C	582037
LCS 400-582037/2-A	Lab Control Sample	Total/NA	Water	8015C	582037

### Prep Batch: 582269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-3	NPS MW- 2 (061522)	Total/NA	Water	3510C	582269
680-217040-4	NPS MW- 4 (061522)	Total/NA	Water	3510C	582269
680-217040-8	NPS MW- 16 (061522)	Total/NA	Water	3510C	582269
680-217040-9	NPS MW- 18 (061522)	Total/NA	Water	3510C	582269
680-217040-11	CSXT MW- 6R (061522)	Total/NA	Water	3510C	582269
680-217040-16	CSXT MW- 43 (061522)	Total/NA	Water	3510C	582269
MB 400-582269/2-A	Method Blank	Total/NA	Water	3510C	582269
LCS 400-582269/3-A	Lab Control Sample	Total/NA	Water	3510C	582269
LCSD 400-582269/4-A	Lab Control Sample Dup	Total/NA	Water	3510C	582269

### Analysis Batch: 582346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-3	NPS MW- 2 (061522)	Total/NA	Water	8015C	582269
680-217040-4	NPS MW- 4 (061522)	Total/NA	Water	8015C	582269
680-217040-8	NPS MW- 16 (061522)	Total/NA	Water	8015C	582269
680-217040-9	NPS MW- 18 (061522)	Total/NA	Water	8015C	582269
680-217040-11	CSXT MW- 6R (061522)	Total/NA	Water	8015C	582269
680-217040-16	CSXT MW- 43 (061522)	Total/NA	Water	8015C	582269
MB 400-582269/2-A	Method Blank	Total/NA	Water	8015C	582269
LCS 400-582269/3-A	Lab Control Sample	Total/NA	Water	8015C	582269
LCSD 400-582269/4-A	Lab Control Sample Dup	Total/NA	Water	8015C	582269

### Analysis Batch: 582424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-6	NPS MW- 13 (061422)	Total/NA	Water	8015C	582037

### Prep Batch: 583035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-6 - RE	NPS MW- 13 (061422)	Total/NA	Water	3510C	583035
MB 400-583035/1-A - RE	Method Blank	Total/NA	Water	3510C	583035
LCS 400-583035/2-A - RE	Lab Control Sample	Total/NA	Water	3510C	583035
LCSD 400-583035/3-A - RE	Lab Control Sample Dup	Total/NA	Water	3510C	583035

### Analysis Batch: 583203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
680-217040-6 - RE	NPS MW- 13 (061422)	Total/NA	Water	8015C	583035
MB 400-583035/1-A - RE	Method Blank	Total/NA	Water	8015C	583035
LCS 400-583035/2-A - RE	Lab Control Sample	Total/NA	Water	8015C	583035
LCSD 400-583035/3-A - RE	Lab Control Sample Dup	Total/NA	Water	8015C	583035

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW-71 (061422)**

**Lab Sample ID: 680-217040-1**

Matrix: Water

Date Collected: 06/14/22 07:40  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 16:39	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582714	06/25/22 18:12	GRK	TAL PEN
		Instrument ID: CH_JOAN								
Total/NA	Prep	3510C			233.6 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 01:57	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: NPS MW- 1 (061422)**

**Lab Sample ID: 680-217040-2**

Matrix: Water

Date Collected: 06/14/22 13:40  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 17:05	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582714	06/25/22 18:43	GRK	TAL PEN
		Instrument ID: CH_JOAN								
Total/NA	Prep	3510C			221.4 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 02:13	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: NPS MW- 2 (061522)**

**Lab Sample ID: 680-217040-3**

Matrix: Water

Date Collected: 06/15/22 08:15  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 17:32	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582714	06/25/22 19:14	GRK	TAL PEN
		Instrument ID: CH_JOAN								
Total/NA	Prep	3510C			268.2 mL	1 mL	582269	06/22/22 13:16	BKL	TAL PEN
Total/NA	Analysis	8015C		1			582346	06/22/22 22:12	CJ	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: NPS MW- 4 (061522)**

**Lab Sample ID: 680-217040-4**

Matrix: Water

Date Collected: 06/15/22 10:15  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 17:58	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582714	06/25/22 19:45	GRK	TAL PEN
		Instrument ID: CH_JOAN								
Total/NA	Prep	3510C			263.6 mL	1 mL	582269	06/22/22 13:16	BKL	TAL PEN
Total/NA	Analysis	8015C		1			582346	06/22/22 22:29	CJ	TAL PEN
		Instrument ID: Eva								

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# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 5 (061422)**

**Lab Sample ID: 680-217040-5**

**Matrix: Water**

Date Collected: 06/14/22 14:15  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 18:24	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582714	06/25/22 20:16	GRK	TAL PEN
		Instrument ID: CH_JOAN								
Total/NA	Prep	3510C			246.6 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 02:29	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: NPS MW- 13 (061422)**

**Lab Sample ID: 680-217040-6**

**Matrix: Water**

Date Collected: 06/14/22 15:30  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 18:50	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582714	06/25/22 20:48	GRK	TAL PEN
		Instrument ID: CH_JOAN								
Total/NA	Prep	3510C			247.8 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582424	06/23/22 13:11	LHB	TAL PEN
		Instrument ID: Eva								
Total/NA	Prep	3510C	RE		243.6 mL	1 mL	583035	06/29/22 09:03	BKL	TAL PEN
Total/NA	Analysis	8015C	RE	1			583203	06/29/22 21:57	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: NPS MW- 14 (061422)**

**Lab Sample ID: 680-217040-7**

**Matrix: Water**

Date Collected: 06/14/22 15:00  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 19:16	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582714	06/25/22 22:52	GRK	TAL PEN
		Instrument ID: CH_JOAN								
Total/NA	Prep	3510C			245.2 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 03:00	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: NPS MW- 16 (061522)**

**Lab Sample ID: 680-217040-8**

**Matrix: Water**

Date Collected: 06/15/22 09:01  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 19:43	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 13:05	SAB	TAL PEN
		Instrument ID: CH_RITA								

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# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: NPS MW- 16 (061522)**

**Lab Sample ID: 680-217040-8**

Matrix: Water

Date Collected: 06/15/22 09:01

Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			259.8 mL	1 mL	582269	06/22/22 13:16	BKL	TAL PEN
Total/NA	Analysis	8015C		1			582346	06/22/22 22:45	CJ	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: NPS MW- 18 (061522)**

**Lab Sample ID: 680-217040-9**

Matrix: Water

Date Collected: 06/15/22 08:10

Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 20:09	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 13:32	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			231.8 mL	1 mL	582269	06/22/22 13:16	BKL	TAL PEN
Total/NA	Analysis	8015C		1			582346	06/22/22 23:01	CJ	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 3 (061422)**

**Lab Sample ID: 680-217040-10**

Matrix: Water

Date Collected: 06/14/22 08:55

Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 20:35	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 13:57	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			237.4 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 03:16	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 6R (061522)**

**Lab Sample ID: 680-217040-11**

Matrix: Water

Date Collected: 06/15/22 10:20

Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582554	06/24/22 21:01	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 14:50	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			253.2 mL	1 mL	582269	06/22/22 13:16	BKL	TAL PEN
Total/NA	Analysis	8015C		1			582346	06/22/22 23:17	CJ	TAL PEN
		Instrument ID: Eva								

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# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 22 (061422)**

**Lab Sample ID: 680-217040-12**

**Matrix: Water**

Date Collected: 06/14/22 11:00  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 11:55	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 17:47	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			251 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 03:32	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 24(061422)**

**Lab Sample ID: 680-217040-13**

**Matrix: Water**

Date Collected: 06/14/22 11:25  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 14:05	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 18:13	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			204.6 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 03:48	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 25(061422)**

**Lab Sample ID: 680-217040-14**

**Matrix: Water**

Date Collected: 06/14/22 08:20  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 14:31	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 18:40	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			232.8 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 04:20	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 29(061422)**

**Lab Sample ID: 680-217040-15**

**Matrix: Water**

Date Collected: 06/14/22 11:55  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 14:57	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 19:06	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			243.8 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 04:36	LHB	TAL PEN
		Instrument ID: Eva								

Eurofins Savannah

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: CSXT MW- 43 (061522)**

**Lab Sample ID: 680-217040-16**

**Matrix: Water**

Date Collected: 06/15/22 09:10  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 15:23	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 19:32	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			240.6 mL	1 mL	582269	06/22/22 13:16	BKL	TAL PEN
Total/NA	Analysis	8015C		1			582346	06/22/22 23:34	CJ	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 51 (061422)**

**Lab Sample ID: 680-217040-17**

**Matrix: Water**

Date Collected: 06/14/22 12:30  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 15:49	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 19:58	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			245.8 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 04:52	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 64(061422)**

**Lab Sample ID: 680-217040-18**

**Matrix: Water**

Date Collected: 06/14/22 10:20  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 16:15	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 20:24	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			246.4 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 05:08	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: CSXT MW- 69(061422)**

**Lab Sample ID: 680-217040-19**

**Matrix: Water**

Date Collected: 06/14/22 09:35  
Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 16:41	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 20:53	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			240.6 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 05:24	LHB	TAL PEN
		Instrument ID: Eva								

Eurofins Savannah

# Lab Chronicle

Client: ARCADIS U.S., Inc.  
Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

**Client Sample ID: DUP- 01 (061422)**

**Lab Sample ID: 680-217040-20**

**Matrix: Water**

Date Collected: 06/14/22 12:00

Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 17:06	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 21:18	SAB	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3510C			235.2 mL	1 mL	582037	06/21/22 09:00	STC	TAL PEN
Total/NA	Analysis	8015C		1			582141	06/22/22 05:40	LHB	TAL PEN
		Instrument ID: Eva								

**Client Sample ID: TRIP BLANK**

**Lab Sample ID: 680-217040-21**

**Matrix: Water**

Date Collected: 06/14/22 12:00

Date Received: 06/16/22 15:34

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	582694	06/25/22 13:39	AGW	TAL PEN
		Instrument ID: CH_WASP								
Total/NA	Analysis	8015C		1	5 mL	5 mL	582806	06/27/22 17:25	SAB	TAL PEN
		Instrument ID: CH_RITA								

**Laboratory References:**

TAL PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Eurofins Savannah

P4 V3

**CSX**  
CHAIN OF  
CUSTODY  
TRANSPORTATION

**LABORATORY INFORMATION**

**Baltimore**  
**COC #**  
**#201**

TestAmerica Savannah 5702 LaRoche Avenue Savannah GA 31404 P 912-354-7856 F 912-352-0165  
 TestAmerica North Canton 4101 Shuffel Drive NW North Canton OH 44720 P 330-497-9396 F 330-497-0772  
 TestAmerica Tampa 6712 Benjamin Road Suite 100 Tampa FL 33634 P 813-885-7427 F 813-885-7049  
 TestAmerica Pensacola - 3355 McLemore Drive Pensacola FL 32514 P 850-474-1001 F 850-478-2671  
 TestAmerica Buffalo 10 Hazelwood Drive Suite 106 Amherst NY 14228 P 716-691-2600 F 716-961-7991  
 TestAmerica Chicago 2417 Bond Street University Park IL 60466 P 708-534-5211 F 708-534-5211

**CSXT PROJECT INFORMATION**

CSXT Project Number **9415381** Proj City **Brunswick** Company **Arcadis**  
 CSXT Project Name **Bronwick Yard** Address **7550 Teague Rd** Email **josh.wilson@arcadis.com**  
 CSXT Contact **William Petty** Lwon **ENR 35683** City, State Zip **Hanover, MD 21076** Phone **4107139924** Fax

**Proj. State (State of Origin)****Consultant Information**

Project # **30128305**  
 PM **Josh Wilson**  
 Email **josh.wilson@arcadis.com**

**SHIPMENT INFORMATION**  
**Shipment Method**  
 Shipment Tracking No.

**METHODS FOR ANALYSIS**  
  
 680-217040 Chain of Custody

Project # **30128305**

PM **Josh Wilson**

Email **josh.wilson@arcadis.com**

Phone **4107139924**

Fax

Comments

Lab Use

2/3

<b>#201</b> <b>CSX</b> CHAIN OF CUSTODY TRANSPORTATION		LABORATORY INFORMATION																																																																																																																																																	
		<p>TestAmerica Savannah 5102 LaRoche Avenue Savannah GA 31404 P 912-354-7858 F 912-352-0165</p> <p>TestAmerica North Canton 4101 Shuffel Drive NW North Canton OH 44720 P 330-497-9396 F 330-497-0772</p> <p>TestAmerica Tampa - 671 Benjamin Road Suite 100 Tampa FL 33634 P 813 805 7427 F 813 885 7049</p> <p>TestAmerica Pensacola 3355 McLeMORE Drive Pensacola FL 32514 P 850-474-1001 F 850-474-2671</p> <p>TestAmerica Buffalo 10 Hazelwood Drive Suite 106 Amherst NY 14228 P 716-691 2600 F 716-691 7991</p> <p>TestAmerica Chicago 2417 Bond Street, University Park IL 60466 P 708 534-5200 F 708-534-5211</p>																																																																																																																																																	
CSXT PROJECT INFORMATION		<p>Proj State (State of Origin) <u>Maryland</u></p> <p>Proj City <u>Brunswick</u></p> <p>Company <u>Arcadis</u></p> <p>Address <u>2550 League Rd.</u></p> <p>City, State, Zip <u>Hawthorne NJ 07036</u></p> <p>Phone <u>(907)399-9244</u></p> <p>Fax <u></u></p>																																																																																																																																																	
		<p>Proj State (State of Origin) <u>Illinois</u></p> <p>Proj City <u>Willow</u></p> <p>LWON ENU 35683</p> <p>Consultant Information</p>																																																																																																																																																	
		<p>Turnaround Time.</p> <p><input type="checkbox"/> Standard 6-13 Days</p> <p><input type="checkbox"/> Specify # Days _____</p> <p><input checked="" type="checkbox"/> Standard 14 Days</p> <p><input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> 3 Day Rush</p>																																																																																																																																																	
		<p>Preservative Codes:</p> <p><input type="checkbox"/> 0 = No Preservatives</p> <p><input type="checkbox"/> 1 = Hydrochloric Acid</p> <p><input type="checkbox"/> 2 = Nitric Acid</p> <p><input type="checkbox"/> 3 = Sulfuric Acid</p> <p><input type="checkbox"/> 4 = Sodium Thiosulfate</p> <p><input type="checkbox"/> 5 = Sodium Hydroxide</p> <p><input type="checkbox"/> 6 = Other _____</p>																																																																																																																																																	
		<p>Matrix Codes:</p> <p><input type="checkbox"/> SO = Soil</p> <p><input type="checkbox"/> SL = Sludge</p> <p><input type="checkbox"/> GW = Groundwater</p> <p><input type="checkbox"/> WW = Waste Water</p> <p><input type="checkbox"/> SW = Surface Water</p> <p><input type="checkbox"/> LIQ = Liquid</p> <p><input type="checkbox"/> OI = Oil</p> <p><input type="checkbox"/> SOL = Other Solid</p>																																																																																																																																																	
<p><b>SAMPLE INFORMATION</b></p> <table border="1"> <thead> <tr> <th>Sample Identification</th> <th>Containers</th> <th>Date</th> <th>Time</th> <th>Sampler</th> <th>Y or N</th> <th>Filtered</th> <th>Type</th> <th>Matrix</th> </tr> <tr> <th></th> <th>Number &amp; Type</th> <th></th> <th></th> <th></th> <th></th> <th>Comp or Grab</th> <th>Code</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>CSXT MW-3(061422)</td> <td>7</td> <td>6/14/22</td> <td>0855</td> <td>AF</td> <td>N</td> <td>G</td> <td>Gu</td> <td>5 2</td> </tr> <tr> <td>CSXT MW-6(061522)</td> <td></td> <td>6/15/22</td> <td>1020</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-27(061422)</td> <td></td> <td>6/14/22</td> <td>1100</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-24(061422)</td> <td></td> <td>6/14/22</td> <td>1125</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-25(061422)</td> <td></td> <td>6/14/22</td> <td>0820</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-29(061422)</td> <td></td> <td>6/14/22</td> <td>1155</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-43(061522)</td> <td></td> <td>6/15/22</td> <td>0910</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-51(061422)</td> <td></td> <td>6/14/22</td> <td>1230</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-64(061422)</td> <td></td> <td>6/14/22</td> <td>1020</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CSXT MW-67(061422)</td> <td>7</td> <td>6/14/22</td> <td>0935</td> <td>AF</td> <td>N</td> <td>G</td> <td>Gu</td> <td>5 2</td> </tr> <tr> <td>Relinquished By <u>John</u></td> <td>Date/Time <u>6/15/22 1310</u></td> <td colspan="6">Received By <u>JK</u></td> </tr> <tr> <td>Relinquished By <u>MM</u></td> <td>Date/Time <u>6/15/22 1700</u></td> <td colspan="6">Received By <u>JK</u></td> </tr> <tr> <td>Relinquished By <u></u></td> <td>Date/Time <u></u></td> <td colspan="6">Received By <u></u></td> </tr> <tr> <td>Received By Laboratory <u></u></td> <td>Date/Time <u></u></td> <td colspan="6">Lab Remarks</td> </tr> </tbody> </table>								Sample Identification	Containers	Date	Time	Sampler	Y or N	Filtered	Type	Matrix		Number & Type					Comp or Grab	Code	Code	CSXT MW-3(061422)	7	6/14/22	0855	AF	N	G	Gu	5 2	CSXT MW-6(061522)		6/15/22	1020						CSXT MW-27(061422)		6/14/22	1100						CSXT MW-24(061422)		6/14/22	1125						CSXT MW-25(061422)		6/14/22	0820						CSXT MW-29(061422)		6/14/22	1155						CSXT MW-43(061522)		6/15/22	0910						CSXT MW-51(061422)		6/14/22	1230						CSXT MW-64(061422)		6/14/22	1020						CSXT MW-67(061422)	7	6/14/22	0935	AF	N	G	Gu	5 2	Relinquished By <u>John</u>	Date/Time <u>6/15/22 1310</u>	Received By <u>JK</u>						Relinquished By <u>MM</u>	Date/Time <u>6/15/22 1700</u>	Received By <u>JK</u>						Relinquished By <u></u>	Date/Time <u></u>	Received By <u></u>						Received By Laboratory <u></u>	Date/Time <u></u>	Lab Remarks					
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<p>Comments &amp; Special Analytical Requirements.</p> <p>Project #: <u>3012-8305</u></p> <p>PM <u>Josh Wilson</u></p> <p>Email <u>josh.wilson@arcadis.com</u></p> <p>Phone <u>(907)399-9244</u></p> <p>Date/Time <u>6/15/22 13:59</u></p> <p>Date/Time <u>6/15/22 11:00 3:09:49</u></p> <p>Date/Time <u></u></p> <p>LAB USE <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Custody Inact <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Custody Seal # <input type="checkbox"/> #</p> <p>LAB Log Number <input type="checkbox"/> #</p>																																																																																																																																																			
<p>ORIGINAL = RETURN TO LABORATORY WITH SAMPLES</p> <p>INVOICE MUST BE SUBMITTED TO CSXT WITH ORIGINAL COC</p> <p>TAI-6006 (0506)</p>																																																																																																																																																			

Ex. 3(m)

Baltimore

CSX

20  
CHAIN OF  
CUSTODY

CSXT PROJECT INFORMATION

CSXT PROJECT IN

LABORATORY INFORMATION

02

INVOICE MUST BE SUBMITTED TO CSX WITH ORIGINAL COC  
IAL-6006 (0509)

1  
2  
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11  
12



**Eurofins Savannah**

5102 LaRoche Avenue  
Savannah, GA 31404

5102 LaRoche Avenue  
Savannah, GA 31404  
Phone: 912-354-7858 Fax: 912-352-0165

## Chain of Custody Record

Ver: 06/08/2021 | 1 2 3 4 5 6 7 8 9 10 11 12

## Eurofins Savannah

5102 LaRoche Avenue  
Savannah, GA 31404  
Phone: 912-354-7858 Fax: 912-352-0165

## Chain of Custody Record

### Client Information (Sub Contract Lab)

Client Contact	Sampler	Lab PM	Carrier Tracking No(s):
Shipping/Receiving	Phone	DeMonico, Michael	COC No 680-6982-87.2
Company	E-Mail		Page 2 of 3
Eurofins Environment Testing Southeast,	Michael.DeMonico@eurofinsus.com		Job #
Address	Accreditations Required (See note)		680-217040-1
3355 McLemore Drive, City Pensacola			Preservation Codes:
State, Zip FL, 32514			A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHCO <sub>3</sub> F - H <sub>2</sub> SO <sub>4</sub> G - MeOH H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Z - other (specify) Other:
Phone 850-474-1001(Tel) 850-478-2671(Fax)	TAT Requested (days):		
Email	PO #:		
Project Name: CSXT Brunswick Yard	WO #:		
Site	Project #: 24015637		
SSOW#			

Due Date Requested:		Analysis Requested										Total Number of Contaminates	Special Instructions/Note:
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefall, B=tissue, A=Air)	Preservation Code:	Field Filled Sample (Yes or No)	Performance MS/MSD (yes or No)	8260B/5030B VOCs 8260 + Oxygenates	8015C_DRO/3510C_LVI DRO C10-C28 (Default)	8015C_GRC/5030C (MOD) GRO (C6 - C10)			
CSXT MW- 3 (061422) (680-217040-10)	6/14/22	08:55	Water	X	X							7	
CSXT MW- 6R (061522) (680-217040-11)	6/15/22	10:20	Water	X	X							7	
CSXT MW- 22 (061422) (680-217040-12)	6/14/22	11:00	Water	X	X							7	
CSXT MW- 24(061422) (680-217040-13)	6/14/22	11:25	Water	X	X							7	
CSXT MW- 25(061422) (680-217040-14)	6/14/22	08:20	Water	X	X							7	
CSXT MW- 29(061422) (680-217040-15)	6/14/22	11:55	Water	X	X							7	
CSXT MW- 43 (061522) (680-217040-16)	6/15/22	09:10	Water	X	X							7	
CSXT MW- 51 (061422) (680-217040-17)	6/14/22	12:30	Water	X	X							7	
CSXT MW- 64(061422) (680-217040-18)	6/14/22	10:20	Water	X	X							7	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysts/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other institutions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

### Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify)

Primary Deliverable Rank: 2

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)

Return To Client

Disposal By Lab

Empty Kit Relinquished by: 	Date/Time: 6/16 17/15	Company	Received by:	Date/Time:	Company
Relinquished by: 	Date/Time:	Company	Received by:	Date/Time:	Company
Custody Seals Intact: △ Yes △ No			Cooler Temperature(s) °C and Other Remarks	16.6°C 18.9°C 28	Ver: 06/08/2021

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## Chain of Custody Record

EUROLINS ENVIRONMENT TESTING SOUTHEAST, LLC PLACES THE OWNERSHIP OF THE SAMPLES WITH THE LABORATORY FOR ANALYSIS/TESTING. SINCE LABORATORY ACCREDITATIONS ARE SUBJECT TO CHANGE, EUROLINS ENVIRONMENT TESTING SOUTHEAST, LLC SHALL NOT BE CURRENTLY MAINTAIN ACCREDITATION IN THE STATE OF ORIGIN LISTED ABOVE FOR ANALYSTS/TESTERS. ANY CHANGES TO ACCREDITATION STATUS SHOULD NOT BE CURRENT TO EUROLINS ENVIRONMENT TESTING SOUTHEAST, LLC ATTEMPT IMMEDIATELY IF ALL REQUESTED ACCREDITATIONS ARE CURRENT TO DATE, REFURN THE SIGNED CHAIN OF CUSTODY ATTACHMENT IMMEDIATELY.

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client       Disposal By Lab       Archive For \_\_\_\_\_ Month

Dear viewers, welcome to our channel. We will share with you the best of Indian culture.

Empty Kit Relinquished by:

Reinrichs by 3/2/2015 Company 12/15 Received by

Or Date/Time

Reinstituted by \_\_\_\_\_  
Custody Seals Intact:  Yes  No  
Custody Seal No.: \_\_\_\_\_

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ORIGIN ID: SAVA (912) 354-7858  
SHIPPING  
EUROFINS/TESTAMERICA  
5102 LA ROUCHE AVE  
SAVANNAH, GA 31404  
UNITED STATES US

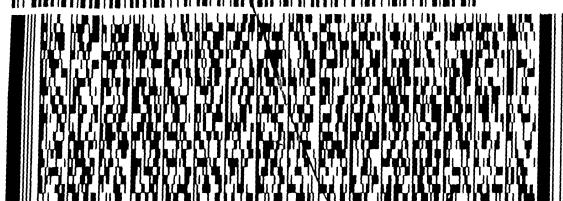
SHIP DATE: 16JUN22  
ACTWTG: 20.00 LB MAN  
PAC: 0801261/CAFE3511

BILL SENDER

TO SHIPPING/RECEIVING  
EUROFINS ENVIRONMENT TESTING SOUTHE  
3355 MCLEMORE DRIVE

PENSACOLA FL 32514

(850) 474-1001 REF: 6680-136894  
PO: YES



2 of 2  
MPS# 1328 9414 7255  
0263

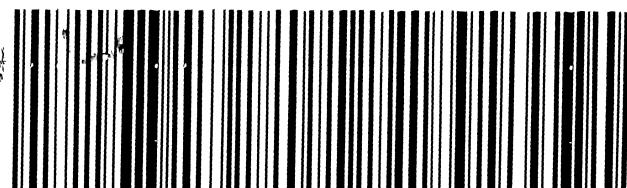
Mstr# 1328 9414 7244

0201

FRI - 17 JUN 10:30A  
PRIORITY OVERNIGHT

XH PNSA

32514  
FL-US BFM



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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ORIGIN ID:SAVA (912) 354-7858  
 SHIPPING  
 EUROFINS/TESTAMERICA  
 5102 LA ROUCHE AVE  
 SAVANNAH, GA 31404  
 UNITED STATES US

SHIP DATE: 16JUN22  
 ACTWTG: 20.00 LB MAN  
 CAD: 0801261/CAFE3511

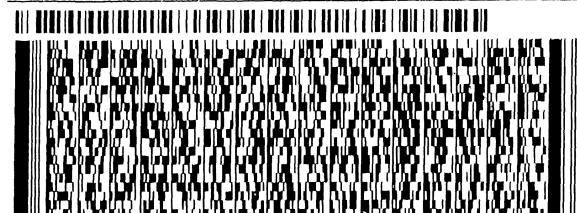
BILL SENDER

TO **SHIPPING/RECEIVING**  
**EUROFINS ENVIRONMENT TESTING SOUTHE**  
**3355 MCLEMORE DRIVE**

**PENSACOLA FL 32514**  
 (860) 474-1001  
 PO: YES

REF: S680-136894

18.90  
 IRS AK

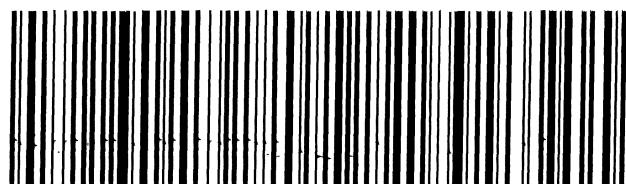


1 of 2  
 TRK# 0201 1328 9414 7244  
 ## MASTER ##

FRI - 17 JUN 10:30/  
 PRIORITY OVERNIGHT

**XH PNSA**

32514  
 FL-US BFM





**Eurofins Canton**

1180-S Van Buren Avenue

Barberton, OH 44203

Phone: 330-497-9396 Fax: 330-497-0772

## Chain of Custody Record

Environment Testing  
America



### **Client Information (Sub Contract Lab)**

Client Contact:	Shipping/Receiving	Sampler:	Lab P#: Brooks, Kris M	Carrier Tracking No(s):
Company:	Europins Environment Testing Southeast,	Phone:	E-Mail: Kris Brooks@et.eurofinsus.com	State of Origin: Michigan
Address:	3355 McLemore Drive, Pensacola, FL, 32514	Accreditations Required (See note):		
City:	Pensacola	Due Date Requested:	6/30/2022	Total Number of containers:
State, Zip:		TAT Requested (days):		
Phone:	850-474-1001(Tel) 850-478-2671(Fax)	PO #:		
Email:		WO #:		
Project Name:	National Standard City Complex Quarterly	Project #:	24022110	
Site:	SSOW#:			

### **Sample Identification - Client ID (Lab ID)**

Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Soil, Oil/Waste, Air)	Preservation Code	Field Filled Sample (Type or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
MW-20S (240-168475-10)	6/14/22	13:02	Water	X					
MW-20D (240-168475-11)	6/14/22	13:32	Water	X					
MW-4SR (240-168475-12)	6/15/22	04:40	Water	X					
MW-4DR (240-168475-13)	6/15/22	05:38	Water	X					
MW-3SR (240-168475-14)	6/15/22	06:22	Water	X					
MW-3DR (240-168475-15)	6/15/22	06:59	Water	X					
MW-13D (240-168475-16)	6/15/22	07:40	Water	X					
MW-7S (240-168475-17)	6/15/22	08:59	Water	X					
MW-7D (240-168475-18)	6/15/22	09:40	Water	X					

Primary Deliverable Rank: 2		Method of Shipment:	
Empty Kit Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Custody Seals Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Custody Seal No.: D.9~TQ8		
Cooler Temperature(s) °C and Other Remarks: 0.9~14.8			

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analytic & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above or analysis/test/s/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any charges to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

### **Possible Hazard Identification**

Unconfirmed  
Deliverable Requested: I, II, III, IV, Other (specify)

<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For Months
Special Instructions/QC Requirements:		
<input type="checkbox"/> Method of Shipment:		
<input type="checkbox"/> Received by:	Date/Time:	Company
<input type="checkbox"/> Received by:	Date/Time:	Company
<input type="checkbox"/> Received by:	Date/Time:	Company
<input type="checkbox"/> Received by:	Date/Time:	Company

Ver: 06/08/2021

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## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 680-217040-1

**Login Number: 217040**

**List Source: Eurofins Savannah**

**List Number: 1**

**Creator: Bissonnette, Ian**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 680-217040-1

**Login Number:** 217040

**List Source:** Eurofins Pensacola

**List Number:** 2

**List Creation:** 06/18/22 11:08 AM

**Creator:** Roberts, Alexis J

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A		1
The cooler's custody seal, if present, is intact.	N/A		2
Sample custody seals, if present, are intact.	N/A		3
The cooler or samples do not appear to have been compromised or tampered with.	True		4
Samples were received on ice.	True	Water present in cooler; indicates evidence of melted ice.	5
Cooler Temperature is acceptable.	True	Cooler temperature outside required temperature criteria.	6
Cooler Temperature is recorded.	True	16.6°C, 18.9°C IR8	7
COC is present.	True		8
COC is filled out in ink and legible.	True		9
COC is filled out with all pertinent information.	True		10
Is the Field Sampler's name present on COC?	True		11
There are no discrepancies between the containers received and the COC.	True		12
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	True		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A		

# Accreditation/Certification Summary

Client: ARCADIS U.S., Inc.

Project/Site: CSXT Brunswick Yard

Job ID: 680-217040-1

## Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-22
ANAB	ISO/IEC 17025	L2471	02-23-23
Arkansas DEQ	State	88-0689	09-01-22
California	State	2510	06-30-22
Florida	NELAP	E81010	06-30-22
Georgia	State	E81010(FL)	06-30-22
Illinois	NELAP	200041	10-09-22
Kansas	NELAP	E-10253	10-31-22
Kentucky (UST)	State	53	06-30-22
Kentucky (WW)	State	KY98030	12-31-22
Louisiana	NELAP	30976	06-30-22
Louisiana (DW)	State	LA017	12-31-22
Maryland	State	233	09-30-22
Michigan	State	9912	06-30-22
North Carolina (WW/SW)	State	314	12-31-22
Oklahoma	NELAP	9810	08-31-22
Pennsylvania	NELAP	68-00467	01-31-23
South Carolina	State	96026	06-30-22
Tennessee	State	TN02907	06-30-22
Texas	NELAP	T104704286	09-30-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

# **Attachment 5**

## **Historical Groundwater and Analytical Data**

Location ID	Sample Date	Sample Type Code	Benzene ( $\mu\text{g/L}$ )	Diiisopropyl Ether ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	Naphthalene ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Xylenes, Total ( $\mu\text{g/L}$ )	TPH-DRO (mg/L)	TPH-GRO (mg/L)
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DROC10-C28	PHC610GRO
CSXT MW-01	7/5/1994	N	<b>2</b>	NA	NA	NA	NA	NA	NA	< 1 U	< 3 U	<b>9.7</b>	NA
	8/29/1995	N	< 5 U	NA	NA	NA	< 10 U	NA	NA	< 5 U	< 10 U	<b>19</b>	NA
	3/10/1997	N	< 1 U	NA	NA	NA	< 1 U	NA	NA	< 1 U	< 1 U	<b>13</b>	NA
	3/12/1998	N	< 2 U	NA	NA	NA	< 10 U	NA	NA	< 2 U	< 2 U	<b>25.7</b>	NA
	11/9/1999	N	< 1 U	NA	NA	NA	<b>6</b>	NA	NA	< 1 U	< 2 U	<b>7.56</b>	NA
	4/11/2000	N	< 1 U	NA	NA	NA	< 1 U	NA	NA	< 1 U	< 2 U	<b>9.58</b>	NA
	5/7/2002	N	< 1 U	NA	NA	NA	< 10 U	NA	NA	< 1 U	< 2 U	<b>37.3</b>	NA
	5/15/2003	N	< 1 U	NA	NA	NA	< 8 U	NA	NA	< 1 U	< 2 U	<b>2.51</b>	NA
	5/7/2004	N	< 1 U	NA	NA	NA	< 1 U	NA	NA	< 1 U	< 2 U	< 0.1 U	NA
	5/16/2005	N	< 1 U	NA	NA	NA	< 5 U	NA	NA	< 1 U	< 2 U	<b>0.75</b>	NA
	6/6/2006	N	< 1 U	NA	NA	NA	< 5 U	NA	NA	< 1 U	< 2 U	<b>11</b>	NA
	12/27/2006	N	< 5 U	NA	NA	<b>97</b>	< 25 U	NA	NA	< 5 U	< 10 U	<b>12</b>	<b>0.69</b>
	3/5/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>11</b>	<b>0.068</b>
	5/22/2007	N	< 1 U	NA	NA	<b>90</b>	< 5 U	NA	NA	< 1 U	< 2 U	NA	< 0.05 U
	8/9/2007	N	< 1 U	NA	NA	<b>210</b>	< 5 U	NA	NA	< 1 U	< 2 U	<b>3.7</b>	< 0.05 U
	12/5/2007	N	< 1 U	<b>0.66 J</b>	< 1 U	<b>210 E</b>	< 1 U	<b>9.2</b>	<b>24</b>	< 1 U	< 3 U	<b>8.3</b>	<b>0.16</b>
	2/28/2008	N	< 0.35 U	<b>0.72</b>	< 0.6 U	<b>160 D</b>	<b>2.7</b>	<b>7.1</b>	<b>10 B</b>	< 0.51 U	< 0.93 U	<b>3.8</b>	<b>0.17</b>
	5/23/2008	N	< 0.7 U	<b>1.2</b>	< 1.2 U	<b>280 D</b>	< 0.87 U	<b>9.6</b>	<b>42</b>	< 1 U	< 1.9 U	<b>0.91</b>	<b>0.24</b>
	8/6/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	<b>160 D</b>	< 0.43 U	<b>3.9</b>	< 3.6 U	< 0.51 U	< 0.93 U	<b>1.9</b>	<b>0.1</b>
CSXT MW-02	7/5/1994	N	<b>31</b>	NA	NA	NA	NA	NA	NA	<b>2</b>	<b>22</b>	<b>110</b>	NA
	5/7/2002	N	<b>13.3</b>	NA	NA	NA	<b>63</b>	NA	NA	<b>5.8</b>	<b>62.3</b>	<b>222</b>	NA
	5/15/2003	N	< 5 U	NA	NA	NA	< 9 U	NA	NA	<b>19.1</b>	<b>103</b>	<b>188</b>	NA
	5/6/2004	N	< 1 U	NA	NA	NA	<b>10</b>	NA	NA	< 1 U	< 2 U	<b>4.12</b>	NA
	8/12/2008	N	<b>0.70</b>	< 0.17 U	< 0.6 U	< 0.28 U	<b>7</b>	< 0.53 U	< 3.6 U	<b>0.66</b>	< 0.93 U	<b>250</b>	<b>0.12</b>
CSXT MW-03	7/5/1994	N	< 1 U	NA	NA	NA	NA	NA	NA	< 1 U	< 3 U	<b>0.83</b>	NA
	8/29/1995	N	< 5 U	NA	NA	NA	< 10 U	NA	NA	< 5 U	< 10 U	< 0.6 U	NA
	3/10/1997	N	< 1 U	NA	NA	NA	< 1 U	NA	NA	< 1 U	< 1 U	<b>0.47</b>	NA
	3/12/1998	N	< 2 U	NA	NA	NA	< 10 U	NA	NA	< 2 U	< 2 U	< 0.1 U	NA
	11/9/1999	N	< 1 U	NA	NA	NA	< 1 U	NA	NA	< 1 U	< 2 U	<b>0.54</b>	NA
	4/11/2000	N	< 1 U	NA	NA	NA	< 1 U	NA	NA	< 1 U	< 2 U	< 0.1 U	NA
	5/16/2001	N	< 1 U	NA	NA	NA	< 11 U	NA	NA	< 1 U	< 2 U	< 0.1 U	NA
	5/7/2002	N	< 1 U	NA	NA	NA	< 9 U	NA	NA	< 1 U	< 2 U	< 0.1 U	NA
	5/15/2003	N	< 1 U	NA	NA	NA	< 11 U	NA	NA	< 1 U	< 2 U	< 0.11 U	NA
	5/6/2004	N	< 1 U	NA	NA	NA	< 1 U	NA	NA	< 1 U	< 2 U	< 0.1 U	NA
	5/16/2005	N	< 1 U	NA	NA	NA	< 5 U	NA	NA	< 1 U	< 2 U	< 0.095 U	NA
	6/6/2006	N	< 1 U	NA	NA	NA	< 5 U	NA	NA	< 1 U	< 2 U	< 0.1 U	NA
	12/14/2006	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	< 0.094 U	< 0.05 U
	3/5/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	< 0.097 U	< 0.05 U
	5/22/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	< 0.096 U	< 0.05 U
	8/9/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>0.18</b>	< 0.05 U
	12/3/2007	FD	< 1 U	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 20 U	< 1 U	< 3 U	< 0.098 U	< 0.05 U
	12/3/2007	N	< 1 U	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 20 U	< 1 U	< 3 U	< 0.098 U	< 0.05 U
	2/26/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	<b>0.22</b>	< 0.0042 U
	5/21/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	< 0.04 U	< 0.0042 U
	8/7/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	< 0.043 U	< 0.0042 U
	3/3/2009	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 20 U	< 1 U	< 2 U	< 10 U	< 0.47 U	NA
	9/8/2009	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>0.16</b>	NA
	3/9/2010	FD	< 1 U	< 5 U	< 5 U*	< 5 U	< 5 U	< 5 U	< 5 U*	< 5 U	< 10 U	<b>0.18</b>	NA
	3/9/2010	N	< 1 U	< 5 U	< 5 U*	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>0.16</b>	NA
	9/23/2010	FD	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>0.26</b>	NA
	9/23/2010	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>0.27</b>	NA
	2/16/2011	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>0.23</b>	NA
	8/10/2011	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	<b>0.13</b>	NA
	3/22/2012	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>0.14</b>	NA
	9/25/2012	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	< 0.1 U	< 0.05 U
	1/14/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>0.049 J</b>	< 0.05 U
	9/17/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>0.086 JB</b>	< 0.05 U
	3/13/2014	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 1 U	< 10 U	<b>0.086 JB</b>	<b>0.06 B</b>
	9/17/2014	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 1 U	< 10 U	<b>0.083 J</b>	< 0.1 U
	3/26/2015	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 1 U	< 5 U	<b>0.11 B</b>	< 0.1 U
	9/23/2015	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 1 U	< 5 U	<b>0.20</b>	< 0.1 U
	3/25/2016	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 10 U	< 1 U	< 1 U	< 5 U	<b>0.18</b>	< 0.1 U
	9/27/2016	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 1 U	< 10 U	<b>0.084 J</b> </	

Location ID	Sample Date	Sample Type Code	Benzene	Diisopropyl Ether	ETBE	MTBE	Naphthalene	TAME	TBA	Toluene	Xylenes, Total	TPH-DRO	TPH-GRO
			( $\mu\text{g/L}$ )										
CSXT MW-05 (continued)	5/22/2007	FD	< 1 U	NA	NA	39	< 5 U	NA	NA	< 1 U	< 2 U	1.5	< 0.05 U
	5/22/2007	N	< 1 U	NA	NA	47	< 5 U	NA	NA	< 1 U	< 2 U	1.5	< 0.05 U
	8/9/2007	N	< 1 U	NA	NA	140	< 5 U	NA	NA	< 1 U	< 2 U	2.5	< 0.05 U
	12/5/2007	N	< 1 U	0.65 J	< 1 U	84	< 1 U	0.78 J	4.7 J	< 1 U	< 3 U	3.4	0.070
	2/26/2008	N	< 0.35 U	0.69	< 0.6 U	58	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	10	0.061
	5/22/2008	N	< 0.35 U	0.40	< 0.6 U	5.2	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	6.2	0.0082
	8/6/2008	N	< 0.35 U	0.79	< 0.6 U	9.2	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	14	0.018
CSXT MW-06	8/29/1995	N	< 5 U	NA	NA	NA	< 10 U	NA	NA	< 5 U	< 10 U	6.8	NA
	11/9/1999	N	10	NA	NA	NA	20	NA	NA	< 1 U	< 2 U	251	NA
	4/11/2000	N	16.8	NA	NA	NA	< 5 U	NA	NA	< 5 U	< 10 U	79.4	NA
	5/16/2001	N	10.2	NA	NA	NA	< 11 U	NA	NA	3.8	34.7	45	NA
	5/7/2002	N	6.6	NA	NA	NA	< 10 U	NA	NA	6.2	187	150	NA
	5/15/2003	N	11.8	NA	NA	NA	< 11 U	NA	NA	54.3	253	250	NA
CSXT MW-06R	5/7/2004	N	< 1 U	NA	NA	NA	9.9	NA	NA	< 1 U	< 2 U	15.4	NA
	5/16/2005	N	< 5 U	NA	NA	NA	< 25 U	NA	NA	< 5 U	< 1 U	24	NA
	6/6/2006	N	< 1 U	NA	NA	NA	< 5 U	NA	NA	< 1 U	< 2 U	2.2	NA
	12/15/2006	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	5.1	0.14
	3/2/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	2.4	0.067
	5/23/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	1.3	0.05
	8/10/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	2.5	0.064
	12/7/2007	N	< 1 U	1.2	1.1	3.7	< 1 U	6.3 J	< 1 U	< 3 U	2.2	0.039 J	
	3/3/2008	N	< 0.35 U	0.82	0.79	3.5	< 0.43 U	< 0.53 U	3.9	< 0.51 U	< 0.93 U	1.5	0.055
	5/27/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	1.9	0.13
	8/11/2008	FD	< 0.35 U	0.56	< 0.6 U	6.6	0.58	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	14	0.11
	3/25/2015	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 5 U	< 5 U	4.4	0.11
	8/11/2008	N	< 0.35 U	0.58	< 0.6 U	6.8	0.46	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	2.4	0.10
	2/26/2009	N	< 1 U	0.77 J	NA	2.0	< 1 U	< 1 U	< 20 U	< 1 U	< 2 U	4.0 J	NA
	9/3/2009	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	3.9	NA
	3/9/2010	N	< 1 U	< 5 U	< 5 U*	1.9 J	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	4.2	NA
	9/23/2010	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	2.4	NA
	2/15/2011	FD	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	11	NA
	2/15/2011	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	11	NA
	8/10/2011	FD	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	3.5	NA
	8/10/2011	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	4.8	NA
	3/26/2012	FD	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	29	< 1 U	< 10 U	11	NA
	3/26/2012	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	13	NA
	9/26/2012	FD	< 1 U	< 1 U	< 1 U	< 1 U	1.8	< 1 U	< 1 U	< 5 U	< 10 U	2.0	< 0.05 U
	9/26/2012	N	< 1 U	< 1 U	< 1 U	< 1 U	1.7	< 1 U	< 1 U	< 5 U	< 10 U	2.0	0.059
	1/16/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	7.7	0.13
	9/18/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	16 B	0.18
	3/13/2014	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	NA	0.19 B
	9/16/2014	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	2.6	0.15
	12/30/2014	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 5 U	4.4	0.13 B
	9/22/2015	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 5 U	2.8	0.13
	3/24/2016	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 5 U	4.0	0.15
	9/28/2016	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	5.1	0.1
	3/29/2017	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	22	0.099 J
	9/13/2017	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	8.1	0.097 J
	3/26/2018	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	0.063 J	< 0.1 U
	9/20/2018	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	< 10 U	7.4	0.076 J
	3/21/2019	N	< 1.0 U	< 10 U	< 1 U	< 10 U	6.5	< 0.05 U					
	9/17/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	1.7	< 1.0 U</					

Location ID	Sample Date	Sample Type Code	Benzene	Diisopropyl Ether	ETBE (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	TAME (µg/L)	TBA (µg/L)	Toluene (µg/L)	Xylenes, Total (µg/L)	TPH-DRO (mg/L)	TPH-GRO (mg/L)
			(µg/L)	(µg/L)									
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DROC10-C28	PHC610GRO
CSXT MW-20	12/7/2007	N	<1 U	<1 U	<1 U	1.0	<1 U	<1 U	<20 U	<1 U	<3 U	<0.098 U	<0.05 U
	3/3/2008	N	<0.35 U	<0.17 U	<0.6 U	0.5	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	<0.039 U	<0.0042 U
	5/27/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	<0.038 U	<0.0042 U
	8/11/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	0.47	<0.53 U	<3.6 U	<0.51 U	<0.93 U	<0.044 U	<0.0042 U
	1/16/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	0.036 J	0.065
CSXT MW-21	6/26/2007	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	<1 U	<2 U	2.2	<0.05 U
	8/8/2007	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	<1 U	<2 U	<0.05 U	<0.05 U
	12/5/2007	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<20 U	<1 U	<3 U	5.0	0.065
	2/26/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	0.57	<0.0042 U
	5/23/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	1.8	0.0082
	8/6/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	1.7	0.0082
	1/17/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	0.6	<0.05 U
CSXT MW-22	6/25/2007	N	<1 U	NA	NA	<10 U	16	NA	NA	4	<2 U	17	0.2
	8/9/2007	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	<1 U	<2 U	9.1	<0.05 U
	12/5/2007	N	<4 U	<4 U	<4 U	<4 U	3.0 J	<4 U	<80 U	<4 U	<12 U	8.5	0.027 J
	2/26/2008	N	<1.4 U	<0.67 U	<2.4 U	<1.1 U	2.6	<2.1 U	<14 U	<2 U	<3.7 U	8.0	0.026
	5/22/2008	N	<1.4 U	<0.67 U	<2.4 U	<1.1 U	<1.7 U	<2.1 U	<14 U	<2 U	<3.7 U	6.0	0.019
	8/7/2008	N	<1.4 U	<0.67 U	<2.4 U	<1.1 U	4.0	<2.1 U	<14 U	<2 U	<3.7 U	3.3	0.017
	3/3/2009	N	0.22 J	<1 U	NA	<1 U	2.5	<1 U	<20 U	<1 U	<2 U	7.5	NA
	9/4/2009	N	<1 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	8.4	NA
	3/9/2010	N	<1 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	6.8	NA
	9/23/2010	N	<1 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	7.6	NA
	2/16/2011	N	<1 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	7.3	NA
	8/11/2011	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	5.7	NA
	3/26/2012	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	7.3	NA
	9/25/2012	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	4.8	<0.05 U
	1/15/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	4.1	0.019 J
	9/17/2013	N	<1 U	<1 U	<1 U	<1 U	1.9	<1 U	<1 U	<1 U	<10 U	8.5 B	0.087
	3/13/2014	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	6.7 B	0.034 JB
	9/17/2014	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	3.3	0.56 J
	3/26/2015	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<5 U	16 B	0.085 J
	9/23/2015	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<5 U	8.1	<0.1 U
	3/25/2016	N	0.84 J	<1 U	NA	<1 U	<1 U	<1 U	<10 U	<1 U	<5 U	13.0	<0.1 U
	9/27/2016	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	11.0	0.089 J
	3/28/2017	N	0.60 J	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	25.0	0.059 J
	9/12/2017	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	11.0	0.11
	3/23/2018	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	21.0	0.055 J
	9/19/2018	N	<1 U	<1 U	NA	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	6.2	0.056 J
	3/21/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1 U	<10 U	8.6	<0.05 U
	9/17/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1 U	<10 U	6.9 *	0.110
	7/1/2020	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1 U	<10 U	15	0.360
	12/17/2020	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	1.6	<1.0 U	<10 U	<1 U	<10 U	19	0.230
	6/17/2021	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1 U	<10 U	1.1	1.3
	6/17/2021	FD	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1 U	<10 U	9.2	1.2
	6/14/2022	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	<1 U	<10 U	23	0.44
CSXT MW-23	2/28/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	7	<0.53 U	<3.6 U	<0.51 U	<0.93 U	6.1	0.021
	5/27/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	0.54	<0.0042 U
	8/8/2008	N	1.1	<0.17 U	<0.6 U	<0.28 U	61	<0.53 U	<3.6 U	<0.51 U	<0.93 U	NA	0.054
CSXT MW-24	6/25/2007	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	3.3	<2 U	<0	0.056
	12/6/2007	N	<1 U	<1 U	<1 U	<1 U	<1 U	<20 U	<20 U	<1 U	<3 U	2.0	&lt

Location ID	Sample Date	Sample Type Code	Benzene ( $\mu\text{g/L}$ )	Diisopropyl Ether ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	Naphthalene ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Xylenes, Total ( $\mu\text{g/L}$ )	TPH-DRO (mg/L)	TPH-GRO (mg/L)
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DROC10-C28	PHC610GRO
CSXT MW-25 (continued)	9/17/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	2 *	< 0.1 U
	7/1/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	1.1	0.089 J
	12/29/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	1.4	0.082 J
	6/18/2021	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	0.99 J	< 10 U	1.6	0.160
	6/14/2022	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.76	0.18
CSXT MW-26	6/25/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	1.1	< 2 U	5.4	0.13
	8/9/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	13	1.1
	12/6/2007	N	< 1 U	< 1 U	< 1 U	< 1 U	0.58 J	< 1 U	< 20 U	< 1 U	< 3 U	15	0.16 J
	3/4/2009	N	< 1 U	< 1 U	NA	< 1 U	1.4	< 1 U	< 20 U	< 1 U	< 2 U	1 J	NA
CSXT MW-27	6/26/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	6.8	< 0.05 U
	12/7/2007	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 20 U	< 1 U	< 3 U	1.5	0.016 J
	2/28/2008	FD	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	0.68	0.0082
	2/28/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	0.94	0.0070
	5/27/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	0.36	< 0.0042 U
	8/7/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	0.96	0.0070
CSXT MW-28	2/28/2008	N	11	< 0.17 U	< 0.6 U	1.9	79	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	62	0.19
	8/8/2008	N	3.6	< 0.17 U	< 0.6 U	< 0.28 U	61	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	160	0.26
CSXT MW-29	12/5/2007	N	< 4 U	< 4 U	< 4 U	90	< 4 U	4.4	< 80 U	< 4 U	< 12 U	7.1	0.12
	2/26/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	59	< 0.43 U	3.4	< 3.6 U	< 0.51 U	< 0.93 U	4.1	0.066
	5/23/2008	N	< 0.35 U	0.39	< 0.6 U	88	< 0.43 U	2.7	< 3.6 U	< 0.51 U	< 0.93 U	5.7	0.090
	8/6/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	160 D	< 0.43 U	5.1	4.5	< 0.51 U	< 0.93 U	5.9	0.16
	3/3/2009	N	< 1 U	.82 J	NA	160 J	1.9	3.9	18 J	< 1 U	< 2 U	18	NA
	9/4/2009	N	< 1 U	< 5 U	< 5 U	140	< 5 U	< 5 U	12	< 5 U	< 10 U	2.8	NA
	9/22/2010	N	< 1 U	< 5 U	< 5 U	66	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	5.9	NA
	2/16/2011	N	< 1 U	< 5 U	< 5 U	61	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	23	NA
	8/10/2011	N	< 1 U	< 1 U	< 1 U	31	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	2.1	NA
	3/26/2012	N	< 1 U	< 1 U	< 1 U	15	< 1 U	< 1 U	20	< 1 U	< 10 U	2.0	NA
	9/25/2012	N	< 1 U	< 1 U	< 1 U	2.0	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	2.0	< 0.05 U
	1/24/2013	N	< 1 U	< 1 U	< 1 U	3.8	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	29 B	0.025 J
	9/17/2013	N	< 1 U	< 1 U	< 1 U	1.3	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	4.8 B	0.11
	3/14/2014	N	< 1 U	< 1 U	< 1 U	1.5	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	4.7	0.041 JB
	9/17/2014	N	< 1 U	< 1 U	< 1 U	1.2	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	2.1	< 0.1 U
	3/26/2015	N	< 1 U	< 1 U	< 1 U	1.3	< 1 U	< 1 U	< 10 U	< 1 U	< 5 U	4 B	< 0.1 U
	9/23/2015	N	< 1 U	< 1 U	< 1 U	1.7	< 1 U	< 1 U	< 10 U	< 1 U	< 5 U	3.1	< 0.1 U
	3/25/2016	N	1.7	< 1 U	NA	< 1 U	1.3	< 1 U	< 10 U	< 1 U	< 5 U	1.8	< 0.1 U
	9/27/2016	N	< 1 U	< 1 U	< 1 U	0.76 J	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	2.7	< 0.1
	9/13/2017	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	5.1 J	< 1 U	< 10 U	2.6	0.052 J
	3/23/2018	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	12	0.059 J
	9/20/2018	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	5.2	< 0.1 U
	9/17/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	0.43 J	< 10 U	3.8 *	< 0.1 U
	7/1/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	3	0.16
	6/14/2022	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	1	0.24
CSXT MW-30	12/6/2007	N	< 1 U	1.2	< 1 U	350 E	< 1 U	15	45	< 1 U	< 3 U	2.7	0.28
	8/6/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	7.3	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	4.7	0.0073
	3/3/2009	N	< 1 U	< 1 U	NA	51	< 1 U	1.1	< 20 U	< 1 U	< 2 U	1.9	NA
CSXT MW-31	12/6/2007	N	2.3 J	< 4 U	< 4 U	< 4 U	3.1 J	< 4 U	< 80 U	< 4 U	< 12 U	2.2	

Location ID	Sample Date	Sample Type Code	Benzene	Diisopropyl Ether	ETBE	MTBE	Naphthalene	TAME	TBA	Toluene	Xylenes, Total	TPH-DRO	TPH-GRO
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DROC10-C28	PHC610GRO
CSXT MW-50	12/4/2007	N	<1 U	<1 U	<1 U	NA	0.72 J	<1 U	<20 U	<1 U	<3 U	5.4	0.031 J
	2/25/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	0.27	<0.0042 U
	5/21/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	<0.041 U	<0.0042 U
	8/11/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	0.29	<0.0042 U
CSXT MW-51	12/6/2007	N	<1 U	3.6	1.2	790 E	<1 U	32	75	<1 U	<3 U	0.64	0.70
	2/25/2008	N	<0.35 U	6.8	2.8	<0.28 U	<0.43 U	56	<3.6 U	<0.51 U	<0.93 U	0.37	1.5
	5/28/2008	N	1.0	2.8	1.3	1100 E	<0.43 U	24	54	<0.51 U	<0.93 U	0.38	0.84
	8/8/2008	N	10	4.7	4.2	800 E	<0.43 U	44	88	<0.51 U	<0.93 U	<0.045 U	0.47
	3/4/2009	N	<1 U	3.2	NA	1100 J	<1 U	22	110	<1 U	<2 U	0.17 JB	NA
	9/8/2009	N	<1 U	<5 U	<5 U	69	<5 U	<5 U	410	<5 U	<10 U	0.49	NA
	3/9/2010	N	<1 U	<5 U	<5 U*	9.6	<5 U	<5 U	<5 U*	<5 U	<10 U	0.22	NA
	9/25/2015	N	<1 U	<1 U	<1.0 U	3.6	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	0.13	<0.10 U
	9/23/2010	N	1.0	<5 U	<5 U	30	<5 U	<5 U	6.9	<5 U	<10 U	0.61	NA
	2/16/2011	N	<1 U	<5 U	<5 U	26	<5 U	<5 U	<5 U	<5 U	<10 U	0.48	NA
	8/10/2011	N	<1 U	1.8	1.2	34	<1 U	1.1	120	<1 U	<10 U	0.30	NA
	3/26/2012	N	<1 U	1.8	1.4	27	<1 U	1.0	110	<1 U	<10 U	0.31	NA
	9/25/2012	N	<1 U	1.0	<1 U	18	<1 U	<1 U	26	<1 U	<10 U	0.56	<0.05 U
	1/14/2013	N	<1 U	1.1	1.2	12	<1 U	0.65 J	53	<1 U	<10 U	0.12	0.029 J
	9/17/2013	N	<1 U	0.62 J	<1 U	7.5	<1 U	<1 U	11	<1 U	<10 U	0.18 B	0.083
	3/14/2014	N	<1.0 U	<1.0 U	<1.0 U	3.4	<1.0 U	<1.0 U	21	<1.0 U	<10 U	0.085 J	0.022 JB
	9/18/2014	N	0.38 J	<1.0 U	<1.0 U	7.2	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	0.092 JF1	<0.1 U
	3/26/2015	N	<1.0 U	<1.0 U	<1.0 U	1.9	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	0.27 B	<0.1 U
	3/25/2016	N	<1.0 U	<1.0 U	NA	3.0	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	0.15	<0.1 U
	9/27/2016	N	<1.0 U	<1.0 U	<1.0 U	2.7	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	0.18	<0.1 U
	3/28/2017	N	<1.0 U	<1.0 U	<1.0 U	1.4	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	0.30	<0.1
	9/12/2017	N	<1 U	<1 U	<1 U	1.5	<1 U	<1 U	<10 U	<1 U	<10 U	0.20	<0.1 U
	3/23/2018	N	<1 U	<1 U	<1 U	0.86 J	<1 U	<1 U	<10 U	<1 U	<10 U	0.37	<0.1 U
	9/20/2018	N	<1 U	<1 U	NA	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	0.26	<0.1 U
	3/21/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	0.41	<0.05 U
	9/17/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	0.150 *	<0.1 U
	6/30/2020	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<0.130 U	<0.1 U
	12/18/2020	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	0.26	<0.1 U
	6/17/2021	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<0.120 U	0.048 J
	6/14/2022	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	<1.0 U	<10 U	0.52	0.52
CSXT MW-52	12/6/2007	N	<1 U	<1 U	<1 U	0.85 J	<1 U	<1 U	<20 U	<1 U	<3 U	0.90	<0.05 U
	2/25/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	1.2	0.0058
	5/28/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	1.1	<0.0042 U
	8/8/2008	N	<0.35 U	<0.17 U	<0.6 U	<0.28 U	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	0.34	<0.0042 U
CSXT MW-59	1/14/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	150	0.16
	5/21/2013	N	<2 U	<2 U	<2 U	<2 U	<2 U	<2 U	<10 U	<2 U	<20 U	140	0.16
	9/19/2013	N	61	<1 U	<1 U	<1 U	<1 U	6.4	<1 U	<5 U	<10 U	470 B	1.5 B
	12/26/2013	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	93	0.62 JB
	3/12/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	110	0.16 B
CST MW-61	6/14/2012	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	18	0.12
	9/26/2012	N	<1 U	<1 U	<1 U	<1 U	6.3	<1 U	<5 U	<1 U	<10 U	18	0.12
	1/14/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	100	0.16
	5/21/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	44	0.13
	9/19/2013	N	<1 U	<1 U	<1 U	<1 U	2.9	<1 U	<5 U	<1 U	<10 U	44 B	0.089 B
	12/26/2013	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	30	0.19 B
	3/12/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	160	0.31 B

Location ID	Sample Date	Sample Type Code	Benzene ( $\mu\text{g/L}$ )	Diiisopropyl Ether ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	Naphthalene ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Xylenes, Total ( $\mu\text{g/L}$ )	TPH-DRO (mg/L)	TPH-GRO (mg/L)	
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DR0C10-C28	PHC610GRO	
CSXT MW-65 (continued)	9/26/2012	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	8.0	0.085	
	1/17/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	4	0.092	
	5/21/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	6.8	0.057	
	9/19/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	12 B	0.072 B	
	12/27/2013	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	2.6	0.082 B	
	3/12/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	13	0.083 B	
	6/11/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	19	0.14	
	9/17/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	7.1	0.37	
	3/27/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	5.0 U	7.8 B	
	6/25/2015	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	5.0 U	9.8	
	9/25/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	40	0.085 J	
	12/29/2015	N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<5.0	21	0.42 B	
	3/24/2016	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	16	0.072 J	
	12/20/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	17	0.073 J	
	3/28/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	20.0	0.09 J	
	6/27/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	24	0.20	
	9/12/2017	FD	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	32	0.089 J	
	9/12/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0	<1.0 U	<10 U	31	0.12	
CSXT MW-67	1/15/2013	N	<1 U	<1 U	<1 U	2.1	<1 U	<1 U	<5 U	<1 U	<10 U	5.6	0.086	
	5/21/2013	N	<1 U	<1 U	<1 U	1.1	<1 U	<1 U	<5 U	<1 U	<10 U	7.4	0.061	
	9/18/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	14 B	0.2	
	12/26/2013	N	<1.0 U	<1.0 U	<1.0 U	0.84 J	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	15	0.11 B	
	3/12/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	32	0.15 B	
	12/30/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	3.4	<1.0 U	<10 U	<1.0 U	<5.0 U	41	0.14 B
	3/26/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	15 B	0.43	
	6/25/2015	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	15	0.056 J	
	12/29/2015	N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<5.0	37	0.23 B	
	3/25/2016	N	<5.0 U	<5.0 U	NA	<5.0 U	<5.0 U	<5.0 U	<50 U	<5.0 U	<25 U	50	0.34	
	3/28/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	170	<0.1 U	
	6/27/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	2.9	<1.0 U	<10 U	<1.0 U	<10 U	150	0.086 J
	9/12/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	61	0.22	
CSXT MW-68	1/17/2013	N	<1 U	<1 U	<1 U	<1 U	6.8	<1 U	<5 U	<1 U	<10 U	6.0	0.05	
	5/21/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	20	0.088	
	9/19/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	17 B	0.085 B	
	12/27/2013	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	1.1	<1.0 U	<5.0 U	<1.0 U	<10 U	2.1	0.031 JB	
	3/12/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	3.5	0.05 B	
	6/10/2014	FD	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	6.9	<0.1 U	
	6/10/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	6.2	<0.1 U	
	9/17/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	4.6	<0.1 U	
	12/30/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	11	0.15 B	
	3/27/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	12 B	<0.1 U	
	6/25/2015	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	3.4	<0.1 U	
	9/25/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	7.2	<0.10 U	
	12/29/2015	N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<5.0	5.3	0.13 B	
	3/25/2016	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	3.4	<0.1 U	
	9/27/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	8.2	<0.1 U	
	12/20/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	6.9	0.16	
	3/28/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	9.6	<0.1 U	
	6/27/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	5.7	<0.1 U	
	9/12/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	4.5	0.17	
CSXT MW-69	1/17/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	2.3	0.063	
	5/21/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	3.3	0.03 J	
	9/19/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	6.2 B	0.068 B	
	12/27/2013	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	1.3	0.25 B	
	3/12/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	5.0	0.21 B	
	6/11/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	5.9	<0.1 U	
	9/18/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	3.5 F1	<0.1 U	
	12/30/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	2.9	0.023 JB	
	3/26/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	2.9 B	<0.1 U	
	6/25/2015	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	2.4	<0.1 U	
	9/23/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	4.0	<0.10 U	
	12/29/2015	N	<1.0	<1.0	<1.0									

Location ID	Sample Date	Sample Type Code	Benzene ( $\mu\text{g/L}$ )	Diiisopropyl Ether ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	Naphthalene ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Xylenes, Total ( $\mu\text{g/L}$ )	TPH-DRO (mg/L)	TPH-GRO (mg/L)
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DROC10-C28	PHC610GRO
CSXT MW-70 (continued)	3/25/2016	N	<b>0.51 J</b>	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	<b>3.2</b>	<0.1 U
	9/27/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>4.1</b>	<0.10 U
	12/20/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>4.0</b>	<b>0.051 J</b>
	3/28/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>10.0</b>	<0.1 U
	6/27/2017	FD	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>2.2</b>	<0.1 U
	9/12/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.93</b>	<b>0.059 J</b>
CSXT MW-71	12/30/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	<b>0.38</b>	<b>0.038 JB</b>
	3/26/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	<b>0.23 B</b>	<0.1 U
	6/25/2015	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	<b>0.21</b>	<0.1 U
	9/23/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	<b>0.41</b>	<0.10 U
	12/29/2015	N	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;1.0</b>	<b>&lt;10</b>	<b>&lt;1.0</b>	<b>&lt;5.0</b>	<b>0.27</b>	<b>0.086 B</b>
	3/25/2016	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<5.0 U	<b>0.13</b>	<0.1 U
	9/27/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.28</b>	<0.1 U
	12/20/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.40</b>	<0.1 U
	3/28/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.27</b>	<0.1 U
	6/27/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.21</b>	<0.1 U
	9/12/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.18</b>	<0.1 U
	3/23/2018	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.11</b>	<b>0.060 J</b>
	9/19/2018	N	<1 U	<1 U	NA	<1 U	<1 U	<1 U	<10 U	<1 U	<10 U	<b>0.15</b>	<0.1 U
	3/21/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.15</b>	<0.05 U
	9/17/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.260 *</b>	<0.1 U
	7/1/2020	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<0.130 U	<0.1 U
	12/17/2020	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<0.130 U	<0.1 U
	6/18/2021	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<0.120 U	<b>0.091 J</b>
	6/14/2022	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<5.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<0.13 U	<0.1 U
NPS MW-01	12/18/2006	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	<1 U	<2 U	<b>0.18</b>	<0.05 U
	2/28/2007	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	<1 U	<2 U	<b>0.45</b>	<0.05 U
	5/24/2007	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	<1 U	<2 U	<b>0.25</b>	<0.05 U
	8/9/2007	N	<1 U	NA	NA	<10 U	<5 U	NA	NA	<1 U	<2 U	<b>0.24</b>	<0.05 U
	11/29/2007	N	<1 U	<b>1.6</b>	<b>1.2</b>	NA	<1 U	<20 U	<1 U	<3 U	<0.93 U	<b>0.0073 J</b>	
	3/3/2008	N	<0.35 U	<b>0.86</b>	<b>0.88</b>	<b>2.7</b>	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	<b>1.8</b>	<b>0.0064</b>
	5/21/2008	N	<0.35 U	<0.17 U	<b>0.74</b>	<b>2.8</b>	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	<b>0.16</b>	<b>0.0056</b>
	8/7/2008	N	<0.35 U	<b>1.6</b>	<b>1.8</b>	<b>2.8</b>	<0.43 U	<0.53 U	<3.6 U	<0.51 U	<0.93 U	<0.039 U	<b>0.0054</b>
	2/26/2009	N	<1 U	<b>0.91 J</b>	NA	<b>2.3</b>	<1 U	<20 U	<1 U	<2 U	<0.52 U	NA	
	9/4/2009	N	<1 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<b>0.57</b>	NA
	3/10/2010	N	<1 U	<5 U	<b>1.0 J*</b>	<b>1.7 J</b>	<5 U	<5 U	<5 U*	<5 U	<10 U	<b>0.62</b>	NA
	9/22/2010	N	<1 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<b>0.42</b>	NA
	2/15/2011	N	<1 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<5 U	<10 U	<b>1.1</b>	NA
	8/9/2011	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	<b>0.34</b>	NA
	3/23/2012	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	<b>1.0</b>	NA
	9/25/2012	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	<b>0.38</b>	<0.05 U
	1/15/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	<b>0.13</b>	<0.05 U
	3/13/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.24 B</b>	<b>0.015 JB</b>
	9/18/2013	N	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<5 U	<1 U	<10 U	<b>0.24 B</b>	<0.05 U
	9/16/2014	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>.58</b>	<0.1 U
	3/25/2015	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.43</b>	<0.1 U
	9/22/2015	N	<1.0 U	<1.0 U	<1.0 U	<b>0.74 J</b>	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.48</b>	<0.10 U
	3/24/2016	N	<1.0 U	<1.0 U	NA	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.43</b>	<0.1 U
	9/28/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.78</b>	<0.1 U
	3/28/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.63</b>	<b>&lt;0.1</b>
	9/12/2017	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.51</b>	<0.1 U
	3/26/2018	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.35</b>	<0.1 U
	9/20/2018	N	<1 U	<1 U	NA	<1 U	<1 U	<10 U	<1.0 U	<1 U	<10 U	<b>0.41</b>	<0.1 U
	3/21/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.096 J</b>	<0.05 U
	9/17/2019	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<b>0.290 *</b>	<0.1 U
	6/30/2020	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<10 U	<1.0 U	<10 U	<0.130 U	<0.1 U
	12/18/2020	N	<1.0 U	<1.0 U	<1.0 U	&lt							

Location ID	Sample Date	Sample Type Code	Benzene ( $\mu\text{g/L}$ )	Diisopropyl Ether ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	Naphthalene ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	TBA ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Xylenes, Total ( $\mu\text{g/L}$ )	TPH-DRO (mg/L)	TPH-GRO (mg/L)
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DROC10-C28	PHC610GRO
NPS MW-03 (continued)	2/29/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	< 0.038 U	< 0.0042 U
	5/20/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	< 0.04 U	< 0.0042 U
	8/11/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	< 0.043 U	< 0.0042 U
	1/15/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>0.071 J</b>	< 0.05 U
NPS MW-04	5/16/2005	N	< 1 U	NA	NA	NA	< 5 U	NA	NA	< 1 U	< 2 U	<b>30</b>	NA
	6/6/2006	N	< 1 U	NA	NA	NA	< 5 U	NA	NA	< 1 U	< 2 U	<b>21</b>	NA
	12/18/2006	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>10</b>	<b>0.17</b>
	3/2/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>33</b>	<b>0.092</b>
	5/23/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>3.2</b>	< 0.05 U
	3/3/2008	N	<b>6.1</b>	< 0.67 U	< 2.4 U	< 1.1 U	< 1.7 U	< 2.1 U	< 14 U	< 2 U	< 3.7 U	<b>9.6</b>	<b>0.058</b>
	5/27/2008	N	<b>16</b>	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	<b>11</b>	<b>0.11</b>
	8/12/2008	N	<b>12</b>	< 0.17 U	< 0.6 U	< 0.28 U	<b>0.89</b>	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	<b>2.0</b>	<b>0.11</b>
	3/4/2009	N	<b>&lt; 4 J</b>	<b>&lt; 4 J</b>	NA	<b>&lt; 4 J</b>	<b>&lt; 4 J</b>	<b>&lt; 80 J</b>	<b>&lt; 4 J</b>	<b>&lt; 8 J</b>	<b>6.1 B</b>	NA	
	9/3/2009	N	<b>2.1</b>	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>4.5</b>	NA
	3/9/2010	N	< 1 U	< 5 U	< 5 U*	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>5.4</b>	NA
	9/23/2010	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>3.0</b>	NA
	2/15/2011	N	< 1 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 10 U	<b>12</b>	NA
	8/10/2011	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>3.2</b>	NA
	3/23/2012	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 10 U	<b>2.9</b>	NA
	9/26/2012	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>5.4</b>	<b>0.050</b>
	1/16/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>17</b>	<b>0.088</b>
	9/18/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	<b>31 B</b>	<b>0.085</b>
	3/13/2014	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>7.8 B</b>	<b>0.069 B</b>
	9/16/2014	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>5.2</b>	<b>0.11</b>
	3/25/2015	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>6.8</b>	< 0.1 U
	9/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>11</b>	<b>0.082 J</b>
	3/24/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>3.4</b>	< 0.1 U
	9/28/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>8.8</b>	<b>0.078 J</b>
	3/29/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>14.0</b>	< 0.1 U
	9/13/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>9.4</b>	<b>0.065 J</b>
	3/26/2018	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>49</b>	< 0.1 U
	9/20/2018	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	< 10 U	<b>43</b>	<b>0.064 J</b>
	3/21/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>13</b>	< 0.05 U
	9/17/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>37 *</b>	<b>0.061 J</b>
	6/30/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<b>1.7</b>	< 1.0 U	< 10 U	< 1.0 U	<b>22</b>	<b>0.910</b>
	12/18/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	<b>1.2</b>	< 1.0 U	< 10 U	< 1.0 U	<b>7.2</b>	<b>1.10</b>
	6/17/2021	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	<b>16</b>	<b>4.8</b>
	6/17/2021	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 10 U	< 1.0 U	< 10 U	<b>5.2</b>	<b>1.2</b>
NPS MW-05	12/15/2006	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>0.9</b>	< 0.05 U
	2/28/2007	FD	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>1.3</b>	< 0.05 U
	2/28/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>1.1</b>	< 0.05 U
	5/23/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>0.83</b>	< 0.05 U
	8/9/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	<b>0.91</b>	< 0.05 U
	11/29/2007	N	< 5 U	< 5 U	< 5 U	NA	< 5 U	< 5 U	< 100 U	< 5 U	< 15 U	&lt	



Location ID	Sample Date	Sample Type Code	Benzene	Diisopropyl Ether	ETBE	MTBE	Naphthalene	TAME	TBA	Toluene	Xylenes, Total	TPH-DRO	TPH-GRO
			(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)
		CAS No.	71-43-2	108-20-3	637-92-3	1634-04-4	91-20-3	994-05-8	75-65-0	108-88-3	1330-20-7	DROC10-C28	PHC610GRO
NPS MW-16 (continued)	3/25/2015	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 5.0 U	0.77	< 0.1 U
	9/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U	NA	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 5.0 U	1.0	< 0.10 U
	3/24/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 5.0 U	0.73	< 0.1 U
	9/28/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.92	< 0.1 U
	3/29/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.80	< 0.1 U
	9/13/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.94	< 0.1 U
	3/26/2018	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.77	< 0.1 U
	9/20/2018	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	0.93	< 0.1 U
	3/21/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1 U	< 10 U	0.62	< 0.05 U
	9/17/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1 U	< 10 U	0.710 *	< 0.1 U
	6/30/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.24	< 0.1 U
	12/18/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.41	< 0.1 U
	6/17/2021	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.350	< 0.100 U
	6/15/2022	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.87	< 0.1 U
NPS MW-17	12/14/2006	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	0.12	< 0.05 U
	3/1/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	0.21	< 0.05 U
	5/24/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	0.13	< 0.05 U
	8/10/2007	N	< 1 U	NA	NA	< 10 U	< 5 U	NA	NA	< 1 U	< 2 U	0.17	< 0.05 U
	11/30/2007	N	< 1 U	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 20 U	< 1 U	< 3 U	< 0.097 U	< 0.05 U
	2/27/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	< 0.038 U	< 0.0042 U
	8/12/2008	N	< 0.35 U	< 0.17 U	< 0.6 U	< 0.28 U	< 0.43 U	< 0.53 U	< 3.6 U	< 0.51 U	< 0.93 U	< 0.044 U	< 0.0042 U
	1/16/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	0.1	< 0.05 U
NPS MW-18	9/18/2013	N	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 5 U	< 1 U	< 10 U	0.24 B	< 0.05 U
	12/26/2013	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U	< 10 U	0.082 J	0.025 JB
	3/13/2014	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.26 B	0.017 JB
	9/16/2014	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.33	< 0.1 U
	3/25/2015	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 5.0 U	0.36	< 0.1 U
	6/25/2015	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 5.0 U	0.34	< 0.1 U
	9/22/2015	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 5.0 U	0.41	< 0.10 U
	12/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0	< 5.0	0.37	0.033 JB
	3/24/2016	N	< 1.0 U	< 1.0 U	NA	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 5.0 U	0.35	< 0.1 U
	9/28/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.55	< 0.1 U
	9/28/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.44	< 0.1 U
	3/29/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.42	< 0.1 U
	6/27/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.50	< 0.1 U
	9/13/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.47	< 0.1 U
	3/26/2018	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.36	< 0.1 U
	9/20/2018	N	< 1 U	< 1 U	NA	< 1 U	< 1 U	< 1 U	< 10 U	< 1 U	< 10 U	0.450	< 0.1 U
	3/21/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.32	< 0.05 U
	9/16/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.350 *	< 0.1 U
	6/30/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	< 0.140 U	< 0.1 U
	12/18/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.27	< 0.1 U
	6/17/2021	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	0.22	< 0.100 U
	6/15/2022	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U	< 10 U	< 1.0 U	< 10 U	< 0.13 U	0.048 J

**Attachment 5**  
**Historical Groundwater and Analytical Data**  
**Quarterly Report – Second Quarter 2021**  
**Brunswick Yard, Brunswick, Maryland**



**Notes:**

Values in boldface type exceed applicable GNCSG.

mg/L - milligrams per liter

µg/L - micrograms per liter

<1U - concentration is less than the reporting limit

B - Constituent was detected in a laboratory method blank

F1 - MS and/or MSD Recovery is outside acceptance limits

GNCSG - Generic Numeric Cleanup Standards for Groundwater.

J\* - Concentration is estimated

NA - Not Analyzed

TPH - Total Petroleum Hydrocarbons

VOCs - Volatile Organic Compounds

MDE MEAT GNCSG - Maryland Environmental Assessment Technology for Leaking Underground Storage Tanks (Revised February 2003).