

HUMPHREY IMPOUNDMENT SEMI-ANNUAL 1ST HALF 2024 INTERIM MEASURE REPORT

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SPARROWS POINT, MARYLAND**

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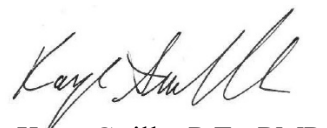

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1.0 INTRODUCTION

ARM Group LLC (ARM), on behalf of Tradepoint Atlantic, has prepared this Semi-Annual 1st Half 2024 Interim Measures (IM) Report for a portion of the Tradepoint Atlantic (TPA) property (formerly Sparrows Point Terminal, LLC) that has been designated as the Humphrey Impoundment located in Area B: Parcel B14 (the Site). Parcel B14 is comprised of 60.3 acres of the approximately 3,100-acre former steel making facility (**Figure 1**). The majority of Parcel B14 is occupied by the Humphrey Impoundment, which is approximately 43 acres in size. The Humphrey Impoundment has been identified as a Special Study Area due to the wastes which were historically managed within the area, and potential environmental releases which could have occurred due to its construction (slag base and sides). The *IM Work Plan for the Humphrey Impoundment* (Revision 2 dated March 29, 2022) was submitted to the Maryland Department of the Environment (MDE) and United States Environmental Protection Agency (USEPA) hereby referred to as the Agencies. The IM Work Plan for the Humphrey Impoundment was proposed as a component of the final remedy for Parcel B14 for the impoundment and the wastes contained within the impoundment. The IM Work Plan proposed groundwater and surface water sampling and gauging to monitor the Site conditions as the Humphrey Impoundment is filled, in preparation for development.

This 1st Half 2024 IM Report summarizes groundwater and surface water sampling and gauging results from January through June 2024. The approved IM proposed gauging and sampling of groundwater and surface water around the perimeter and in the vicinity of the Humphrey Impoundment to assess the interaction of the impoundment with groundwater and surface water and to monitor the effectiveness of the proposed IM at reducing migration of contaminants to groundwater and the potential need for additional contingent groundwater remedies. These gauging and sampling activities include the adjacent areas of Parcel B24 and portions of the Tin Mill Canal (TMC).

1.1. SITE DESCRIPTION AND HISTORY

In preparation for development filling activities for the Humphrey Impoundment commenced in January 2022 and have continued throughout this year. The impoundment is being filled in quadrants. Filling of the impoundment is now approximately 95% complete and paving is approximately 50% complete. Future use for the impoundment will include a Stormwater Management Regional Pond and a parking lot.

From the late 1800s until 2012, the production and manufacturing of steel was conducted at Sparrows Point. Iron and steel production operations and processes at Sparrows Point included raw material handling, coke production, sinter production, iron production, steel production, and semi-finished and finished product preparation. In 1970, Sparrows Point was the largest steel

facility in the United States, producing hot and cold rolled sheets, coated materials, pipes, plates, and rod and wire. The steel making operations at Sparrows Point ceased in fall 2012.

The majority of Parcel B14, as shown in **Figure 1**, is occupied by the Humphrey Impoundment, which is approximately 43 acres in size. As stated in the Description of Current Conditions (DCC) Report prepared by Rust Environment and Infrastructure, dated January 1998, the USEPA identified the Humphrey Impoundment as a potential concern due to the wastes which were historically managed within the impoundment, and potential environmental releases which could have occurred due to its construction (slag base and sides).

Between 1950 and 1970, Humphrey Creek existed as open water (the impoundment did not yet exist) and received wastewater from various steel processing areas including the Hot Strip Mill, Cold Sheet Mill, Tin Mill, and Rod & Wire Mill. Following construction of the TMC (ca. 1969), from 1970 to 1985 the Humphrey Impoundment was used as a dewatering area for on-site sludges and slurry materials generated from the Basic Oxygen Furnace and various on-site water treatment plants. Materials that were dewatered within the impoundment included: Blast Oxygen Furnace slurry; Blast Furnace G, H, J, K, and L thickener sludges; Humphrey Creek Wastewater Treatment Plant (HCWWTP) sludge; Sinter Plant slurry; Open Hearth (No.4) slurry; waste oil pit sludge and non-recoverable waste oil residue; and pre-limer clarifier sludge. Since 1985, the impoundment was used for sludge/slurry dewatering in emergency scenarios only (i.e., when upsets had occurred in the on-site water treatment systems). The MDE was notified prior to these emergency uses. According to the DCC Report, all the wastes that were placed inside the impoundment were determined to be non-hazardous.

2.0 INTERIM MEASURE RESULTS

2.1. GROUNDWATER SAMPLING

In December 2021, perimeter monitoring wells were installed at Humphrey Impoundment. Starting in January 2022, multiple rounds of monthly groundwater sampling data were collected in accordance with the *Humphrey Impoundment IM Work Plan* (Revision 2 dated March 29, 2022). On November 7, 2022, the Agencies approved a reduction in sampling frequency from monthly to quarterly. On October 30, 2023, the Agencies approved a reduction in gauging frequency from monthly to quarterly.

As shown on **Figure 2**, groundwater samples were originally collected from 18 monitoring wells around the perimeter of the impoundment. These wells are HI10-MWS, HI11-MWS, HI12-MWS, HI13-MWS, HI14-MWS, HI15-MWS, HI16-MWS, HI17-MWS, HI18-MWS, HI19-MWS, HI20-MWS (replaced with HI20R-MWS), HI21-MWS, HI22-MWS, TM04-PZM006, TM08R-PZM007, HI02-PZM006 (replaced with HI02R-PZM006), HI04-PZM006, and HI07-PZM005 (replaced with HI07R-PZM005). However, two monitoring wells were not sampled for the 1st and / or 2nd Quarters 2024:

- HI04-PZM006 was not sampled in Q1 or Q2 2024 as it was damaged during redevelopment / construction activities in April 2022, and subsequently abandoned. TPA will evaluate replacement of the damaged HI04-PZM006 based on groundwater concentrations to date.
- HI20R-MWS was not sampled in Q1 2024 due to observed NAPL (refer to Section 6.0).

In January 2024, replacement wells HI02R-PZM006, HI07R-PZM005, and HI20R-MWS were installed. The original wells at these locations were abandoned due to construction activities in the area. Refer to **Appendix A** for the well installation logs. The wells were developed on January 25 and 26, 2024.

Groundwater samples were analyzed for volatile organic compounds (VOCs) via the USEPA method 8260 and semi-volatile organic compounds (SVOCs) via USEPA method 8270 during the groundwater monitoring events. Groundwater analytical results for each monitoring round are included in **Table 1** and **Table 2**. Project Action Limit (PAL) exceedances for each of the sampling rounds are shown on **Figure 3** and **Figure 4**. The groundwater PALs are based on the USEPA Maximum Contaminant Level or the USEPA Regional Screening Level for tap water. The laboratory reports are included in **Appendix B**.

2.1.1. 1st Quarter 2024 Groundwater Sampling

During the 1st Quarter 2024 sampling event, 16 monitoring wells were sampled. Benzene exceedances of the groundwater PAL (5 micrograms per liter, or µg/L) were observed in two baseline monitoring wells: HI19-MWS (9.1 µg/L) and TM04-PZM006 (140 µg/L). Measured benzene concentrations are consistent with historical values observed at these locations.

Naphthalene exceedances of the groundwater PAL (0.12 µg/L) were observed at nine of 16 baseline monitoring wells sampled, with the maximum concentration observed in HI10-MWS (31 µg/L). Five of the nine baseline monitoring wells with naphthalene PAL exceedances are located along the TMC: HI10-MWS (31 µg/L), HI11-MWS (0.18 µg/L), HI14-MWS (0.16 µg/L), HI15-MWS (8.2 µg/L), and TM04-PZM006 (0.12 µg/L). Naphthalene concentrations are consistent with historical values observed at these locations except for monitoring well TM04-PZM006. Historically, the maximum naphthalene concentrations for this study area have been detected at TM04-PZM006. However, naphthalene concentrations have been fluctuating at TM04-PZM006 over the last several quarters: not detected in the 3rd quarter sampling event, 170 µg/L during the 4th quarter 2024, and 0.12 µg/L during the 1st quarter 2024. Concentrations at TM04-PZM006 will continue to be monitored for trend changes.

Benz[a]anthracene exceedances of the groundwater PAL (0.03 µg/L) were observed in 11 of the 16 monitoring wells samples, with the maximum concentration observed in HI15-MWS (0.08 µg/L). Benz[a]anthracene concentrations are consistent with historical values observed at these locations. There were also exceedances for dibenz[a,h]anthracene (PAL is 0.0025 µg/L) in two wells (maximum concentration of 0.14 µg/L in HI15-MWS).

2.1.2. 2nd Quarter 2024 Groundwater Sampling

During the 2nd Quarter 2024 sampling event, 17 monitoring wells were sampled. Benzene exceedances of the groundwater PAL (5 micrograms per liter, or µg/L) were observed in two monitoring wells: HI19-MWS (7.4 µg/L), and TM04-PZM006 (400 µg/L). Monitoring well TM04-PZM006 was the only location out of the 11 total monitoring wells along the TMC to exhibit a PAL exceedance for benzene. These values are consistent with historical benzene concentrations observed at these locations.

Naphthalene exceedances of the groundwater PAL (0.12 µg/L) were observed in 13 of 17 monitoring wells sampled, with the maximum concentration observed in HI10-MWS (30 µg/L). Nine of the 10 monitoring wells with naphthalene PAL exceedances are located along the TMC: HI10-MWS (30 µg/L), HI11-MWS (0.17 µg/L), HI12-MWS (0.30 µg/L), HI13-MWS (0.12 µg/L), HI14-MWS (0.32 µg/L), HI16-MWS (0.19 µg/L), HI17-MWS (0.39 µg/L), HI18-MWS (1.1 µg/L) and TM04-PZM006 (13 µg/L). Naphthalene concentrations are consistent with historical values observed at these locations.

Benz[a]anthracene was detected above its groundwater PAL (0.03 µg/L) in seven of the 17 monitoring wells sampled, with the maximum concentration observed in HI22-MWS (0.38 µg/L). Benz[a]anthracene concentrations are consistent with historical values observed at these locations. Dibenz[a,h]anthracene was detected above its groundwater PAL (0.0025 µg/L) in two of the 17 monitoring wells sampled: HI16-MWS (0.06 µg/L) and HI22-MWS (0.07 µg/L). During the 2nd Quarter 2024, HI22-MWS also had groundwater exceedances for benzo[a]pyrene (0.38 µg/L vs a PAL of 0.2 µg/L), benzo[b]fluoranthene (0.5 µg/L vs a PAL of 0.25 µg/L), and indeno[1,2,3-

c,d]pyrene (0.28 µg/L vs a PAL of 0.25 µg/L). Pentachlorophenol was detected above its PAL (1.0 µg/L) in one monitoring well: HI07R-PZM005 (2.6 J µg/L).

2.1.3. Groundwater Sampling Trends

Benzene and naphthalene historic groundwater sampling results are compiled in **Table 3**. Trend plots for benzene and naphthalene (for wells where PAL exceedances have been identified in one or more monitoring events) are included as **Figure 5** and **Figure 6**, respectively. Overall, benzene and naphthalene concentrations in the wells do not appear to be changing as the impoundment is being filled.

As shown on **Figure 5**, monitoring well location TM04-PZM006 continues to be the main area of benzene groundwater impact. Historically, groundwater sampling results for this area are available from December 2001, July 2004, October 2017, and October 2021. A Mann-Kendall analysis of the benzene and naphthalene groundwater concentrations was conducted via the ChemStat 6.5 statistical software from 2001 – June 2024. Monitoring well TM04-PZM006 was evaluated with a 95% confidence factor and did not identify any statistically significant increasing or decreasing trends in the benzene concentrations but did identify a statistically significant decreasing trend for naphthalene concentrations. The analysis output file is included in **Appendix C**.

2.1.4. B24 Groundwater Sampling

On February 13, 2024, ARM sampled two of the three shallow monitoring wells on Parcel B24: B24-002-MWS and TS03-DDP002. These three monitoring wells are located to the west of the impoundment and were included in the monitoring program to identify potential impact migration towards Bear Creek. Sampling at these locations is conducted on a semi-annual basis. Monitoring well B24-001-MWS was inaccessible due to site activities.

The two monitoring wells were sampled for VOCs via USEPA Method 8260 and SVOCs by USEPA Method 8270 SIM. All results from the 1st quarter 2024 sampling event are included in **Table 4**. The laboratory reports are included in **Appendix B**. All groundwater PAL exceedances are included in **Figure 1**.

Benzene did not exceed the groundwater PAL in the two Parcel B24 sentinel monitoring wells. B24-002-MWS was the only monitoring well with minor VOC exceedances of the groundwater PALs: bromodichloromethane (13 µg/L vs PAL of 0.13 µg/L), bromoform (5.9 µg/L vs PAL of 3.3 µg/L), chloroform (10 µg/L vs PAL of 0.22 µg/L), and dibromochloromethane (11 µg/L vs PAL of 0.17 µg/L). For SVOCs, naphthalene exceeded the groundwater PAL (0.12 µg/L) in B24-002-MWS (0.25 µg/L). Groundwater concentrations at the Parcel B24 sentinel monitoring wells have remained low since sampling began in May 2022 (following well installation in April 2022).

Groundwater concentrations at the three Parcel B24 monitoring wells have remained stable since sampling began in May 2022

2.2. SURFACE WATER SAMPLING

Surface water samples were collected in February and June 2024, from four locations: TMC-Outlet (End of Canal), TMC-TM04 (adjacent to TM04-PZM006), TMC-Bend (from the bend in the TMC in the southeastern corner of B14, adjacent to HI15-MWS), and TMC-Rail Bridge (Mid Canal) (refer to **Figure 2**). All surface water samples were analyzed for VOCs via USEPA Method 8260 and SVOCs by USEPA Method 8270 SIM.

For comparison purposes, the USEPA Region 4 Surface Water Screening Values (for freshwater and chronic) (Region 4 Ecological Risk Assessment Supplemental Guidance, March 2018) were included in **Table 5** and **Table 6** for parameters with detections. The laboratory reports are included in **Appendix B**. Benzene and naphthalene did not exceed these freshwater screening levels. Benzene and naphthalene historic surface water sampling results are compiled in **Table 7**.

For the 1st and 2nd Quarters of 2024, benzene and naphthalene did not exceed the freshwater screening levels (160 µg/L and 21 µg/L) ranging from 0.19 J µg/L to 0.52 µg/L respectively for benzene, and non-detect to 1.4 J µg/L for naphthalene.

Anthracene was the only parameter to exceed its surface water screening value (0.02 µg/L) during the 1st Half of 2024. This exceedance was observed within TMC-TM04 (0.03 J µg/L) during the 2nd Quarter 2024. In 2023, anthracene was also observed at concentrations above its surface water screening level in multiple samples. There were no other exceedances of surface water screening levels in the 1st or 2nd Quarters of 2024.

2.3. GROUNDWATER ELEVATION

To assess potential impacts from the IM on groundwater flow direction, TPA is conducting groundwater gauging throughout the duration of the development/remedial activities. On October 30, 2023, the Agencies approved a reduction in gauging frequency from monthly to quarterly. Gauging results are summarized in **Table 8**. Gauging results from the 1st and 2nd Quarters 2024 have been used to create groundwater elevation contour maps, included as **Figure 7** and **Figure 8**. The following wells are not included in the gauging: HI04-PZM006 (abandoned), HI20R2-MWS (not existing during 1st Quarter and not surveyed for 2nd Quarter), and TS03-PDP002 (not accessible during 2nd Quarter).

During groundwater monitoring events, each groundwater point was checked for the presence of NAPL using an oil-water interface probe. Apart from monitoring well HI17-MWS and HI20R-MWS, discussed below, NAPL was not identified in any of the monitoring wells.

2.4. NAPL OBSERVATIONS

During groundwater gauging on April 18, 2022, approximately 0.02 ft of nonaqueous phase liquid (NAPL) was identified in HI17-MWS. MDE was notified of the NAPL detection on April 19, 2022. HI17-MWS was gauged at least weekly following this detection, with NAPL thickness

ranging from the initial detection of 0.02 ft to not measurable. Three enhanced fluid recovery events were conducted at HI17-MWS in April and May 2022; minimal product was recovered. In July 2022, a 10-foot-long trench was advanced to groundwater within the impoundment, approximately 20 feet west of HI17-MWS. No NAPL was observed within the trench for several weeks prior to backfilling.

Since July 2022, absorbent socks have been utilized in HI17-MWS, with an absorbent sock placed into the well for one month and then removed for one month to evaluate the amount of potential NAPL recharge into the well. A summary of NAPL observations during the 1st Half of 2024 is provided in **Table 9**. NAPL thickness has not increased at this location, remaining at a trace level, so absorbent socks will continue to be used to remove NAPL from the well.

Monitoring well HI20-MWS was abandoned in March 2023 due to anticipated development activities on Sub-Parcel B8-1. Monitoring well HI20R-MWS was installed on January 25, 2024, approximately 53 feet south of the previous well location due to construction of the Parcel B8-1 building pad; the HI20R-MWS location is within Parcel B14 / Humphrey Impoundment (refer to **Figure 5**). During well installation, a black tar-like substance was observed at several depths in the boring. Monitoring well HI20R-MWS was developed on January 25, 2024, and no NAPL was identified. On February 20, 2024, the monitoring well was gauged before the Q1 2024 sampling event; 0.73 ft of NAPL was observed in the well. An absorbent sock was deployed in the well. However, subsequent gauging at HI20R-MWS have identified trace NAPL only; the initial NAPL observation appear to have been an erroneous measurement due to the thicker nature of the NAPL. A summary of NAPL observations during the 1st Half of 2024 is provided in **Table 9**. This location will continue to be gauged, and absorbent socks deployed as needed.

Once access could be gained, monitoring well HI20R2-MWS was installed on March 20, 2024, directly adjacent to the original HI20-MWS location (refer to **Figure 5** for the location, and to **Appendix A** for the well installation log). HI20R2-MWS was developed on April 10, 2024. No NAPL was identified on April 19, 2024, post development. Moving forward, HI20R2-MWS (rather than HI20R-MWS) will be sampled, as it is more representative of the Parcel B14 perimeter conditions.

3.0 SUMMARY AND CONCLUSIONS

The *IM Work Plan for the Humphrey Impoundment* (Revision 2 dated March 29, 2022) was proposed as a component of the final remedy for the waste material contained in the Parcel B14 impoundment. The IM Work Plan proposed groundwater and surface water gauging and sampling to monitor the site conditions as the Humphrey Impoundment is filled, in preparation for development.

Filling of the impoundment is approximately 95% complete, with paving approximately 50% complete. Since commencement of the filling of HI, 16 complete rounds of groundwater sampling have been conducted: nine monthly rounds (January to September 2022) and seven quarterly rounds (October 2022 through June 2024). There have been no significant changes in groundwater concentrations, surface water concentrations, or groundwater elevations, and no seasonal trends have been identified. TMC surface-water elevation continues to be largely controlled at the HCWWTP intake.

The following reduction in sampling is recommended:

- Reduction in groundwater sampling from quarterly to semi-annually for the 17 HI perimeter wells: HI10-MWS, HI11-MWS, HI12-MWS, HI13-MWS, HI14-MWS, HI15-MWS, HI16-MWS, HI17-MWS, HI18-MWS, HI19-MWS, HI20R2-MWS, HI21-MWS, HI22-MWS, TM04-PZM006, TM08R-PZM007, HI02R-PZM006, and HI07R-PZM005;
- Reduction in surface water sampling from quarterly to semi-annually;
- Reduction in groundwater gauging from quarterly to semi-annually; and
- Reduction in surface water laboratory analysis, to include benzene and naphthalene only.

Sampling for the three wells at Parcel B24 (TS03-DDP002, B24-001-MWS and B24-002-MWS) will continue to be conducted semi-annually. Monitoring wells HI17-MWS and HI20R-MWS, where NAPL / sheen has been observed, will continue to be gauged monthly, with absorbent socks deployed as needed.

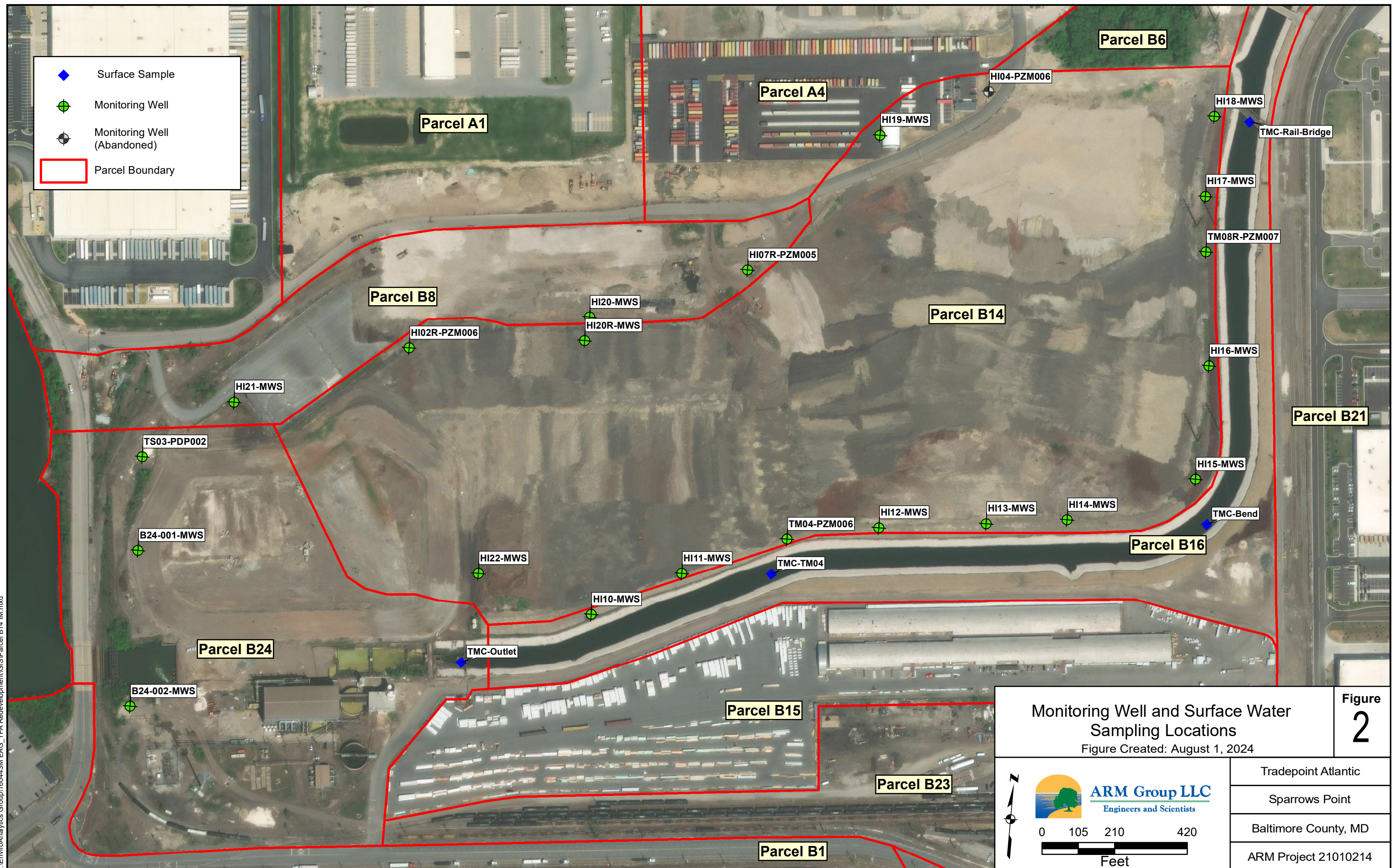
The next IM Report will be submitted following completion of groundwater and surface water activities for the second half of 2024.

FIGURES



Tradepoint Atlantic Property Parcel B14 Site Location February 20, 2023		Figure 1
  ARM Group LLC Engineers and Scientists 0 500 1,000 2,000 Feet	Tradepoint Atlantic	
	Sparrows Point	
	Baltimore County, MD	
ARM Project No. 21010214		

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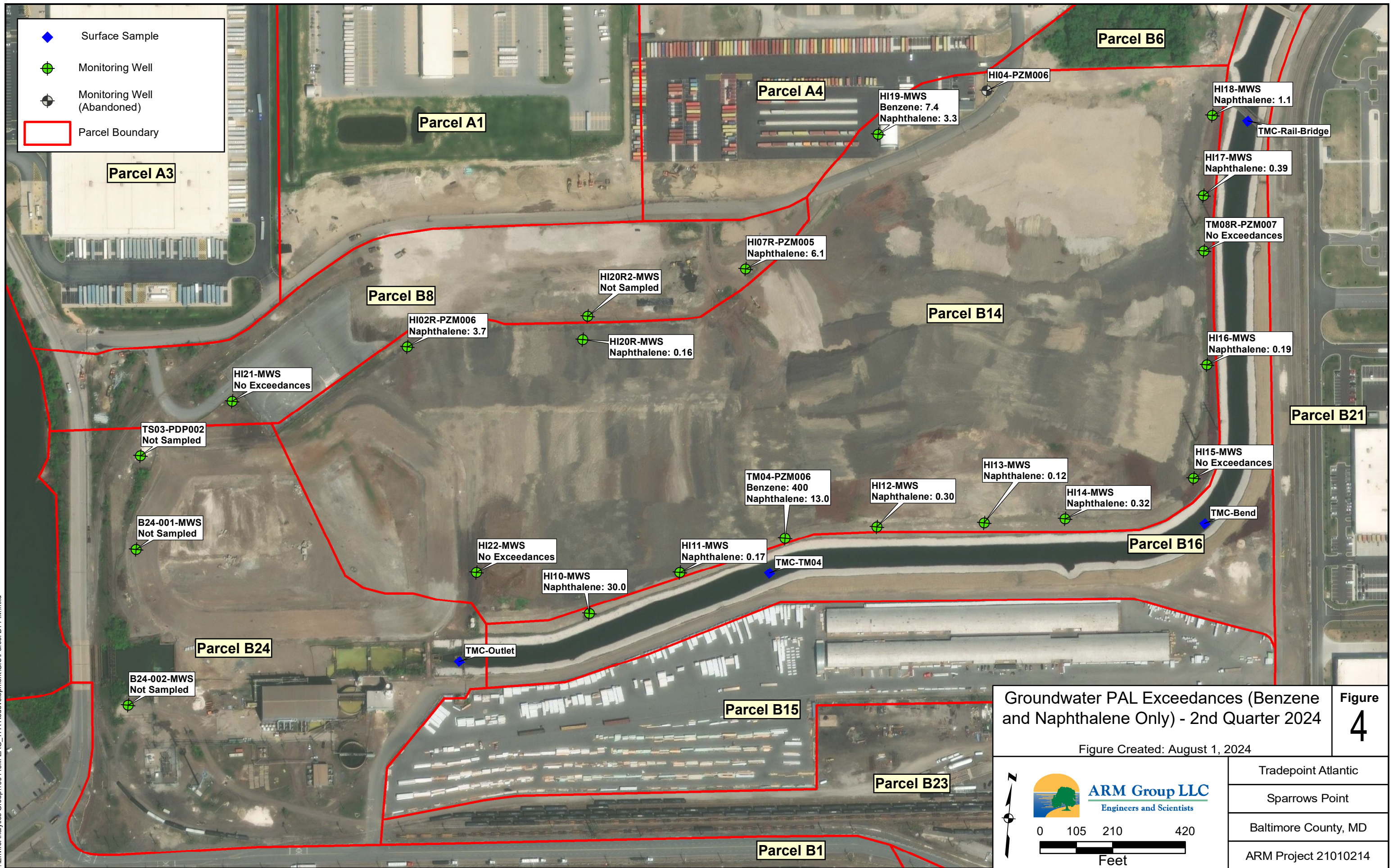
Monitoring Well and Surface Water Sampling Locations

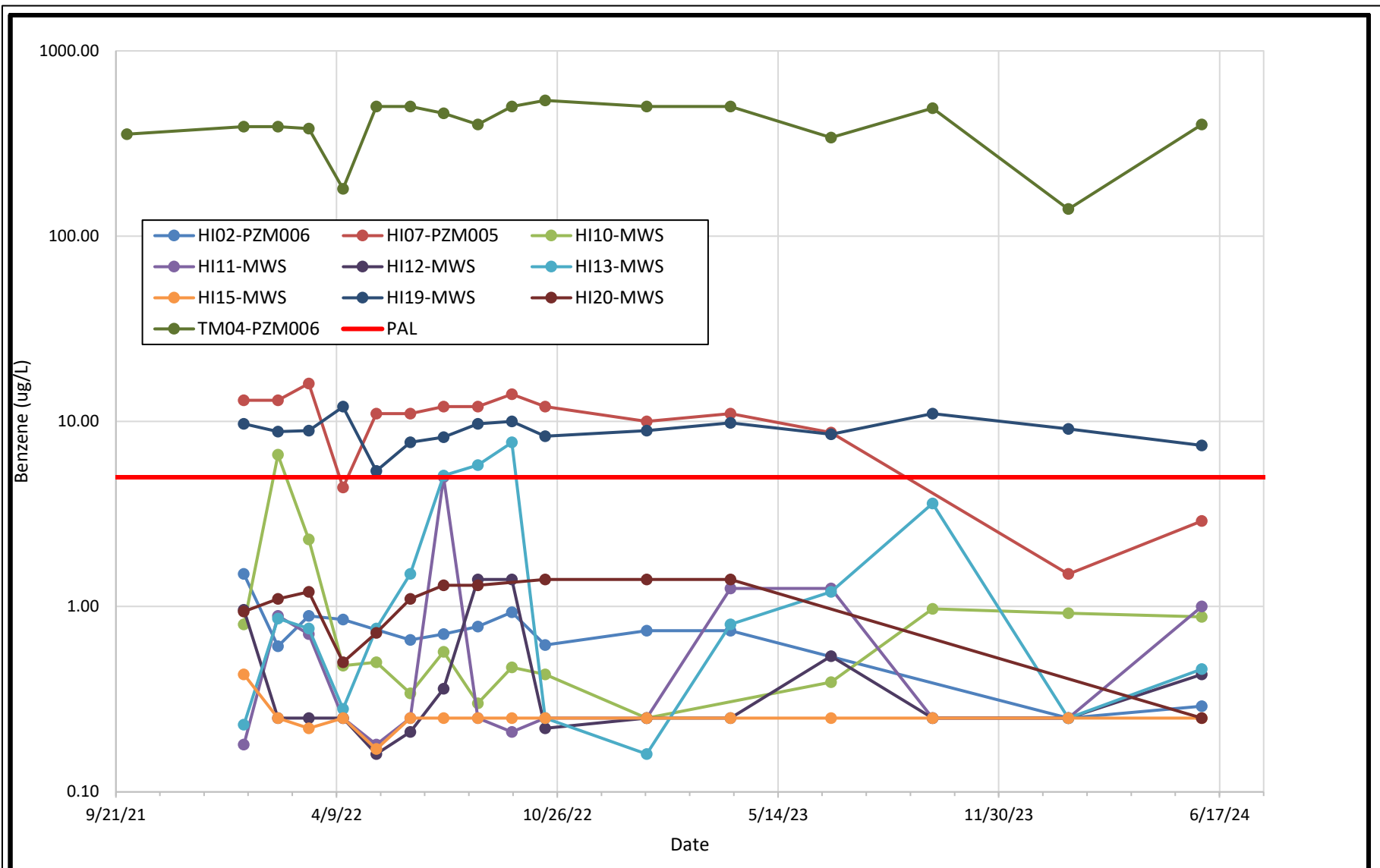
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Figure
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ARM Group LLC
Engineers and Scientists

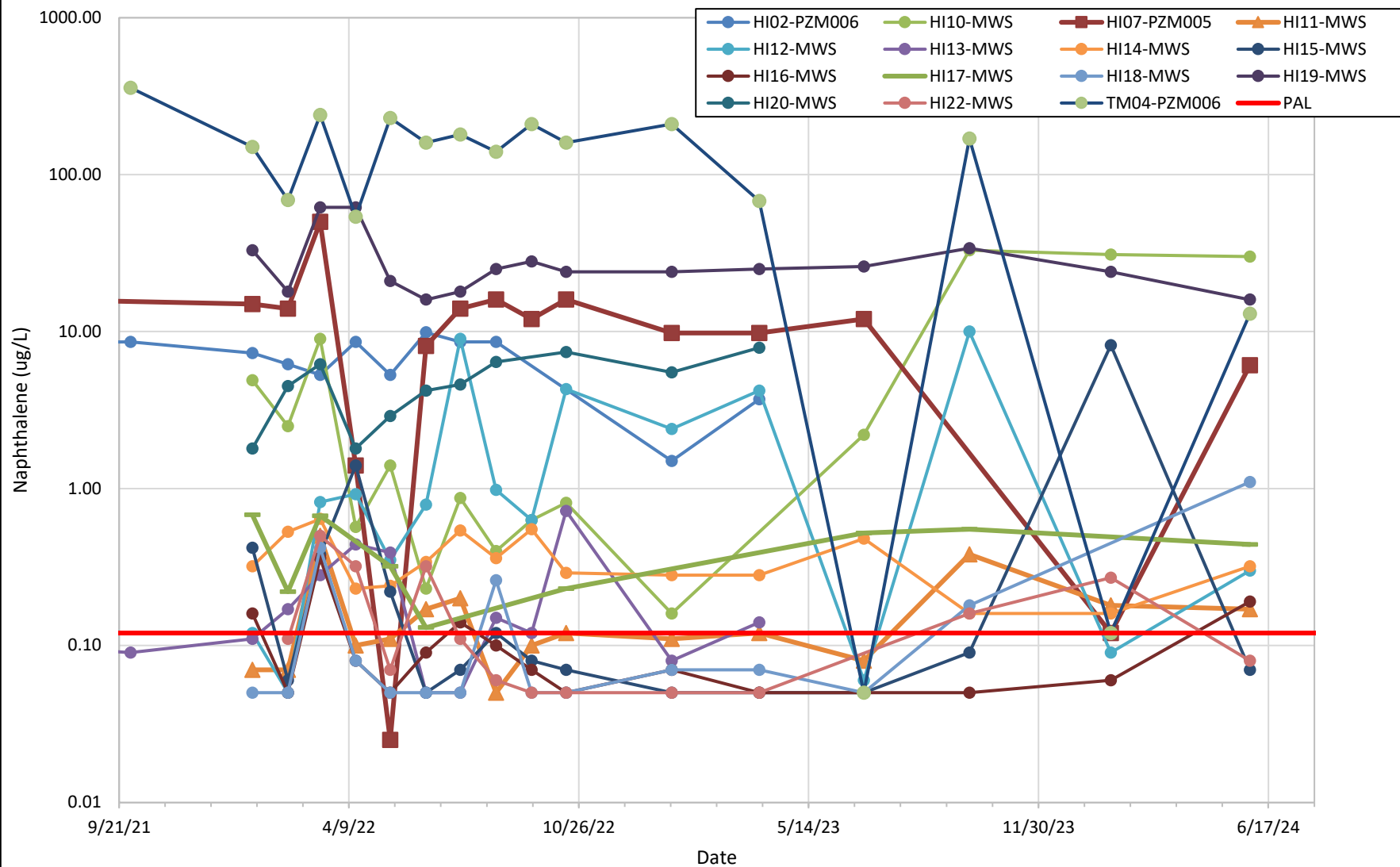
Parcel B14
Tradeport Atlantic

Sparrows Point, Maryland

B14 Historic Groundwater Results for Benzene

July 9, 2024

**Figure
5**



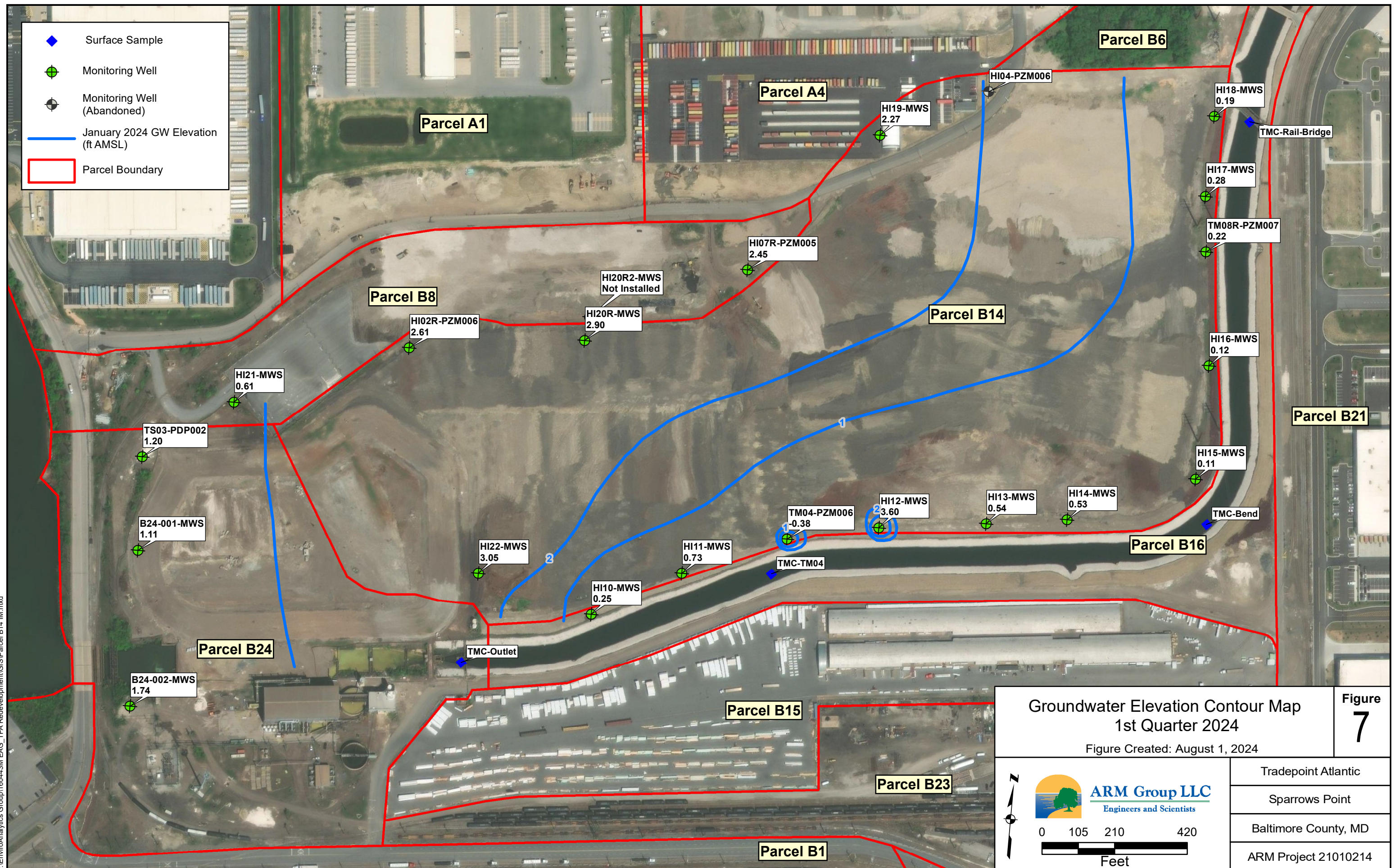
ARM Group LLC
Engineers and Scientists

Parcel B14
Tradeport Atlantic
Sparrows Point, Maryland

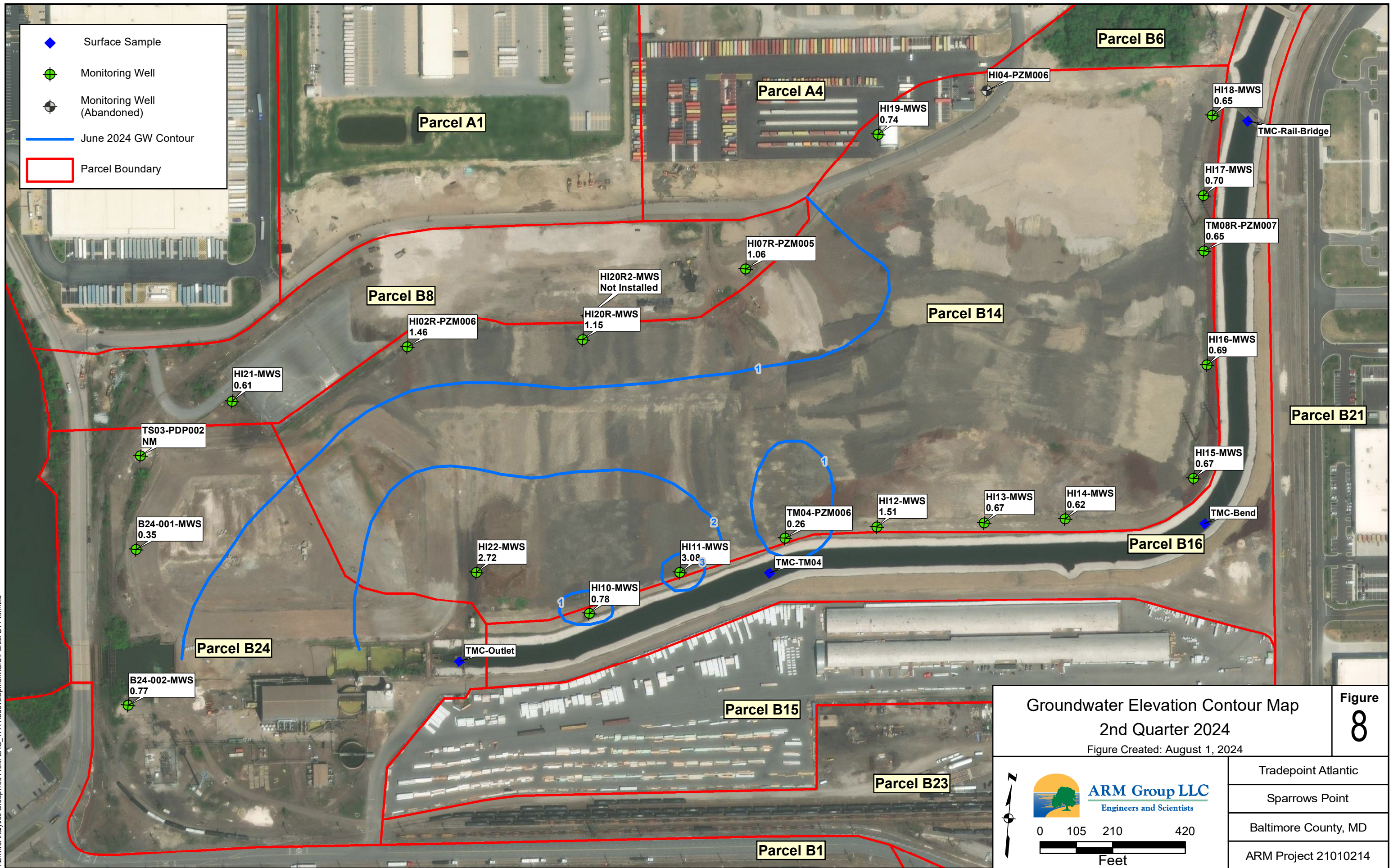
**B14 Historic Groundwater
Results for Naphthalene**
July 9, 2024

**Figure
6**

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TABLES

Table 1 - Parcel B14 Groundwater Sampling (1st Quarter 2024)
Summary of Organics Detected in Groundwater

Parameter	Units	PAL	HI02R-PZM006 2/13/2024	HI07-PZM005 2/13/2024	HI10-MWS 2/7/2024	HI11-MWS 2/8/2024	HI12-MWS 2/8/2024	HI13-MWS 2/8/2024	HI14-MWS 2/16/2024	HI15-MWS 2/6/2024	HI16-MWS 2/6/2024	HI17-MWS 2/6/2024
SVOCs												
1,1-Biphenyl	µg/L	0.83	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,4-Dimethylphenol	µg/L	360	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.9 J
2-Methylnaphthalene	µg/L	36	0.28	0.03 J	1.8	0.05 J	0.1 U	0.1 U	0.03 J	0.71	0.1 U	0.26
2-Methylphenol	µg/L	930	5 U	5 U	0.49 J	5 U	5 U	5 U	5 U	5 U	5 U	0.62 J
3&4-Methylphenol(m&p Cresol)	µg/L	930	1 J	5 U	0.88 J	5 U	5 U	5 U	5 U	5 U	5 U	1.4 J
Acenaphthene	µg/L	530	0.5	0.1 U	2.1	0.04 J	0.02 J	0.1 U	0.98	0.12	0.1 J	0.11
Acenaphthylene	µg/L	530	0.05 J	0.02 J	0.59	0.02 J	0.02 J	0.1 U	0.09 J	0.49	0.06 J	0.1 U
Anthracene	µg/L	1,800	0.13	0.03 J	0.42	0.13	0.04 J	0.02 J	0.14	0.17	0.36	0.29
Benz[a]anthracene	µg/L	0.03	0.05 U	0.05	0.05	0.05 U	0.03 J	0.05 U	0.03 J	0.08	0.03 J	0.04 J
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.05 J	0.1 U	0.1 U	0.02 J	0.1 U	0.1 U	0.09 J	0.1 U	0.1 U
Benzo[b]fluoranthene	µg/L	0.25	0.02 J	0.07	0.02 J	0.05 U	0.02 J	0.02 J	0.05 U	0.12	0.05 U	0.05 U
Benzo[g,h,i]perylene	µg/L	--	0.1 U	0.04 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.12	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	2.5	0.01 J	0.02 J	0.1 U	0.1 U	0.01 J	0.1 U	0.1 U	0.11	0.1 U	0.1 U
bis(2-Ethylhexyl)phthalate	µg/L	6.0	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Carbazole	µg/L	--	2 U	2 U	3.6	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chrysene	µg/L	25	0.1 U	0.04 J	0.04 J	0.1 U	0.01 J	0.01 J	0.01 J	0.09 J	0.02 J	0.02 J
Dibenz[a,h]anthracene	µg/L	0.025	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.14	0.05 U	0.05 U
Fluoranthene	µg/L	800	0.11	0.11	0.73	0.04 J	0.02 J	0.02 J	0.21	0.1 J	0.12	0.05 J
Fluorene	µg/L	290	0.37	0.03 J	1.9	0.02 J	0.1 U	0.1 U	0.46	0.42	0.1 U	0.08 J
Indeno[1,2,3-c,d]pyrene	µg/L	0.25	0.1 U	0.04 J	0.1 U	0.1 U	0.01 J	0.1 U	0.1 U	0.13	0.1 U	0.1 U
Naphthalene	µg/L	0.12	1.5	0.12	31	0.18	0.09 J	0.08 J	0.16	8.2	0.06 JB	0.44 B
Phenanthrene	µg/L	--	0.44	0.08	2.7	0.06	0.02 J	0.05 U	0.37	0.61	0.05 U	0.1
Phenol	µg/L	5,800	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Pyrene	µg/L	120	0.08 J	0.09 J	0.55	0.05 J	0.03 J	0.03 J	0.14	0.08 J	0.1	0.03 J
VOCs												
1,1-Dichloroethane	µg/L	2.7	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
2-Butanone (MEK)	µg/L	5,600	5 U	5 U	5 U	2.5 J	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	µg/L	14,000	5 U	3.7 J	5 U	6.6	5 U	5 U	5 U	5 U	5 U	5 U
Benzene	µg/L	5.0	0.5 U	1.5	0.92	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	µg/L	7.5	1 U	1 U	1 U	0.47 J	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	µg/L	190	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	µg/L	700	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	µg/L	450	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	µg/L		1 U	0.7 J	0.44 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	µg/L		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	0.75 U	0.87	0.4 J	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	23
Vinyl chloride	µg/L	2.0	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	1 U	0.7 J	0.44 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Detections in bold
Values in red indicate an exceedance of the groundwater Project Action Limit (PAL)

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
J: The positive result reported for this analyte is a quantitative estimate.
JB: The positive result reported for this analyte is a quantitative estimate and was detected above the reporting limits in the associated method blank.
B: The analyte was detected above the reporting limits in the associated method blank.
µg/L: micrograms per liter
PAL: Project Action Limit

Table 1 - Parcel B14 Groundwater Sampling (1st Quarter 2024)
Summary of Organics Detected in Groundwater

Parameter	Units	PAL	HI18-MWS 2/6/2024	HI19-MWS 2/20/2024	HI21-MWS 2/20/2024	HI22-MWS 2/16/2024	TM04-PZM006 2/8/2024	TM08R-PZM007 2/6/2024
SVOCs								
1,1-Biphenyl	µg/L	0.83	2 U	0.78 J	2 U	2 U	2 U	2 U
2,4-Dimethylphenol	µg/L	360	5 U	21	5 U	5 U	5 U	3.7 J
2-Methylnaphthalene	µg/L	36	0.04 J	2.2	0.1 U	0.04 J	0.04 J	0.1 U
2-Methylphenol	µg/L	930	5 U	0.92 J	5 U	5 U	5 U	5 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	5 U	9.2	5 U	5 U	5 U	5 U
Acenaphthene	µg/L	530	0.11	0.7	0.1 U	0.02 J	0.16	0.1 U
Acenaphthylene	µg/L	530	0.1 U	0.36	0.1 U	0.03 J	0.44	0.01 J
Anthracene	µg/L	1,800	0.32	0.28	0.05 J	0.1 U	0.16	0.08 J
Benz[a]anthracene	µg/L	0.03	0.06	0.02 J	0.02 J	0.03 J	0.04 J	0.03 J
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.04 J	0.02 J
Benzo[b]fluoranthene	µg/L	0.25	0.02 J	0.01 J	0.02 J	0.05 U	0.06	0.03 J
Benzo[g,h,i]perylene	µg/L	--	0.1 U	0.1 U	0.1 U	0.1 U	0.05 J	0.03 J
Benzo[k]fluoranthene	µg/L	2.5	0.01 J	0.1 U	0.1 U	0.1 U	0.04 J	0.02 J
bis(2-Ethylhexyl)phthalate	µg/L	6.0	1.5 J	3 U	3 U	3 U	3 U	3 U
Carbazole	µg/L	--	2 U	1.2 J	2 U	2 U	2 U	2 U
Chrysene	µg/L	25	0.02 J	0.02 J	0.04 J	0.03 J	0.04 J	0.02 J
Dibenz[a,h]anthracene	µg/L	0.025	0.05 U	0.05 U	0.05 U	0.05 U	0.04 J	0.05 U
Fluoranthene	µg/L	800	0.05 J	0.45	0.04 J	0.05 J	0.07 J	0.1 U
Fluorene	µg/L	290	0.1 U	0.85	0.11	0.05 J	0.13	0.1 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.25	0.1 U	0.1 U	0.1 U	0.1 U	0.05 J	0.03 J
Naphthalene	µg/L	0.12	0.44 B	24	0.1 U	0.27	0.12	0.05 JB
Phenanthrene	µg/L	--	0.03 J	1.5	0.31	0.05 U	0.18	0.05 U
Phenol	µg/L	5,800	5 U	5 U	5 U	5 U	4.8 J	5 U
Pyrene	µg/L	120	0.04 J	0.28	0.04 J	0.03 J	0.07 J	0.02 J
VOCs								
1,1-Dichloroethane	µg/L	2.7	0.75 U	0.75 U	0.75 U	0.75 U	0.34 J	0.75 U
2-Butanone (MEK)	µg/L	5,600	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	µg/L	14,000	5 U	5 U	5 U	5 U	4.4 J	5 U
Benzene	µg/L	5.0	0.23 J	9.1	0.5 U	0.44 J	140	0.5 U
Bromomethane	µg/L	7.5	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	µg/L	190	2.5 U	2.5 U	2.5 U	1.1 J	2.5 U	2.5 U
Cyclohexane	µg/L	13,000	10 U	10 U	10 U	10 U	0.37 J	10 U
Ethylbenzene	µg/L	700	0.5 U	0.2 J	0.5 U	0.5 U	2.2	0.5 U
Isopropylbenzene	µg/L	450	0.5 U	0.5 U	0.5 U	0.5 U	0.2 J	0.5 U
m&p-Xylene	µg/L		1 U	2.3	1 U	1 U	2.5	1 U
o-Xylene	µg/L		1 U	1.2	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	0.75 U	3.4	0.75 U	0.23 J	0.6 J	0.75 U
Vinyl chloride	µg/L	2.0	1 U	1 U	1 U	1 U	0.25 J	1 U
Xylenes	µg/L	10,000	1 U	3.5	1 U	1 U	2.5	1 U

Detections in bold
Values in red indicate an exceedance of the groundwater Project Action Limit (PAL)

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
J: The positive result reported for this analyte is a quantitative estimate.
JB: The positive result reported for this analyte is a quantitative estimate and was detected above the reporting limits in the associated method blank.
B: The analyte was detected above the reporting limits in the associated method blank.
µg/L: micrograms per liter
PAL: Project Action Limit

Table 2 - Parcel B14 Groundwater Sampling (2nd Quarter 2024)
Summary of Organics Detected in Groundwater

Parameter	Units	PAL	HI02R-PZM006	HI07R-PZM005	HI10-MWS	HI11-MWS	HI12-MWS	HI13-MWS	HI14-MWS	HI15-MWS	HI16-MWS	HI17-MWS
			6/25/2024	6/25/2024	6/26/2024	6/28/2024	6/28/2024	6/26/2024	6/25/2024	6/27/2024	6/25/2024	6/27/2024
SVOCs												
1,1-Biphenyl	µg/L	0.83	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,4-Dimethylphenol	µg/L	360	34	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylnaphthalene	µg/L	36	0.41	0.99	2.0	0.1 U	0.07 J	0.1 U	0.1	0.04 J	0.21	0.2
3&4-Methylphenol(m&p Cresol)	µg/L	930	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acenaphthene	µg/L	530	0.76	0.49	2.3	0.1 U	0.11	0.1 U	1.1	0.04 J	0.12	0.08 J
Acenaphthylene	µg/L	530	0.03 J	0.42	0.58	0.1 U	0.1 U	0.1 U	0.04 J	0.1 U	0.11	0.1 U
Anthracene	µg/L	1,800	0.07 J	0.29	0.45	0.04 J	0.04 J	0.1 U	0.16	0.1 U	0.1 J	0.06 J
Benz[a]anthracene	µg/L	0.03	0.05 U	0.06	0.06	0.05 U	0.05 J	0.05 U	0.05 U	0.05 U	0.08	0.05 J
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.06 J	0.1 U	0.1 U	0.1 U	0.07 J	0.1 U
Benzo[b]fluoranthene	µg/L	0.25	0.05 U	0.05 U	0.05 U	0.05 U	0.07	0.05 U	0.05 U	0.05 U	0.06	0.05 U
Benzo[g,h,i]perylene	µg/L	--	0.1 U	0.1 U	0.1 U	0.1 U	0.04 J	0.1 U	0.1 U	0.1 U	0.06 J	0.1 U
Benzo[k]fluoranthene	µg/L	2.5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.07 J	0.1 U
Carbazole	µg/L	--	0.34 J	0.72 J	3.2	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Chrysene	µg/L	25.0	0.1 U	0.1 U	0.1 U	0.1 U	0.03 J	0.1 U	0.1 U	0.1 U	0.06 J	0.04 J
Dibenz[a,h]anthracene	µg/L	0.025	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.06	0.05 U
Fluoranthene	µg/L	800	0.12	0.92	0.7	0.04 J	0.1	0.1 U	0.18	0.03 J	0.14	0.05 J
Fluorene	µg/L	290	0.57	1.0	2.0	0.1 U	0.07 J	0.1 U	0.56	0.03 J	0.1 J	0.07 J
Indeno[1,2,3-c,d]pyrene	µg/L	0.25	0.1 U	0.1 U	0.1 U	0.1 U	0.04 J	0.1 U	0.1 U	0.1 U	0.07 J	0.1 U
Naphthalene	µg/L	0.12	3.7	6.1	30.0	0.17	0.30	0.12	0.32	0.05 J	0.19	0.39
Pentachlorophenol	µg/L	1.0	10 U	2.5 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	µg/L	--	0.57	1.5	2.7	0.05 U	0.12	0.05 U	0.58	0.04 J	0.1	0.09
Phenol	µg/L	5,800	0.5 J	0.76 J	0.92 J	0.97 J	0.63 J	0.68 J	5 U	0.54 J	5 U	5 U
Pyrene	µg/L	120	0.09 J	0.6	0.53	0.1 U	0.1 J	0.1 U	0.12	0.1 U	0.13	0.06 J
VOCs												
Acetone	µg/L	14,000	1.7 J	2.4 J	5 U	20 U	3.8 J	5 U	5 U	1.9 J	5 U	1.6 J
Benzene	µg/L	5.0	0.29 J	2.9	0.88	2 U	0.43 J	0.46 J	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	µg/L	7.5	1 U	1 U	1 U	4 U	1 U	1 U	1 U	0.46 J	1 U	1 U
Ethylbenzene	µg/L	700	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylene	µg/L	--	1 U	0.81 J	0.42 J	4 U	1 U	1 U	1 U	1 U	1 U	1 U
o-Xylene	µg/L	--	1 U	0.91 J	1 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	µg/L	100	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	µg/L	1,000	0.75 U	1.8	0.42 J	3 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	27
Vinyl chloride	µg/L	2.0	1 U	1 U	1 U	4 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	µg/L	10,000	1 U	1.7 J	0.42 J	4 U	1 U	1 U	1 U	1 U	1 U	1 U

Detections in bold
Values in red indicate an exceedance of the groundwater Project Action Limit (PAL)

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
J: The positive result reported for this analyte is a quantitative estimate.
µg/L: micrograms per liter
PAL: Project Action Limit

Table 2 - Parcel B14 Groundwater Sampling (2nd Quarter 2024)
Summary of Organics Detected in Groundwater

Parameter	Units	PAL	HI18-MWS	HI19-MWS	HI20R-MWS	HI21-MWS	HI22-MWS	TM04-PZM006	TM08R-PZM007
			6/24/204	6/27/2024	6/25/2024	6/26/2024	6/26/2024	6/28/2024	6/24/2024
SVOCs									
1,1-Biphenyl	µg/L	0.83	2 U	0.56 J	2 U	2 U	2 U	2 U	2 U
2,4-Dimethylphenol	µg/L	360	5 U	26	12	5 U	5 U	5 U	5 U
2-Methylnaphthalene	µg/L	36	0.05 J	0.8	0.12	0.1 U	0.1 U	0.47	0.1 U
3&4-Methylphenol(m&p Cresol)	µg/L	930	5 U	7.6	2.2 J	5 U	5 U	5 U	5 U
Acenaphthene	µg/L	530	0.04 J	0.83	0.05 J	0.1 U	0.04 J	0.26	0.1 U
Acenaphthylene	µg/L	530	0.1 U	0.36	0.1 U	0.1 U	0.05 J	0.95	0.1 U
Anthracene	µg/L	1,800	0.07 J	0.1 U	0.1 U	0.1 U	0.18	0.06 J	0.1 U
Benz[a]anthracene	µg/L	0.03	0.05 U	0.04 J	0.05 U	0.05 U	0.38	0.05 U	0.05 U
Benzo[a]pyrene	µg/L	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.38	0.1 U	0.1 U
Benzo[b]fluoranthene	µg/L	0.25	0.05 U	0.05 U	0.05 U	0.05 U	0.5	0.05 U	0.05 U
Benzo[g,h,i]perylene	µg/L	--	0.1 U	0.1 U	0.1 U	0.1 U	0.26	0.1 U	0.1 U
Benzo[k]fluoranthene	µg/L	2.5	0.1 U	0.1 U	0.1 U	0.1 U	0.16	0.1 U	0.1 U
Carbazole	µg/L	--	2 U	1 J	2 U	2 U	2 U	2 U	2 U
Chrysene	µg/L	25.0	0.1 U	0.1 U	0.1 U	0.1 U	0.35	0.1 U	0.1 U
Dibenz[a,h]anthracene	µg/L	0.025	0.05 U	0.05 U	0.05 U	0.05 U	0.07	0.05 U	0.05 U
Fluoranthene	µg/L	800	0.04 J	0.6	0.07 J	0.1 U	0.77	0.15	0.1 U
Fluorene	µg/L	290	0.05 J	1.1	0.05 J	0.1 U	0.04 J	0.19	0.1 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.25	0.1 U	0.1 U	0.1 U	0.1 U	0.28	0.1 U	0.1 U
Naphthalene	µg/L	0.12	1.1	3.3	0.16	0.1 U	0.08 J	13.0	0.1 U
Pentachlorophenol	µg/L	1.0	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	µg/L	--	0.05 U	1.4	0.1	0.05 U	0.49	0.32	0.05 U
Phenol	µg/L	5,800	5 U	0.7 J	5 U	0.43 J	5 U	5 U	5 U
Pyrene	µg/L	120	0.1 U	0.38	0.07 J	0.1 U	0.6	0.11	0.1 U
VOCs									
Acetone	µg/L	14,000	5 U	5 U	2.4 J	5 U	1.6 J	3.2 J	5 U
Benzene	µg/L	5.0	0.16 J	7.4	0.5 U	0.5 U	0.46 J	400	0.5 U
Bromomethane	µg/L	7.5	1 U	1 U	1 U	1 U	1 U	4 U	1 U
Ethylbenzene	µg/L	700	0.5 U	0.19 J	0.5 U	0.5 U	0.5 U	4.8	0.5 U
m&p-Xylene	µg/L	--	1 U	1.8	1 U	1 U	1 U	4.8	1 U
o-Xylene	µg/L	--	1 U	0.99 J	1 U	1 U	1 U	4 U	1 U
Styrene	µg/L	100	1 U	0.54 J	1 U	1 U	1 U	2.4 J	1 U
Toluene	µg/L	1,000	0.75 U	3.0	0.75 U	0.75 U	0.75 U	1.8 J	0.75 U
Vinyl chloride	µg/L	2.0	1 U	1 U	1 U	1 U	1 U	0.54 J	1 U
Xylenes	µg/L	10,000	1 U	2.8 J	1 U	1 U	1 U	4.8	1 U

Detections in bold
Values in red indicate an exceedance of the groundwater Project Action Limit (PAL)

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.
J: The positive result reported for this analyte is a quantitative estimate.
µg/L: micrograms per liter
PAL: Project Action Limit

**Table 3 - Parcel B14 Groundwater Sampling
Historic Groundwater Sampling Results**

Benzene (µg/L)																					
Well ID	PAL	Dec-01	Jul-04	Oct-17	Oct-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Jan-23	Apr-23	Jul-23	Oct-23	Feb-24	Jun-24
HI02-PZM006 / HI02R-PZM006	5	1.2		0.88 J	NS	1.5	0.61	0.89	0.85	0.75	0.66	0.71	0.78	0.93	0.62	0.74	0.74			0.5 U	0.29 J
HI04-PZM006	5	1 U		1 U	NS	0.5 U	0.5 U	0.50 U	0.5 U												
HI07-PZM005 / HI07R-PZM005	5	25	16	16.2	NS	13.0	13.0	16.0	4.4	11	11	12.0	12.0	14	12	10	11	8.7		1.5	2.9
HI10-MWS	5					0.8	6.6	2.3	0.48 J	1.0 U	0.34 J	0.57	0.30 J	0.47 J	0.43 J	0.50 U	0.69	0.39 J	0.97	0.92	0.88
HI11-MWS	5					0.18 J	0.89	0.71	0.5 U	0.18 J	0.50 U	10 U	0.50 U	0.21 J	0.50 U	0.50 U	2.5 U	2.5 U	0.5 U	0.5 U	2 U
HI12-MWS	5					0.96	0.5 U	0.50 U	0.5 U	0.16 J	0.21 J	0.36 J	1.4	1.4	0.22 J	0.50 U	0.5 U	0.54	0.5 U	0.5 U	0.43 J
HI13-MWS	5					0.23 J	0.86	0.76	0.28 J	0.76	1.5	5.1	5.8	7.7	0.50 U	0.16 J	0.8	1.2	3.6	0.5 U	0.46 J
HI14-MWS	5					0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
HI15-MWS	5					0.43 J	0.5 U	0.22 J	0.5 U	0.17 J	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
HI16-MWS	5					0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
HI17-MWS	5					0.5 U	0.5 U	0.50 U	NS (b)	0.5 U	0.5 U	NS (b)	NS (b)	NS (b)	0.50 U	NS (b)	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
HI18-MWS	5					0.5 U	0.5 U	0.50 U	0.5 U	0.5 U	2.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.23 J	0.16 J
HI19-MWS	5					9.7	8.8	8.9	12	5.4	7.7	8.2	9.7	10	8.3	8.9	9.8	8.5	11	9.1	7.4
HI20-MWS	5					0.94	1.1	1.2	0.50	0.72	1.10	1.3	1.3	NS (c)	1.4	1.4	1.4				
HI20R-MWS																					0.5 U
HI21-MWS	5									0.50 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
HI22-MWS	5						2.5 U	0.50 U	5 U	0.50 U	2.5 U	5 U	0.50 U	0.50 U	0.50 U	0.50 U	2.5 U	NS	0.3 J	0.44 J	0.46 J
TM04-PZM006	5	1400	610	653	355	390	390	380	180	500	500	460	400	500	540	500	500	340	490	140	400
TM08R-PZM007	5	1 U		1 U	NS	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation / detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

B: The analyte was detected above the reporting limits in the associated method blank.

NS: Not Sampled

µg/L: micrograms per liter

PAL: Project Action Limit

(a) Analysis was re-run due to B qualifier.

(b) HI17-MWS was not sampled in January 2023 due to trace NAPL.

(c) HI20-MWS was within an active demolition area and could not be safely accessed.

	Well not installed
	Well damaged/abandoned

**Table 3 - Parcel B14 Groundwater Sampling
Historic Groundwater Sampling Results**

Well ID	PAL	Naphthalene (µg/L)																			
		Dec-01	Jul-04	Oct-17	Oct-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Jan-23	Apr-23	Jul-23	Oct-23	Feb-24	Jun-24
HI02-PZM006 / HI02R-PZM006	0.12	7.3 J		5.1	NS	5.2	2.5	7.3	8.6	7.3	6.2	5.3	8.6	5.3	9.9	8.6	8.6			1.5	3.7
HI04-PZM006	0.12			0.15	NS	0.1 U	0.1 U	1.0 U	0.06 J												
HI07-PZM005 / HI07R-PZM005	0.12	40	16	26.1	NS	15	14.0	50	1.4	0.05 J	8.1	14.0	16	12	16	10	9.8	12		0.12	6.1
HI10-MWS	0.12					4.9	2.5	9.0	0.57	1.4	0.23	0.87	0.4	0.63	0.81	0.16	2.8	2.2 B	33	31	30
HI11-MWS	0.12					0.07 J	0.07 J	1.0 U	0.10	0.11	0.17	0.20	0.10 U	0.10	0.12	0.11	0.12	0.08 JB	0.38	0.18	0.17
HI12-MWS	0.12					0.12	0.1 U	0.82 J	0.92	0.35	0.79	9.0	0.98	0.63	4.3	2.4	4.2	0.06 J	10	0.09 J	0.30
HI13-MWS	0.12					0.07 J	0.11	0.40 J	0.09 J	0.11	0.17	0.28	0.44	0.39	0.1 U	0.10 U	0.15	0.12 B	0.72 B	0.08 J	0.12
HI14-MWS	0.12					0.32	0.53	0.64 J	0.23	0.24	0.34	0.54	0.36	0.55	0.29	0.28	0.28	0.48	0.16	0.16	0.32
HI15-MWS	0.12					0.42	0.06 J	0.38 J	1.4	0.22	0.10 U	0.07 J	0.12	0.08 J	0.07 J	0.10 U	0.1 U	0.1 U	0.09 J	8.2	0.05 J
HI16-MWS	0.12					0.16	0.1 U	0.36 J	0.08 J	0.10 U	0.09 J	0.14	0.10 J	0.07 J	0.1 U	0.07 J	0.1 U	0.1 U	0.1 U	0.06 JB	0.19
HI17-MWS	0.12					0.68	0.22	0.67 J	NS (b)	0.32	0.13	NS (b)	NS (b)	NS (b)	0.23	NS (b)	0.27	0.52	0.55	0.44 B	0.39
HI18-MWS	0.12					0.1 U	0.1 U	0.42 J	0.08 J	0.10 U	0.05 JB	0.1 U	0.26	0.10 U	0.05 J	0.07 J	0.07 J	0.1 U	0.18	0.44 B	1.1
HI19-MWS	0.12					33	18.0	62	62	21	16	18.0	25	28	24	24	25	26	34	24	3.3
HI20-MWS	0.12					1.8	4.5	6.2	1.8	2.9	4.2	4.6	6.4	NS (c)	7.4	5.5	7.9				
HI20R-MWS																					0.16
HI21-MWS	0.12									0.07 J	0.06 J	0.06 J	0.26 B / 0.07 J (a)	0.08 J	0.12	0.10 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
HI22-MWS	0.12						0.11	1.0 U	0.32	0.07 J	0.32	0.11	0.06 J	0.10 U	0.10 U	0.10 U	0.1 U	NS	0.16 J	0.27	0.08 J
TM04-PZM006	0.12	200	51	405	358	150 E	69	240	54	230	160	180	140	210	160	210	68	0.1 U	170	0.12	13.0
TM08R-PZM007	0.12	10 U		0.096 J	NS	0.1 U	0.10	1.0 U	0.1 U	0.10 U	0.10 U	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.05 JB	0.1 U

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation / detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

B: The analyte was detected above the reporting limits in the associated method blank.

E: Analyte concentration is greater than the reporting limit; however, the reported concentration should be considered estimated.

NS: Not Sampled

µg/L: micrograms per liter

PAL: Project Action Limit

(a) Analysis was re-run due to B qualifier.

(b) HI17-MWS was not sampled due to trace NAPL.

(c) HI20-MWS was within an active demolition area and could not be safely accessed.

	Well not installed
	Well damaged/abandoned

Table 4 - Parcel B24 Groundwater Sampling (1st Quarter 2024)
Summary of Organics Detected in Groundwater

Parameter	Units	PAL	B24-002-MWS 2/13/2024	TS03-PDP002 2/13/2024
SVOCs				
2-Methylnaphthalene	µg/L	36	0.04 J	0.1 U
Acenaphthene	µg/L	530	0.02 J	0.1 U
Acenaphthylene	µg/L	530	0.01 J	0.1 U
Anthracene	µg/L	1,800	0.02 J	0.1 U
Benzo[b]fluoranthene	µg/L	0.25	0.02 J	0.05 U
Benzo[k]fluoranthene	µg/L	2.5	0.01 J	0.1 U
Chrysene	µg/L	25	0.02 J	0.1 U
Fluoranthene	µg/L	800	0.07 J	0.1 U
Fluorene	µg/L	290	0.03 J	0.1 U
Naphthalene	µg/L	0.12	0.25	0.09 J
Phenanthrene	µg/L	--	0.06	0.05 U
Phenol	µg/L	5,800	5 U	5 U
Pyrene	µg/L	120	0.09 J	0.1 U
VOCs				
Acetone	µg/L	14,000	3.6 J	5 U
Bromodichloromethane	µg/L	0.13	13	0.5 U
Bromoform	µg/L	3.3	5.9	2 U
Chloroform	µg/L	0.22	10	0.75 U
Dibromochloromethane	µg/L	0.17	11	0.5 U

Detections in bold

Values in red indicate an exceedance of the groundwater Project Action Limit

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

µg/L: micrograms per liter

PAL: Project Action Limit

Table 5 - Parcel B14 Surface Water Sampling (1st Quarter 2024)
Summary of Organics Detected in Surface Water

Parameter		EPA Region 4 Surface Water (Freshwater, Chronic)	TMC-BEND 2/8/2024	TMC- OUTLET 2/8/2024	TMC-RAIL BRIDGE 2/8/2024	TMC-TM04 2/8/2024
SVOCs by EPA 8270D / PAHs by EPA 8270D SIM						
Benz[a]anthracene	µg/L	4.7	0.05 U	0.05 U	0.02 J	0.02 J
Benzo[b]fluoranthene	µg/L	2.6	0.05 U	0.05 U	0.03 J	0.05 U
Carbazole	µg/L	4.0	2 U	0.5 J	2 U	2 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.012	0.1 U	0.1 U	0.1 J	0.1 U
Naphthalene	µg/L	21	2 U	0.88 J	1.4 J	0.63 J
Pentachlorophenol	µg/L	--	0.18	0.15	0.16	0.12
Phenanthrene	µg/L	2.3	2 U	0.56 J	2 U	0.48 J
VOCs by EPA 8260C						
Acetone	µg/L	1700	3.7 J	2.9 J	3.5 J	3.6 J
Benzene	µg/L	160	0.38 J	0.50	0.38 J	0.52
Carbon disulfide	µg/L	15	5 U	2.2 J	5 U	2.4 J
Chloroform	µg/L	140	0.75 U	0.77	0.75 U	0.81

Notes:

Detections in bold

Exceedances of EPA Region 4 Surface Water Screening Levels (freshwater, chronic) in red

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit

B: The analyte was detected above the reporting limit in the associated method blank.

J: Estimated Value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL).

µg/L: micrograms per liter

PAL: Project Action Limit

Table 6 - Parcel B14 Surface Water Sampling (2nd Quarter 2024)
Summary of Organics Detected in Surface Water

Parameter		EPA Region 4 Surface Water (Freshwater, Chronic)	TMC-BEND 6/11/2024	TMC- OUTLET 6/11/2024	TMC-RAIL BRIDGE 6/11/2024	TMC-TM04 6/11/2024
SVOCs by EPA 8270D / PAHs by EPA 8270D SIM						
Acenaphthylene	µg/L	13	0.1 U	0.04 J	0.1 U	0.04 J
Acenaphthene	µg/L	15	0.09 J	0.11	0.09 J	0.13
Anthracene	µg/L	0.02	0.1 U	0.1 U	0.1 U	0.03 J
Fluoranthene	µg/L	0.8	0.1 U	0.04 J	0.1 U	0.05 J
Fluorene	µg/L	19.0	0.09 J	0.11	0.09 J	0.12
Naphthalene	µg/L	21	0.1 U	0.1 U	0.07 J	0.1 U
Phenanthrene	µg/L	2.3	0.10	0.14	0.10	0.15
VOCs by EPA 8260C						
Acetone	µg/L	1700	7.8	5.4	9.2	6.2
Benzene	µg/L	160	0.19 J	0.27 J	0.21 J	0.25 J
Carbon disulfide	µg/L	15	5 U	0.41 J	5 U	0.46 J
Chloroform	µg/L	140	0.75 U	0.46 J	0.75 U	0.42 J

Notes:

Detections in bold

Exceedances of EPA Region 4 Surface Water Screening Levels (freshwater, chronic) in red

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit

B: The analyte was detected above the reporting limit in the associated method blank.

J: Estimated Value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL).

µg/L: micrograms per liter

PAL: Project Action Limit

**Table 7 - Parcel B14
Historic Surface Water Sampling Results**

Benzene (µg/L)																		
Location	GW PAL	EPA Region 4 SW	2/4/22	2/9/22	3/21/22	4/19/22	5/18/22	6/16/22	7/29/22	8/23/22	9/19/22	10/26/22	1/12/23	4/6/23	7/18/23	10/4/23	2/8/24	6/11/24
TMC-Bend	5	160	NS	NS	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.50 U	0.21 J	0.50 U	0.50 U	0.5 U	0.25 J	0.5 U	0.38 J	0.19 J
TMC-Outlet	5	160	1 U	1.84	0.50 U	0.54	0.82	0.50 U	0.17 J	2.1	0.05 U	1.0	0.20 J	0.62	0.62	0.5 U	0.50	0.27 J
TMC-Rail Bridge	5	160	5 U	1 U	0.50 U	0.5 U	0.50 U	0.50 U	0.5 U	0.16 J	0.22 J	0.50 U	0.50 J	0.5 U	0.22 J	0.5 U	0.38 J	0.21 J
TMC-TM04	5	160	5 U	3.49	0.16 J	2.0	1.1	0.50 U	0.5 U	1.2	0.29 J	0.50 U	0.20 J	0.51	0.51	0.5 U	0.52	0.25 J

Naphthalene (µg/L)																		
Location	GW PAL	EPA Region 4 SW	2/4/22	2/9/22	3/21/22	4/19/22	5/18/22	6/16/22	7/29/22	8/23/22	9/19/22	10/26/22	1/12/23	4/6/23	7/18/23	10/4/23	2/8/24	6/11/24
TMC-Bend	0.12	21	NS	NS	0.03 J	0.62	0.06 J	0.06 J	0.17	0.10 U	0.11	0.10 U	0.10 U	0.15	0.15	0.13	2 U	0.1 U
TMC-Outlet	0.12	21	1 U	3.33	0.03 J	1.2	0.10 U	0.10 U	0.22	0.10 U	0.06 J	0.10 U	0.10 U	0.1 U	0.1 U	0.1 U	0.88 J	0.1 U
TMC-Rail Bridge	0.12	21	1 U	1 U	0.10 U	0.58	0.05 J	0.10 U	1.1	0.10 U	0.11	0.06 J	0.10 U	0.1 U	0.27	0.08 J	1.4 J	0.07 J
TMC-TM04	0.12	21	1 U	1.3	0.03 J	0.79	0.10 U	0.12	0.12	0.10 U	0.14	0.10 U	0.10 U	0.34	0.34	0.1 U	0.63 J	0.1 U

Detections in bold

Exceedances of EPA Region 4 Surface Water Screening Levels (freshwater, chronic) in red

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation / detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

B: The analyte was detected above the reporting limits in the associated method blank.

µg/L: micrograms per liter

PAL: Project Action Limit

Starting in March 2022, naphthalene was analyzed by SIM PAH.

**Table 8 - Parcel B14
Groundwater Elevations**

Well Designation	Installation Date	Top of Casing (ft, AMSL)	January 2024		June 2024	
			Depth to Water (ft)	Groundwater Elevation (ft, AMSL)	Depth to Water (ft)	Groundwater Elevation (ft, AMSL)
B24-001-MWS	4/27/2022	11.30	10.19	1.11	10.95	0.35
B24-002-MWS	4/28/2022	12.43	10.69	1.74	11.66	0.77
HI02R-PZM006 (b)	1/26/2024	11.61	9.00	2.61	10.15	1.46
HI04-PZM006 (e)	9/26/2001	12.26	NM	NM	NM	NM
HI07R-PZM005 (b)	1/25/2024	11.65	9.20	2.45	10.59	1.06
HI10-MWS	12/21/2021	12.50	12.25	0.25	11.72	0.78
HI11-MWS	12/30/2021	13.08	12.35	0.73	10.00	3.08
HI12-MWS	12/30/2021	11.54	7.94	3.60	10.03	1.51
HI13-MWS	12/22/2021	11.29	10.75	0.54	10.62	0.67
HI14-MWS	12/22/2021	14.65	14.12	0.53	14.03	0.62
HI15-MWS	1/3/2022	13.43	13.32	0.11	12.76	0.67
HI16-MWS	12/22/2021	10.53	10.41	0.12	9.84	0.69
HI17-MWS (a)	12/23/2021	10.11	9.83	0.28	9.41	0.70
HI18-MWS	12/23/2021	9.35	9.16	0.19	8.70	0.65
HI19-MWS	12/29/2021	10.18	7.91	2.27	9.44	0.74
HI20R-MWS (a, b)	1/25/2024	11.49	8.59	2.90	10.34	1.15
HI20R2-MWS	3/20/2024	(c)	Not Installed		5.5	NA
HI21-MWS	4/27/2022	12.56	11.95	0.61	11.85	0.71
HI22-MWS	12/30/2021	11.49	8.44	3.05	8.77	2.72
TM04-PZM006	3/25/1983	12.00	12.38	-0.38	11.74	0.26
TM08R-PZM007	11/19/2021	9.92	9.70	0.22	9.27	0.65
TS03-PDP002	8/11/2000	13.53	12.33	1.20	(d)	NA

Notes:

- (a) Absorbent socks utilized to address minor NAPL impacts.
- (b) Replacement well installed in January 2024 and surveyed in March 2024.
- (c) Replacement well has installed in March 2024, has not been surveyed.
- (d) Well inaccessible for gauging.
- (e) Well abandoned.

Table 9 - Parcel B14
NAPL Gauging Activities

Sample ID	Installation Date	Well Total Depth (Feet bgs)	Screen Interval (Feet bgs)	Riser Stick-Up (Feet)	1/10/2024			1/25/2024			2/7/2024			2/20/2024			3/5/2024		
					Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thicknes s (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)
HI20R-MWS	1/25/2024	15	5-15	3	NM	NM	NM	HI20R-MWS Installed			NM	NM	NM	9.79	10.52	0.73	NM	NM	NM
HI17-MWS	12/23/2021	20	5-20	2.13	trace	10.90	trace	NM	NM	NM	NM	NM	NM	NM	NM	NM	trace	9.44	trace
HI20R2-MWS	3/20/2024	27.00	7- 22	3.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

HI17-MWS: absorbent sock deployed

HI17-MWS: absorbent sock removed; 1/2 saturated

HI20R-MWS: absorbent sock deployed

HI17-MWS: absorbent sock deployed
HI20R-MWS: Absorbent sock removed; trace product observed

NM = Not Measured
SHADED = NAPL Detection
bgs = below ground surface
TOC = Top of Casing

Table 9 - Parcel B14
NAPL Gauging Activities

Sample ID		3/20/2024		4/10/2024			4/19/2024			5/9/2024			6/11/2024		
	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)	Depth to NAPL (Feet TOC)	Depth to Water (Feet TOC)	NAPL Thickness (Feet)
HI20R-MWS	NM	NM	NM	trace	8.88	trace	trace	9.39	trace	NM	NM	NM	trace	10.20	trace
HI17-MWS	NM	NM	NM	NM	NM	NM	NM	NM	NM	trace	11.15	trace	NM	NM	NM
HI20R2-MWS	HI20R2-MWS Installed			NM	NM	NM	-	17.39	-	-	18.07	-	-	18.23	-

HI17-MWS: absorbent sock removed; 1/2 saturated with product.
HI20R-MWS: Absorbent sock deployed.
HI20R2-MWS: Well Developed.

HI17-MWS: Absorbent sock deployed.
HI20R-MWS: absorbent sock removed; 1/6 saturated with product.
HI17-MWS: absorbent sock removed; 1/6 saturated with product.
HI20R-MWS: absorbent sock deployed.

APPENDIX A



ARM Group LLC

Engineers and Scientists

Project Name : B14 Well Re-Installation
Project Number : 21010214
Client : Tradepoint Atlantic
Site : Sparrows Point
Borehole Location : Parcel B14
ARM Representative : T. Palank G.I.T.
Checked by : S. Lowe G.I.T.
Drilling Company : Kim Engineering
Driller : Wes
Drilling Equipment : Split-Spoon Auger

Northing (ft) : 569897.65
Easting (ft) : 1457446.57
Date/Time Completed : 1/24/2024
Surf. Elev. (ft AMSL) :
TOC Elev. (ft AMSL) :
PVC Stick-up (ft) : 2.42 ags
Total Well Depth (ft) : 17.50 bgs
Depth to Water (ft) : 0 hr: 9.82 TOC
Borehole Diameter (in.): 6

Well ID: HI02R-PZM006

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	REMARKS
0			(0-2') FILL Black GRAVEL SLAG, top soil and organic matter observed, dense, no plasticity, no cohesion (WET)	Wet @ 6' bgs
1	15	0.0		
2			(2-3') FILL Black GRAVEL SAND SLAG, dense, no plasticity, no cohesion, minor top soil observed (WET)	
3	35	0.0		
4			(3-4') FILL Yellow to brown, SAND SLAG with some SILT and GRAVEL, soft, no plasticity, minor cohesion (DAMP)	
5	50	0.1		
6			(4-5') FILL Blue grey coarse GRAVEL SLAG with sand, dense, dry, no plasticity, no cohesion (DRY)	
7	25	0.4		
8			(5-6') FILL Yellow to light brown SAND SLAG with GRAVEL, soft, no plasticity, no cohesion (DRY)	
9	50	0.1		
10			(6-7.5') FILL Dark blue grey GRAVEL SLAG with SAND, dense, no plasticity, no cohesion (WET)	
11	50	0.1		
12			(7.5-8') FILL Brown GRAVEL SLAG with SAND, dense, no plasticity, no cohesion (WET)	
13	60	0.2		
14	35	0.1		
15			(8'-10') FILL Blue grey GRAVEL SLAG with SAND, hard, no plasticity, no cohesion (WET)	
16	55	0.1		
17			(10-12') FILL Blue grey SILTY SAND SLAG with coarse GRAVEL, dense, no plasticity, no cohesion (WET)	
			(12-14') FILL Black to grey SAND SLAG with GRAVEL, dense, no plasticity, no cohesion (WET)	
			(14'-15.5') FILL Black to grey SANDY GRAVEL SLAG, dense, no plasticity, no cohesion (WET)	
			(15.5'-17') FILL Black to grey SAND SLAG with GRAVEL, dense, no plasticity, no cohesion (WET)	

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

Bentonite seal: 0-5' bgs
Filter pack: 5-17' bgs
Well riser: 3' ags to 7' bgs
Well screen: 7-17' bgs



ARM Group LLC
Engineers and Scientists

Project Name : B14 Well Re-Installation
Project Number : 21010214
Client : TradePoint Atlantic
Site : Sparrows Point
Borehole Location : Parcel B14
ARM Representative : T. Palank G.I.T.
Checked by : S. Lowe G.I.T.
Drilling Company : Kim Engineering
Driller : Wes
Drilling Equipment : Split-Spoon Auger

Northing (ft) : 570206.76
Easting (ft) : 1458401.34
Date/Time Completed : 1/24/2024
Surf. Elev. (ft AMSL) :
TOC Elev. (ft AMSL) :
PVC Stick-up (ft) : 2.61 ags
Total Well Depth (ft) : 16.18 bgs
Depth to Water (ft) : 0 hr: 9.99 TOC
Borehole Diameter (in.): 6

Well ID: HI07R-PZM005

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	REMARKS
0			(0-2') FILL Black SANDY GRAVEL SLAG, dense, no plasticity, no cohesion (DAMP)	Stick-up Steel Casing Locking Lid Bentonite Seal: 3/8" chips Riser: 2" diameter Schedule 40 PVC Filter Pack: FilPro W.G. #2 Sand Screen: 2" diameter Schedule 40 PVC 0.02" slot size Wet @ 7.5' bgs
1	40	0.1		
2			(2-3') FILL Black GRAVEL SAND SLAG, dense, no plasticity, no cohesion, minor top soil observed (WET)	
3	60	0.2	(3-4') FILL Black GRAVEL SANDY SLAG, dense, no plasticity, no cohesion (DAMP)	
4			(4-5') FILL Black SANDY GRAVEL SLAG, dense, no plasticity, no cohesion (DAMP)	
5	75	0.1	(5-5.5') FILL Yellow to light brown SANDY SILTY SLAG, very dense, no plasticity, no cohesion (DRY)	
6			(5.5-6') FILL Black SANDY GRAVEL, minor SILT, dense, no plasticity, no cohesion (DAMP)	
7	90	1.1	(6-7') FILL Black SANDY GRAVEL, minor SILT, dense, no plasticity, no cohesion (DAMP)	
8			(7-8') FILL Black SANDY GRAVEL, minor SILT, dense, no plasticity, minor cohesion (WET)	
9	75	0.1	(8-10') FILL SANDY GRAVEL SLAG, minor SILT, dense, no plasticity, minor cohesion (WET)	
10				
11	70	0.7		
12			(12-14') FILL Coarse SAND SLAG, with minor SILT and GRAVEL, dense, no plasticity, minor cohesion (WET)	
13	75	0.1		
14				

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

Bentonite seal: 0-2' bgs
Filter pack: 2-14' bgs
Well riser: 3' ags to 7' bgs
Well screen: 7-14' bgs



ARM Group LLC

Engineers and Scientists

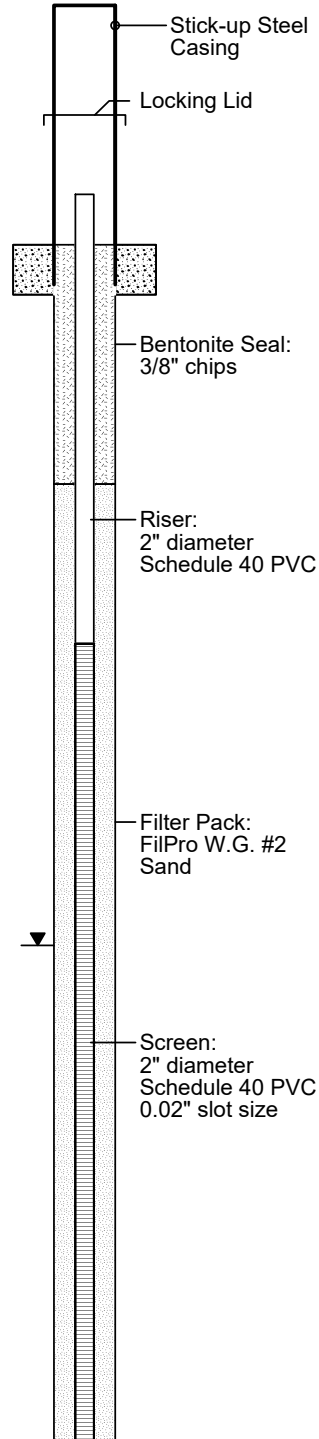
Well ID: HI20R-MWS

(page 1 of 1)

Project Name : B14 Well Re-Installation
Project Number : 21010214
Client : Tradepoint Atlantic
Site : Sparrows Point
Borehole Location : Parcel B14
ARM Representative : T. Palank G.I.T.
Checked by : S. Lowe G.I.T.
Drilling Company : Kim Engineering
Driller : Wes
Drilling Equipment : Split-Spoon Auger

Northing (ft) : 569963.49
Easting (ft) : 1457949.76
Date/Time Completed : 1/25/2024
Surf. Elev. (ft AMSL) :
TOC Elev. (ft AMSL) :
PVC Stick-up (ft) : 3' ags
Total Well Depth (ft) : 17.18 bgs
Depth to Water (ft) : 0 hr: 9.28 TOC
Borehole Diameter (in.): 6

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	REMARKS
0			(0-2') FILL Brown to black SANDY GRAVEL SLAG, loose, no plasticity, no cohesion (DRY)	
1	55	0.0		
2			(2'-4') FILL Brown to black SAND SLAG with coarse GRVAEL, loose, no plasticity, no cohesion (DRY)	
3	65	0.1		
4			(4'-4.25') FILL Brown to black SAND SLAG with coarse GRVAEL, loose, no plasticity, no cohesion (DRY)	
5	70	0.3		
6			(4.25'-6') FILL Blue grey SILTY CLAY SLAG, grain size coarsens down, dense, high cohesion, low plasticity (DAMP)	
7	75	0.4		
8			(6'-6.25') FILL Blue to black SILT SLAG with minor SAND and GRAVEL, soft, cohesive, no plasticity (DAMP)	
9	65	0.3		
10			(6.25'-7') FILL Black TAR, sticky/ oily consistency, soft, strong petroleum odor (DAMP)	
11	45	0.2		
12			(7'-8') FILL Brown coarse SANDY GRAVEL SLAG, hard, no plasticity, no cohesion (WET)	
13	65	0.8		
14			(8'-9.25') FILL Black TARY CLAY SLAG with minor GRAVEL, soft, moderate plasticity, high cohesion (WET)	
15	50			
			(9.25'-10') FILL Brown SANDY GRAVEL SLAG, hard, no plasticity, no cohesion (WET)	
			(10'-12') FILL Black TARY CLAY SLAG with minor GRAVEL, interbedded with TAR, moderate plasticity, high cohesion (WET)	
			(12'-14') FILL Black TAR coated SANDY GRAVEL SLAG, loose, no plasticity, moderate cohesion (WET)	
			(14'-15') FILL Black SANDY GRAVEL with TAR, loose, high cohesion, no plasticity (WET)	



Wet @ 7' bgs
10 \" Tar observed at 8'bgs

TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

Bentonite seal: 0-3' bgs
Filter pack: 3-15' bgs
Well riser: 3' ags to 5' bgs
Well screen: 5-15' bgs



ARM Group LLC

Engineers and Scientists

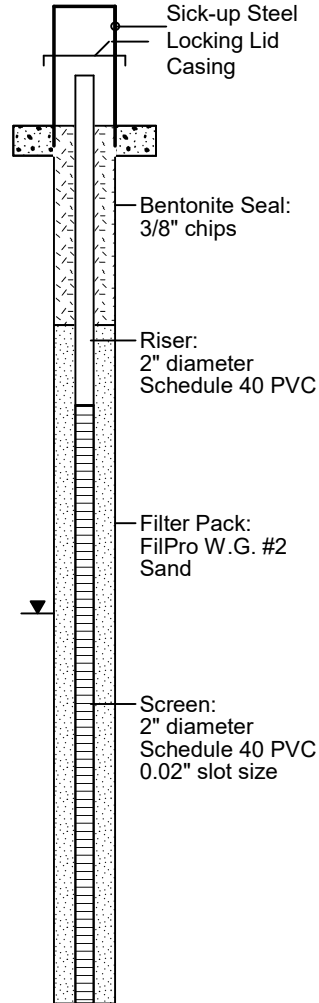
Project Name : B14 Well Re-Installation
Project Number : 21010214
Client : Tradepoint Atlantic
Site : Sparrows Point
Borehole Location : Parcel B14
ARM Representative : L. Parker
Checked by : S. Lowe G.I.T.
Drilling Company : Kim Engineering
Driller : Wes
Drilling Equipment : Split-Spoon Auger

Northing (ft) : 570016.55
Easting (ft) : 1457952.39
Date/Time Completed : 3/20/2024
Surf. Elev. (ft AMSL) :
TOC Elev. (ft AMSL) :
PVC Stick-up (ft) : 3' ags
Total Well Depth (ft) : 17.18 bgs
Depth to Water (ft) : 0 hr: 15.23 TOC
Borehole Diameter (in.): 6

Well ID: HI20R2-MWS

(page 1 of 1)

Depth (ft.)	%Recovery	PID (ppm)	DESCRIPTION	REMARKS
0			(0'-10') NO RECOVERY	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11	60	0.6	(10'-12') FILL	
12		0.2	Black SILTY SAND SLAG and GRVAEL, loose (DAMP)	
13			(12'-15') NO RECOVERY	
14				
15				
16	60	0.0	(15'-17') FILL	
17		0.0	Light brown to gray concrete GRAVEL SLAG with black SILTY SAND and GRAVEL, loose (WET)	
18			(17'-20') NO RECOVERY	
19				
20				
21	100	0.0	(20'-22') FILL	
22		0.0	Black SILTY SAND and GRAVEL SLAG, dense (WET to DAMP)	
23			(22'-25') NO RECOVERY	
24				
25				
26	60	0.0	(25'-25.25') FILL	
27		0.0	Black SILTY SAND and GRAVEL, loose (WET)	
28			(25.25'-27') NATIVE	
29			Gray to dark gray SILTY CLAY to CLAYEY SILT, trace very fine SAND and GRAVEL, medium dense, low plasticity, low cohesion (DAMP)	
30			End of Boring	



TOC - Top of PVC Casing
AMSL - Above Mean Sea Level
ags - above ground surface
bgs - below ground surface

Bentonite seal: 0-5' bgs
Filter pack: 5-22' bgs
Well riser: 3' ags to 7' bgs
Well screen: 7-22' bgs

APPENDIX B



ANALYTICAL REPORT

Lab Number:	L2432760
Client:	Tradepoint Atlantic 1600 Sparrows Point Boulevard Baltimore, MD 21219
ATTN:	Robert Tworkowski
Phone:	(443) 649-5073
Project Name:	TMC SW SAMPLING
Project Number:	21010216
Report Date:	06/19/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2432760-01	TMC-OUTLET	WATER	TMC	06/11/24 09:00	06/11/24
L2432760-02	TMC-TM04	WATER	TMC	06/11/24 09:10	06/11/24
L2432760-03	TMC-BEND	WATER	TMC	06/11/24 09:20	06/11/24
L2432760-04	TMC-RAIL-BRIDGE	WATER	TMC	06/11/24 09:30	06/11/24
L2432760-05	DUP	WATER	TMC	06/11/24 00:00	06/11/24
L2432760-06	TRIP BLANK	WATER	TMC	06/11/24 00:00	06/11/24

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: *Tiffani Morrissey* - Tiffani Morrissey

Title: Technical Director/Representative

Date: 06/19/24

ORGANICS

VOLATILES

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-01
Client ID: TMC-OUTLET
Sample Location: TMC

Date Collected: 06/11/24 09:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/24 06:08
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	0.41	J	ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	5.4		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	0.46	J	ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.27	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-01
Client ID: TMC-OUTLET
Sample Location: TMC

Date Collected: 06/11/24 09:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	104		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-01
Client ID: TMC-OUTLET
Sample Location: TMC

Date Collected: 06/11/24 09:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/17/24 06:08
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			100		70-130	
4-Bromofluorobenzene			92		70-130	

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-02
Client ID: TMC-TM04
Sample Location: TMC

Date Collected: 06/11/24 09:10
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/24 09:43
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	0.46	J	ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	6.2		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	0.42	J	ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.25	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-02
Client ID: TMC-TM04
Sample Location: TMC

Date Collected: 06/11/24 09:10
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	106		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-02
 Client ID: TMC-TM04
 Sample Location: TMC

Date Collected: 06/11/24 09:10
 Date Received: 06/11/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 06/17/24 09:43
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
4-Bromofluorobenzene	91		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-03
Client ID: TMC-BEND
Sample Location: TMC

Date Collected: 06/11/24 09:20
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/24 10:07
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	7.8		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.19	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: TMC SW SAMPLING

Lab Number: L2432760

Project Number: 21010216

Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-03

Date Collected: 06/11/24 09:20

Client ID: TMC-BEND

Date Received: 06/11/24

Sample Location: TMC

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	105		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-03
 Client ID: TMC-BEND
 Sample Location: TMC

Date Collected: 06/11/24 09:20
 Date Received: 06/11/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 06/17/24 10:07
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			102		70-130	
4-Bromofluorobenzene			91		70-130	

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-04
Client ID: TMC-RAIL-BRIDGE
Sample Location: TMC

Date Collected: 06/11/24 09:30
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/24 10:31
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	9.2		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.21	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-04
Client ID: TMC-RAIL-BRIDGE
Sample Location: TMC

Date Collected: 06/11/24 09:30
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	106		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-04
Client ID: TMC-RAIL-BRIDGE
Sample Location: TMC

Date Collected: 06/11/24 09:30
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/17/24 10:31
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS-SIM - Westborough Lab						
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1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
4-Bromofluorobenzene	91		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-05
Client ID: DUP
Sample Location: TMC

Date Collected: 06/11/24 00:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/24 10:54
Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	0.41	J	ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	5.4		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	0.45	J	ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.27	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: TMC SW SAMPLING

Lab Number: L2432760

Project Number: 21010216

Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-05

Date Collected: 06/11/24 00:00

Client ID: DUP

Date Received: 06/11/24

Sample Location: TMC

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	103		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-05
 Client ID: DUP
 Sample Location: TMC

Date Collected: 06/11/24 00:00
 Date Received: 06/11/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 06/17/24 10:54
 Analyst: TMS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			103		70-130	
4-Bromofluorobenzene			91		70-130	

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-06
Client ID: TRIP BLANK
Sample Location: TMC

Date Collected: 06/11/24 00:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/17/24 06:32
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-06
Client ID: TRIP BLANK
Sample Location: TMC

Date Collected: 06/11/24 00:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	101		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-06
 Client ID: TRIP BLANK
 Sample Location: TMC

Date Collected: 06/11/24 00:00
 Date Received: 06/11/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 06/17/24 06:32
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			102		70-130	
4-Bromofluorobenzene			92		70-130	

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 06/17/24 05:44
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG1935600-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Cyclohexane	ND		ug/l	10	0.27
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 06/17/24 05:44
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG1935600-5					
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/17/24 05:44
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG1935600-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	104		70-130

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/17/24 05:44
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-06 Batch: WG1935601-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
4-Bromofluorobenzene	92		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1935600-3 WG1935600-4								
Dichlorodifluoromethane	61		60		36-147	2		20
Chloromethane	97		95		64-130	2		20
Vinyl chloride	89		87		55-140	2		20
Bromomethane	84		81		39-139	4		20
Chloroethane	89		87		55-138	2		20
Trichlorofluoromethane	96		95		62-150	1		20
1,1-Dichloroethene	93		92		61-145	1		20
Carbon disulfide	94		91		51-130	3		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	96		94		70-130	2		20
Methylene chloride	88		88		70-130	0		20
Acetone	110		120		58-148	9		20
trans-1,2-Dichloroethene	94		92		70-130	2		20
Methyl Acetate	110		110		70-130	0		20
Methyl tert butyl ether	96		98		63-130	2		20
1,1-Dichloroethane	100		100		70-130	0		20
cis-1,2-Dichloroethene	95		94		70-130	1		20
Cyclohexane	110		110		70-130	0		20
Chloroform	99		97		70-130	2		20
Carbon tetrachloride	93		94		63-132	1		20
1,1,1-Trichloroethane	97		94		67-130	3		20
2-Butanone	130		130		63-138	0		20
Benzene	98		99		70-130	1		20
1,2-Dichloroethane	100		100		70-130	0		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1935600-3 WG1935600-4								
Trichloroethene	96		91		70-130	5		20
1,2-Dichloropropane	97		95		70-130	2		20
Bromodichloromethane	97		94		67-130	3		20
cis-1,3-Dichloropropene	98		96		70-130	2		20
Toluene	97		93		70-130	4		20
Tetrachloroethene	87		86		70-130	1		20
4-Methyl-2-pentanone	91		95		59-130	4		20
trans-1,3-Dichloropropene	99		98		70-130	1		20
1,1,2-Trichloroethane	99		95		70-130	4		20
Dibromochloromethane	90		86		63-130	5		20
1,2-Dibromoethane	95		95		70-130	0		20
2-Hexanone	96		97		57-130	1		20
Chlorobenzene	94		90		75-130	4		20
Ethylbenzene	94		92		70-130	2		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	85		80		70-130	6		20
Styrene	85		80		70-130	6		20
Bromoform	79		76		54-136	4		20
Isopropylbenzene	81		80		70-130	1		20
1,1,2,2-Tetrachloroethane	97		97		67-130	0		20
1,3-Dichlorobenzene	92		91		70-130	1		20
1,4-Dichlorobenzene	86		84		70-130	2		20
1,2-Dichlorobenzene	86		86		70-130	0		20

Lab Control Sample Analysis**Batch Quality Control****Project Name:** TMC SW SAMPLING**Lab Number:** L2432760**Project Number:** 21010216**Report Date:** 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1935600-3 WG1935600-4								
1,2-Dibromo-3-chloropropane	81		84		41-144	4		20
1,2,4-Trichlorobenzene	80		79		70-130	1		20
1,2,3-Trichlorobenzene	81		82		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105		104		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	101		102		70-130
Dibromofluoromethane	99		100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Lab Number: L2432760

Project Number: 21010216

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-06 Batch: WG1935601-3 WG1935601-4								
1,1,2,2-Tetrachloroethane	97		97		70-130	0		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		100		70-130
4-Bromofluorobenzene	92		93		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1935600-6 WG1935600-7 QC Sample: L2432760-01 Client ID: TMC-OUTLET												
Dichlorodifluoromethane	ND	10	5.7	57		6.0	60		36-147	5		20
Chloromethane	ND	10	9.1	91		9.7	97		64-130	6		20
Vinyl chloride	ND	10	8.2	82		8.8	88		55-140	7		20
Bromomethane	ND	10	5.3	53		6.4	64		39-139	19		20
Chloroethane	ND	10	7.8	78		8.2	82		55-138	5		20
Trichlorofluoromethane	ND	10	8.9	89		9.2	92		62-150	3		20
1,1-Dichloroethene	ND	10	8.4	84		9.3	93		61-145	10		20
Carbon disulfide	0.41J	10	8.9	89		9.6	96		51-130	8		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	8.7	87		9.3	93		70-130	7		20
Methylene chloride	ND	10	7.7	77		8.3	83		70-130	8		20
Acetone	5.4	10	16	106		17	116		58-148	6		20
trans-1,2-Dichloroethene	ND	10	8.7	87		9.2	92		70-130	6		20
Methyl Acetate	ND	10	8.9	89		8.5	85		70-130	5		20
Methyl tert butyl ether	ND	10	8.4	84		9.2	92		63-130	9		20
1,1-Dichloroethane	ND	10	9.3	93		10	100		70-130	7		20
cis-1,2-Dichloroethene	ND	10	8.6	86		9.3	93		70-130	8		20
Cyclohexane	ND	10	9.8J	98		11	110		70-130	12		20
Chloroform	0.46J	10	9.1	91		9.7	97		70-130	6		20
Carbon tetrachloride	ND	10	8.4	84		9.1	91		63-132	8		20
1,1,1-Trichloroethane	ND	10	8.7	87		9.3	93		67-130	7		20
2-Butanone	ND	10	10	100		12	120		63-138	18		20
Benzene	0.27J	10	9.2	92		9.8	98		70-130	6		20
1,2-Dichloroethane	ND	10	8.9	89		9.5	95		70-130	7		20

Matrix Spike Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1935600-6 WG1935600-7 QC Sample: L2432760-01 Client ID: TMC-OUTLET												
Trichloroethene	ND	10	8.4	84		9.2	92		70-130	9		20
1,2-Dichloropropane	ND	10	8.4	84		9.2	92		70-130	9		20
Bromodichloromethane	ND	10	8.5	85		9.1	91		67-130	7		20
cis-1,3-Dichloropropene	ND	10	7.5	75		8.2	82		70-130	9		20
Toluene	ND	10	8.7	87		9.3	93		70-130	7		20
Tetrachloroethene	ND	10	7.9	79		8.2	82		70-130	4		20
4-Methyl-2-pentanone	ND	10	8.2	82		8.8	88		59-130	7		20
trans-1,3-Dichloropropene	ND	10	8.2	82		9.0	90		70-130	9		20
1,1,2-Trichloroethane	ND	10	8.4	84		8.9	89		70-130	6		20
Dibromochloromethane	ND	10	7.8	78		8.1	81		63-130	4		20
1,2-Dibromoethane	ND	10	8.2	82		8.7	87		70-130	6		20
2-Hexanone	ND	10	8.4	84		9.0	90		57-130	7		20
Chlorobenzene	ND	10	8.2	82		8.8	88		75-130	7		20
Ethylbenzene	ND	10	8.4	84		9.1	91		70-130	8		20
p/m-Xylene	ND	20	17	85		18	90		70-130	6		20
o-Xylene	ND	20	15	75		16	80		70-130	6		20
Styrene	ND	20	15	75		16	80		70-130	6		20
Bromoform	ND	10	6.7	67		7.1	71		54-136	6		20
Isopropylbenzene	ND	10	7.4	74		8.0	80		70-130	8		20
1,1,2,2-Tetrachloroethane	ND	10	8.4	84		9.0	90		67-130	7		20
1,3-Dichlorobenzene	ND	10	8.0	80		8.4	84		70-130	5		20
1,4-Dichlorobenzene	ND	10	7.6	76		8.0	80		70-130	5		20
1,2-Dichlorobenzene	ND	10	7.6	76		8.0	80		70-130	5		20

Matrix Spike Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1935600-6 WG1935600-7 QC Sample: L2432760-01 Client ID: TMC-OUTLET												
1,2-Dibromo-3-chloropropane	ND	10	7.0	70		7.7	77		41-144	10		20
1,2,4-Trichlorobenzene	ND	10	6.6	66	Q	7.2	72		70-130	9		20
1,2,3-Trichlorobenzene	ND	10	6.8	68	Q	7.6	76		70-130	11		20

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		102		70-130
4-Bromofluorobenzene	104		103		70-130
Dibromofluoromethane	98		97		70-130
Toluene-d8	101		103		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1935601-6 WG1935601-7 QC Sample: L2432760-01 Client ID: TMC-OUTLET												
1,1,2,2-Tetrachloroethane	ND	0.1	0.088	88		0.088	88		70-130	0		30

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
1,2-Dichloroethane-d4	99		100		70-130
4-Bromofluorobenzene	94		94		70-130

SEMIVOLATILES

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-01
Client ID: TMC-OUTLET
Sample Location: TMC

Date Collected: 06/11/24 09:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/18/24 16:30
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: TMC SW SAMPLING**Lab Number:** L2432760**Project Number:** 21010216**Report Date:** 06/19/24**SAMPLE RESULTS**

Lab ID: L2432760-01

Date Collected: 06/11/24 09:00

Client ID: TMC-OUTLET

Date Received: 06/11/24

Sample Location: TMC

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	26		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	46		10-120
4-Terphenyl-d14	91		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-01
Client ID: TMC-OUTLET
Sample Location: TMC

Date Collected: 06/11/24 09:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/17/24 14:05
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	0.04	J	ug/l	0.10	0.02	1
Acenaphthene	0.11		ug/l	0.10	0.02	1
Fluorene	0.11		ug/l	0.10	0.03	1
Phenanthrene	0.14		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	31		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	115		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	65		10-120
4-Terphenyl-d14	106		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-02
Client ID: TMC-TM04
Sample Location: TMC

Date Collected: 06/11/24 09:10
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/18/24 17:48
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	1.5	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: TMC SW SAMPLING**Lab Number:** L2432760**Project Number:** 21010216**Report Date:** 06/19/24**SAMPLE RESULTS**

Lab ID: L2432760-02

Date Collected: 06/11/24 09:10

Client ID: TMC-TM04

Date Received: 06/11/24

Sample Location: TMC

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	32		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	86		15-120
2,4,6-Tribromophenol	54		10-120
4-Terphenyl-d14	87		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-02
Client ID: TMC-TM04
Sample Location: TMC

Date Collected: 06/11/24 09:10
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/17/24 14:54
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	0.04	J	ug/l	0.10	0.02	1
Acenaphthene	0.13		ug/l	0.10	0.02	1
Fluorene	0.12		ug/l	0.10	0.03	1
Phenanthrene	0.15		ug/l	0.05	0.04	1
Anthracene	0.03	J	ug/l	0.10	0.02	1
Fluoranthene	0.05	J	ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	134	Q	23-120
2-Fluorobiphenyl	94		15-120
2,4,6-Tribromophenol	80		10-120
4-Terphenyl-d14	115		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-03
Client ID: TMC-BEND
Sample Location: TMC

Date Collected: 06/11/24 09:20
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/18/24 18:14
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	2.5	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: TMC SW SAMPLING**Lab Number:** L2432760**Project Number:** 21010216**Report Date:** 06/19/24**SAMPLE RESULTS**

Lab ID: L2432760-03

Date Collected: 06/11/24 09:20

Client ID: TMC-BEND

Date Received: 06/11/24

Sample Location: TMC

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		21-120
Phenol-d6	26		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	85		15-120
2,4,6-Tribromophenol	58		10-120
4-Terphenyl-d14	89		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-03
Client ID: TMC-BEND
Sample Location: TMC

Date Collected: 06/11/24 09:20
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/17/24 15:10
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.09	J	ug/l	0.10	0.02	1
Fluorene	0.09	J	ug/l	0.10	0.03	1
Phenanthrene	0.10		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	ND		ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	130	Q	23-120
2-Fluorobiphenyl	92		15-120
2,4,6-Tribromophenol	79		10-120
4-Terphenyl-d14	109		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-04
Client ID: TMC-RAIL-BRIDGE
Sample Location: TMC

Date Collected: 06/11/24 09:30
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/19/24 14:00
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-04
Client ID: TMC-RAIL-BRIDGE
Sample Location: TMC

Date Collected: 06/11/24 09:30
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		21-120
Phenol-d6	23		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	87		15-120
2,4,6-Tribromophenol	62		10-120
4-Terphenyl-d14	95		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-04
Client ID: TMC-RAIL-BRIDGE
Sample Location: TMC

Date Collected: 06/11/24 09:30
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/17/24 15:26
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.07	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.09	J	ug/l	0.10	0.02	1
Fluorene	0.09	J	ug/l	0.10	0.03	1
Phenanthrene	0.10		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	ND		ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		21-120
Phenol-d6	34		10-120
Nitrobenzene-d5	139	Q	23-120
2-Fluorobiphenyl	96		15-120
2,4,6-Tribromophenol	72		10-120
4-Terphenyl-d14	116		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-05
Client ID: DUP
Sample Location: TMC

Date Collected: 06/11/24 00:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/19/24 14:24
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: TMC SW SAMPLING**Lab Number:** L2432760**Project Number:** 21010216**Report Date:** 06/19/24**SAMPLE RESULTS**

Lab ID: L2432760-05

Date Collected: 06/11/24 00:00

Client ID: DUP

Date Received: 06/11/24

Sample Location: TMC

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	24		21-120
Phenol-d6	23		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	89		15-120
2,4,6-Tribromophenol	61		10-120
4-Terphenyl-d14	96		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

SAMPLE RESULTS

Lab ID: L2432760-05
Client ID: DUP
Sample Location: TMC

Date Collected: 06/11/24 00:00
Date Received: 06/11/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/17/24 15:42
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	0.04	J	ug/l	0.10	0.02	1
Acenaphthene	0.12		ug/l	0.10	0.02	1
Fluorene	0.11		ug/l	0.10	0.03	1
Phenanthrene	0.13		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	125	Q	23-120
2-Fluorobiphenyl	88		15-120
2,4,6-Tribromophenol	57		10-120
4-Terphenyl-d14	104		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/18/24 16:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1934902-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/18/24 16:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1934902-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/18/24 16:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1934902-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	50		10-120
4-Terphenyl-d14	67		41-149

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 06/17/24 13:49
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 06/16/24 02:22

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-05 Batch: WG1934903-1					
Naphthalene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	ND		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	ND		ug/l	0.10	0.03
Pyrene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	123	Q	23-120
2-Fluorobiphenyl	86		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	110		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1934902-2 WG1934902-3								
Benzaldehyde	71		84		40-140	17		30
Phenol	35		42		12-110	18		30
Bis(2-chloroethyl)ether	81		96		40-140	17		30
2-Chlorophenol	68		82		27-123	19		30
2-Methylphenol	60		75		30-130	22		30
Bis(2-chloroisopropyl)ether	80		95		40-140	17		30
Acetophenone	78		94		39-129	19		30
n-Nitrosodi-n-propylamine	77		94		29-132	20		30
3-Methylphenol/4-Methylphenol	63		74		30-130	16		30
Hexachloroethane	71		82		40-140	14		30
Nitrobenzene	81		99		40-140	20		30
Isophorone	72		88		40-140	20		30
2,4-Dimethylphenol	65		81		30-130	22		30
Bis(2-chloroethoxy)methane	79		96		40-140	19		30
2,4-Dichlorophenol	74		92		30-130	22		30
Naphthalene	78		91		40-140	15		30
4-Chloroaniline	80		88		40-140	10		30
Hexachlorobutadiene	73		84		40-140	14		30
Caprolactam	24		26		10-130	8		30
2-Methylnaphthalene	74		89		40-140	18		30
Hexachlorocyclopentadiene	57		66		40-140	15		30
1,2,4,5-Tetrachlorobenzene	73		85		2-134	15		30
2,4,6-Trichlorophenol	76		91		30-130	18		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1934902-2 WG1934902-3								
2,4,5-Trichlorophenol	80		92		30-130	14		30
Biphenyl	74		90		40-140	20		30
2-Chloronaphthalene	76		91		40-140	18		30
2-Nitroaniline	80		98		52-143	20		30
2,6-Dinitrotoluene	82		100		40-140	20		30
Acenaphthylene	77		93		45-123	19		30
Acenaphthene	79		95		37-111	18		30
2,4-Dinitrophenol	88		103		20-130	16		30
2,4-Dinitrotoluene	84		100		48-143	17		30
2,3,4,6-Tetrachlorophenol	86		103		54-145	18		30
Diethyl phthalate	83		99		40-140	18		30
Fluorene	81		96		40-140	17		30
4-Nitroaniline	81		97		51-143	18		30
NDPA/DPA	82		99		40-140	19		30
Hexachlorobenzene	76		91		40-140	18		30
Pentachlorophenol	69		85		9-103	21		30
Phenanthrene	86		102		40-140	17		30
Anthracene	84		98		40-140	15		30
Carbazole	83		96		55-144	15		30
Di-n-butylphthalate	73		88		40-140	19		30
Fluoranthene	83		97		40-140	16		30
Pyrene	84		98		26-127	15		30
3,3'-Dichlorobenzidine	86		100		40-140	15		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1934902-2 WG1934902-3								
Benzo(a)anthracene	87		99		40-140	13		30
Chrysene	90		104		40-140	14		30
Bis(2-ethylhexyl)phthalate	70		83		40-140	17		30
Di-n-octylphthalate	69		80		40-140	15		30
Benzo(b)fluoranthene	80		97		40-140	19		30
Benzo(k)fluoranthene	90		104		40-140	14		30
Benzo(a)pyrene	82		97		40-140	17		30
Indeno(1,2,3-cd)pyrene	85		98		40-140	14		30
Dibenzo(a,h)anthracene	92		104		40-140	12		30
Benzo(ghi)perylene	90		99		40-140	10		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	46		54		21-120
Phenol-d6	32		40		10-120
Nitrobenzene-d5	83		100		23-120
2-Fluorobiphenyl	76		89		15-120
2,4,6-Tribromophenol	83		94		10-120
4-Terphenyl-d14	80		89		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-05 Batch: WG1934903-2 WG1934903-3								
Naphthalene	73		94		40-140	25		40
2-Methylnaphthalene	84		108		40-140	25		40
Acenaphthylene	84		109		40-140	26		40
Acenaphthene	82		108		37-111	27		40
Fluorene	84		110		40-140	27		40
Phenanthrene	82		106		40-140	26		40
Anthracene	87		113		40-140	26		40
Fluoranthene	89		114		40-140	25		40
Pyrene	87		111		26-127	24		40
Benzo(a)anthracene	86		108		40-140	23		40
Chrysene	91		117		40-140	25		40
Benzo(b)fluoranthene	92		116		40-140	23		40
Benzo(k)fluoranthene	93		120		40-140	25		40
Benzo(a)pyrene	98		125		40-140	24		40
Indeno(1,2,3-cd)pyrene	108		138		40-140	24		40
Dibenzo(a,h)anthracene	105		133		40-140	24		40
Benzo(ghi)perylene	99		126		40-140	24		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-05 Batch: WG1934903-2 WG1934903-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	59		73		21-120
Phenol-d6	47		60		10-120
Nitrobenzene-d5	113		146	Q	23-120
2-Fluorobiphenyl	80		103		15-120
2,4,6-Tribromophenol	101		130	Q	10-120
4-Terphenyl-d14	100		125		41-149

Matrix Spike Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1934902-4 WG1934902-5 QC Sample: L2432760-01 Client ID: TMC-OUTLET												
Benzaldehyde	ND	20	17	85		16	80		40-140	6		30
Phenol	ND	20	6.2	31		6.5	33		12-110	5		30
Bis(2-chloroethyl)ether	ND	20	18	90		18	90		40-140	0		30
2-Chlorophenol	ND	20	8.8	44		10	50		27-123	13		30
2-Methylphenol	ND	20	12	60		12	60		30-130	0		30
Bis(2-chloroisopropyl)ether	ND	20	19	95		18	90		40-140	5		30
Acetophenone	ND	20	18	90		18	90		39-129	0		30
n-Nitrosodi-n-propylamine	ND	20	18	90		18	90		29-132	0		30
3-Methylphenol/4-Methylphenol	ND	20	11	55		12	60		30-130	9		30
Hexachloroethane	ND	20	17	85		16	80		40-140	6		30
Nitrobenzene	ND	20	20	100		20	100		40-140	0		30
Isophorone	ND	20	17	85		17	85		40-140	0		30
2,4-Dimethylphenol	ND	20	14	70		14	70		30-130	0		30
Bis(2-chloroethoxy)methane	ND	20	18	90		18	90		40-140	0		30
2,4-Dichlorophenol	ND	20	10	50		11	55		30-130	10		30
Naphthalene	ND	20	19	95		18	90		40-140	5		30
4-Chloroaniline	ND	20	16	80		16	80		40-140	0		30
Hexachlorobutadiene	ND	20	18	90		17	85		40-140	6		30
Caprolactam	ND	20	5.6J	28		5.9J	30		10-130	5		30
2-Methylnaphthalene	ND	20	18	90		18	90		40-140	0		30
Hexachlorocyclopentadiene	ND	20	15J	75		14J	70		40-140	7		30
1,2,4,5-Tetrachlorobenzene	ND	20	17	85		17	85		2-134	0		30
2,4,6-Trichlorophenol	ND	20	9.0	45		9.4	47		30-130	4		30

Matrix Spike Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1934902-4 WG1934902-5 QC Sample: L2432760-01 Client ID: TMC-OUTLET												
2,4,5-Trichlorophenol	ND	20	9.5	48		11	55		30-130	15		30
Biphenyl	ND	20	18	90		18	90		40-140	0		30
2-Chloronaphthalene	ND	20	18	90		18	90		40-140	0		30
2-Nitroaniline	ND	20	15	75		16	80		52-143	6		30
2,6-Dinitrotoluene	ND	20	19	95		19	95		40-140	0		30
Acenaphthylene	ND	20	18	90		18	90		45-123	0		30
Acenaphthene	ND	20	19	95		19	95		37-111	0		30
2,4-Dinitrophenol	ND	20	15J	75		15J	75		20-130	0		30
2,4-Dinitrotoluene	ND	20	19	95		19	95		48-143	0		30
2,3,4,6-Tetrachlorophenol	ND	20	9.3	47	Q	9.6	48	Q	54-145	3		30
Diethyl phthalate	ND	20	19	95		19	95		40-140	0		30
Fluorene	ND	20	19	95		18	90		40-140	5		30
4-Nitroaniline	ND	20	13	65		13	65		51-143	0		30
NDPA/DPA	ND	20	18	90		18	90		40-140	0		30
Hexachlorobenzene	ND	20	17	85		18	90		40-140	6		30
Pentachlorophenol	ND	20	8.1J	41		8.3J	42		9-103	2		30
Phenanthrene	ND	20	20	100		19	95		40-140	5		30
Anthracene	ND	20	19	95		18	90		40-140	5		30
Carbazole	ND	20	19	95		19	95		55-144	0		30
Di-n-butylphthalate	ND	20	18	90		18	90		40-140	0		30
Fluoranthene	ND	20	19	95		19	95		40-140	0		30
Pyrene	ND	20	18	90		18	90		26-127	0		30
3,3'-Dichlorobenzidine	ND	20	9.2	46		9.2	46		40-140	0		30

Matrix Spike Analysis

Batch Quality Control

Project Name: TMC SW SAMPLING

Project Number: 21010216

Lab Number: L2432760

Report Date: 06/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1934902-4 WG1934902-5 QC Sample: L2432760-01 Client ID: TMC-OUTLET												
Benzo(a)anthracene	ND	20	19	95		19	95		40-140	0		30
Chrysene	ND	20	20	100		20	100		40-140	0		30
Bis(2-ethylhexyl)phthalate	ND	20	16	80		17	85		40-140	6		30
Di-n-octylphthalate	ND	20	17	85		17	85		40-140	0		30
Benzo(b)fluoranthene	ND	20	17	85		18	90		40-140	6		30
Benzo(k)fluoranthene	ND	20	18	90		19	95		40-140	5		30
Benzo(a)pyrene	ND	20	18	90		19	95		40-140	5		30
Indeno(1,2,3-cd)pyrene	ND	20	20	100		21	110		40-140	5		30
Dibenzo(a,h)anthracene	ND	20	20	100		20	100		40-140	0		30
Benzo(ghi)perylene	ND	20	20	100		20	100		40-140	0		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	47		51		10-120
2-Fluorobiphenyl	91		88		15-120
2-Fluorophenol	25		28		21-120
4-Terphenyl-d14	85		82		41-149
Nitrobenzene-d5	97		95		23-120
Phenol-d6	23		25		10-120

Project Name: TMC SW SAMPLING
Project Number: 21010216

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Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler **Custody Seal**
A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2432760-01A	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01A1	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01A2	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01B	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01B1	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01B2	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01C	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01C1	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01C2	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-01D	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-01D1	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-01D2	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-01E	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-01E1	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-01E2	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-02A	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-02B	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-02C	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-02D	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2432760-02E	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2432760-03A	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-03B	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-03C	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)

Project Name: TMC SW SAMPLING
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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2432760-03D	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-03E	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-04A	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-04B	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-04C	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-04D	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2432760-04E	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2432760-05A	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-05B	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-05C	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-05D	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-05E	Amber 100ml unpreserved	A	7	7	5.1	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2432760-06A	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-06B	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-06C	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2432760-06D	Vial HCl preserved	A	NA		5.1	Y	Absent		PA-8260-SIM(14),PA-8260(14)

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: TMC SW SAMPLING
Project Number: 21010216

Lab Number: L2432760
Report Date: 06/19/24

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 21

Published Date: 04/17/2024

Page 1 of 1

Certification Information**The following analytes are not included in our Primary NELAP Scope of Accreditation:****Westborough Facility****EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B**The following analytes are included in our Massachusetts DEP Scope of Accreditation****Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

[illegible]



ANALYTICAL REPORT

Lab Number:	L2435634
Client:	Tradepoint Atlantic 1600 Sparrows Point Boulevard Baltimore, MD 21219
ATTN:	Robert Tworkowski
Phone:	(443) 649-5073
Project Name:	B14 Q2
Project Number:	21010214
Report Date:	07/02/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2435634-01	HI18-MWS	WATER	Not Specified	06/24/24 15:45	06/24/24
L2435634-02	TM08R-PZM007	WATER	Not Specified	06/24/24 14:55	06/24/24
L2435634-03	TB-WT-01	WATER	Not Specified	06/24/24 00:00	06/24/24

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Caitlin Walukevich

Title: Technical Director/Representative

Date: 07/02/24

ORGANICS

VOLATILES

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-01
Client ID: HI18-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 15:45
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 09:24
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.16	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-01
Client ID: HI18-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 15:45
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	107		70-130

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-01
Client ID: HI18-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 15:45
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 09:24
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			110		70-130	
4-Bromofluorobenzene			95		70-130	

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-02
Client ID: TM08R-PZM007
Sample Location: Not Specified

Date Collected: 06/24/24 14:55
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 09:01
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-02
Client ID: TM08R-PZM007
Sample Location: Not Specified

Date Collected: 06/24/24 14:55
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	107		70-130

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-02
Client ID: TM08R-PZM007
Sample Location: Not Specified

Date Collected: 06/24/24 14:55
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 09:01
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			111		70-130	
4-Bromofluorobenzene			97		70-130	

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-03
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/24/24 00:00
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 07:01
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-03
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/24/24 00:00
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	124		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	108		70-130

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-03
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/24/24 00:00
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 07:01
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			110		70-130	
4-Bromofluorobenzene			97		70-130	

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 06/28/24 05:49
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1941569-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Cyclohexane	ND		ug/l	10	0.27
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 06/28/24 05:49
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1941569-5					
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/28/24 05:49
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1941569-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	108		70-130

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 05:49
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1941577-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
4-Bromofluorobenzene	99		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1941569-3 WG1941569-4								
Dichlorodifluoromethane	120		120		36-147	0		20
Chloromethane	140	Q	140	Q	64-130	0		20
Vinyl chloride	120		120		55-140	0		20
Bromomethane	75		71		39-139	5		20
Chloroethane	110		100		55-138	10		20
Trichlorofluoromethane	110		110		62-150	0		20
1,1-Dichloroethene	110		110		61-145	0		20
Carbon disulfide	110		110		51-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		110		70-130	0		20
Methylene chloride	100		100		70-130	0		20
Acetone	130		140		58-148	7		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Methyl Acetate	130		130		70-130	0		20
Methyl tert butyl ether	100		110		63-130	10		20
1,1-Dichloroethane	120		120		70-130	0		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Cyclohexane	130		130		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
2-Butanone	110		130		63-138	17		20
Benzene	110		110		70-130	0		20
1,2-Dichloroethane	120		120		70-130	0		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1941569-3 WG1941569-4								
Trichloroethene	110		110		70-130	0		20
1,2-Dichloropropane	120		110		70-130	9		20
Bromodichloromethane	110		110		67-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Tetrachloroethene	98		100		70-130	2		20
4-Methyl-2-pentanone	100		100		59-130	0		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
1,1,2-Trichloroethane	110		120		70-130	9		20
Dibromochloromethane	100		100		63-130	0		20
1,2-Dibromoethane	110		110		70-130	0		20
2-Hexanone	110		120		57-130	9		20
Chlorobenzene	110		110		75-130	0		20
Ethylbenzene	110		110		70-130	0		20
p/m-Xylene	110		110		70-130	0		20
o-Xylene	100		100		70-130	0		20
Styrene	100		100		70-130	0		20
Bromoform	86		90		54-136	5		20
Isopropylbenzene	96		99		70-130	3		20
1,1,2,2-Tetrachloroethane	120		120		67-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1941569-3 WG1941569-4								
1,2-Dibromo-3-chloropropane	88		95		41-144	8		20
1,2,4-Trichlorobenzene	87		91		70-130	4		20
1,2,3-Trichlorobenzene	91		96		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	111		111		70-130
Toluene-d8	109		110		70-130
4-Bromofluorobenzene	103		108		70-130
Dibromofluoromethane	100		100		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1941577-3 WG1941577-4								
1,1,2,2-Tetrachloroethane	116		121		70-130	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		110		70-130
4-Bromofluorobenzene	97		97		70-130

SEMIVOLATILES

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-01
Client ID: HI18-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 15:45
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/29/24 05:31
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	1.0	J	ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-01
Client ID: HI18-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 15:45
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	14	Q	21-120
Phenol-d6	17		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	24		10-120
4-Terphenyl-d14	66		41-149

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-01
Client ID: HI18-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 15:45
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 14:55
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	1.1		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.05	J	ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.04	J	ug/l	0.10	0.02	1
Fluorene	0.05	J	ug/l	0.10	0.03	1
Phenanthrene	ND		ug/l	0.05	0.04	1
Anthracene	0.07	J	ug/l	0.10	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	74		15-120
4-Terphenyl-d14	72		41-149

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-02
Client ID: TM08R-PZM007
Sample Location: Not Specified

Date Collected: 06/24/24 14:55
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/29/24 05:54
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-02
Client ID: TM08R-PZM007
Sample Location: Not Specified

Date Collected: 06/24/24 14:55
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	15	Q	21-120
Phenol-d6	16		10-120
Nitrobenzene-d5	40		23-120
2-Fluorobiphenyl	41		15-120
2,4,6-Tribromophenol	18		10-120
4-Terphenyl-d14	42		41-149

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

SAMPLE RESULTS

Lab ID: L2435634-02
Client ID: TM08R-PZM007
Sample Location: Not Specified

Date Collected: 06/24/24 14:55
Date Received: 06/24/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 15:12
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	ND		ug/l	0.10	0.02	1
Fluorene	ND		ug/l	0.10	0.03	1
Phenanthrene	ND		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	ND		ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	46		15-120
4-Terphenyl-d14	48		41-149

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1940992-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1940992-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1940992-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	23		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	33		10-120
4-Terphenyl-d14	67		41-149

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 14:39
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1940994-1					
Naphthalene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	ND		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	ND		ug/l	0.10	0.03
Pyrene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	97		23-120
2-Fluorobiphenyl	73		15-120
4-Terphenyl-d14	75		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1940992-2 WG1940992-3								
Benzaldehyde	59		60		40-140	2		30
Phenol	31		37		12-110	18		30
Bis(2-chloroethyl)ether	60		65		40-140	8		30
2-Chlorophenol	60		63		27-123	5		30
2-Methylphenol	53		62		30-130	16		30
Bis(2-chloroisopropyl)ether	58		60		40-140	3		30
Acetophenone	58		62		39-129	7		30
n-Nitrosodi-n-propylamine	64		66		29-132	3		30
3-Methylphenol/4-Methylphenol	53		58		30-130	9		30
Hexachloroethane	60		57		40-140	5		30
Nitrobenzene	59		61		40-140	3		30
Isophorone	62		62		40-140	0		30
2,4-Dimethylphenol	56		57		30-130	2		30
Bis(2-chloroethoxy)methane	60		61		40-140	2		30
2,4-Dichlorophenol	62		66		30-130	6		30
Naphthalene	62		61		40-140	2		30
4-Chloroaniline	57		57		40-140	0		30
Hexachlorobutadiene	60		56		40-140	7		30
Caprolactam	17		21		10-130	21		30
2-Methylnaphthalene	61		61		40-140	0		30
Hexachlorocyclopentadiene	53		56		40-140	6		30
1,2,4,5-Tetrachlorobenzene	58		56		2-134	4		30
2,4,6-Trichlorophenol	67		68		30-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1940992-2 WG1940992-3								
2,4,5-Trichlorophenol	62		63		30-130	2		30
Biphenyl	58		58		40-140	0		30
2-Chloronaphthalene	61		60		40-140	2		30
2-Nitroaniline	63		65		52-143	3		30
2,6-Dinitrotoluene	65		66		40-140	2		30
Acenaphthylene	64		66		45-123	3		30
Acenaphthene	66		64		37-111	3		30
2,4-Dinitrophenol	46		41		20-130	11		30
2,4-Dinitrotoluene	65		61		48-143	6		30
2,3,4,6-Tetrachlorophenol	68		67		54-145	1		30
Diethyl phthalate	66		65		40-140	2		30
Fluorene	67		65		40-140	3		30
4-Nitroaniline	64		70		51-143	9		30
NDPA/DPA	67		66		40-140	2		30
Hexachlorobenzene	67		66		40-140	2		30
Pentachlorophenol	62		60		9-103	3		30
Phenanthrene	69		64		40-140	8		30
Anthracene	70		64		40-140	9		30
Carbazole	66		63		55-144	5		30
Di-n-butylphthalate	67		63		40-140	6		30
Fluoranthene	66		63		40-140	5		30
Pyrene	66		63		26-127	5		30
3,3'-Dichlorobenzidine	79		71		40-140	11		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1940992-2 WG1940992-3								
Benzo(a)anthracene	70		62		40-140	12		30
Chrysene	73		64		40-140	13		30
Bis(2-ethylhexyl)phthalate	69		62		40-140	11		30
Di-n-octylphthalate	64		59		40-140	8		30
Benzo(b)fluoranthene	67		63		40-140	6		30
Benzo(k)fluoranthene	67		64		40-140	5		30
Benzo(a)pyrene	72		69		40-140	4		30
Indeno(1,2,3-cd)pyrene	75		67		40-140	11		30
Dibenzo(a,h)anthracene	80		70		40-140	13		30
Benzo(ghi)perylene	84		76		40-140	10		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		47		21-120
Phenol-d6	30		34		10-120
Nitrobenzene-d5	59		62		23-120
2-Fluorobiphenyl	63		63		15-120
2,4,6-Tribromophenol	70		70		10-120
4-Terphenyl-d14	63		60		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1940994-2 WG1940994-3								
Naphthalene	64		62		40-140	3		40
2-Methylnaphthalene	71		69		40-140	3		40
Acenaphthylene	73		70		40-140	4		40
Acenaphthene	76		69		37-111	10		40
Fluorene	77		69		40-140	11		40
Phenanthrene	77		66		40-140	15		40
Anthracene	83		72		40-140	14		40
Fluoranthene	82		70		40-140	16		40
Pyrene	81		69		26-127	16		40
Benzo(a)anthracene	81		72		40-140	12		40
Chrysene	87		71		40-140	20		40
Benzo(b)fluoranthene	87		78		40-140	11		40
Benzo(k)fluoranthene	88		71		40-140	21		40
Benzo(a)pyrene	94		80		40-140	16		40
Indeno(1,2,3-cd)pyrene	99		81		40-140	20		40
Dibenzo(a,h)anthracene	96		79		40-140	19		40
Benzo(ghi)perylene	92		75		40-140	20		40

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1940994-2 WG1940994-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	89		86		23-120
2-Fluorobiphenyl	66		64		15-120
4-Terphenyl-d14	76		64		41-149

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2435634-01A	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-01B	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-01C	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-01D	Amber 100ml unpreserved	A	9	9	5.0	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435634-01E	Amber 100ml unpreserved	A	9	9	5.0	Y	Absent		ARCHIVE()
L2435634-02A	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-02B	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-02C	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-02D	Amber 100ml unpreserved	A	7	7	5.0	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2435634-02E	Amber 100ml unpreserved	A	7	7	5.0	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2435634-03A	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-03B	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-03C	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435634-03D	Vial HCl preserved	A	NA		5.0	Y	Absent		PA-8260-SIM(14),PA-8260(14)

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
Report Date: 07/02/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: B14 Q2
Project Number: 21010214

Lab Number: L2435634
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REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 21

Published Date: 04/17/2024

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



ANALYTICAL REPORT

Lab Number:	L2435895
Client:	Tradepoint Atlantic 1600 Sparrows Point Boulevard Baltimore, MD 21219
ATTN:	Robert Tworkowski
Phone:	(443) 649-5073
Project Name:	B14 GW
Project Number:	21010214
Report Date:	07/03/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2435895-01	HI02R-PZM006	WATER	Not Specified	06/25/24 11:15	06/25/24
L2435895-02	HI20R-MWS	WATER	Not Specified	06/25/24 11:55	06/25/24
L2435895-03	HI07R-PZM005	WATER	Not Specified	06/25/24 12:45	06/25/24
L2435895-04	HI16-MWS	WATER	Not Specified	06/25/24 14:15	06/25/24
L2435895-05	HI14-MWS	WATER	Not Specified	06/25/24 15:05	06/25/24
L2435895-06	TB-WT-01	WATER	Not Specified	06/25/24 00:00	06/25/24
L2435895-07	DUP	WATER	Not Specified	06/25/24 00:00	06/25/24

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

L2435895-01: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (3%), phenol-d6 (7%) and 2,4,6-tribromophenol (5%); however, re-extraction achieved similar results: 2-fluorophenol (4%), phenol-d6 (7%) and 2,4,6-tribromophenol (6%). The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 07/03/24

ORGANICS

VOLATILES

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 10:12
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.7	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.29	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	106		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 10:12
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			111		70-130	
4-Bromofluorobenzene			95		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-02
Client ID: HI20R-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 11:55
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 09:48
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	2.4	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-02
Client ID: HI20R-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 11:55
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	110		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-02
Client ID: HI20R-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 11:55
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 09:48
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			110		70-130	
4-Bromofluorobenzene			97		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-03
Client ID: HI07R-PZM005
Sample Location: Not Specified

Date Collected: 06/25/24 12:45
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 10:36
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	2.4	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	2.9		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	1.8		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-03
Client ID: HI07R-PZM005
Sample Location: Not Specified

Date Collected: 06/25/24 12:45
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	0.81	J	ug/l	1.0	0.33	1
o-Xylene	0.91	J	ug/l	1.0	0.39	1
Xylenes, Total	1.7	J	ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	102		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-03
Client ID: HI07R-PZM005
Sample Location: Not Specified

Date Collected: 06/25/24 12:45
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 10:36
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			109		70-130	
4-Bromofluorobenzene			94		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-04
Client ID: HI16-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 14:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 11:00
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-04
Client ID: HI16-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 14:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	119		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	104		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-04
Client ID: HI16-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 14:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 11:00
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
4-Bromofluorobenzene	97		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-05
Client ID: HI14-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 15:05
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 11:24
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-05
Client ID: HI14-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 15:05
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	107		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-05
 Client ID: HI14-MWS
 Sample Location: Not Specified

Date Collected: 06/25/24 15:05
 Date Received: 06/25/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 06/28/24 11:24
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			110		70-130	
4-Bromofluorobenzene			96		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-06
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 07:25
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-06
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	114		70-130
Dibromofluoromethane	108		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-06
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 07:25
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			110		70-130	
4-Bromofluorobenzene			97		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-07
Client ID: DUP
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 06/28/24 11:48
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-07
Client ID: DUP
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	106		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-07
 Client ID: DUP
 Sample Location: Not Specified

Date Collected: 06/25/24 00:00
 Date Received: 06/25/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 06/28/24 11:48
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			110		70-130	
4-Bromofluorobenzene			97		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/28/24 05:49
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1941569-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Cyclohexane	ND		ug/l	10	0.27
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/28/24 05:49
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1941569-5					
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 06/28/24 05:49
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-07 Batch: WG1941569-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	121		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	116		70-130
Dibromofluoromethane	108		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)
Analytical Date: 06/28/24 05:49
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-07 Batch: WG1941577-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
4-Bromofluorobenzene	99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1941569-3 WG1941569-4								
Dichlorodifluoromethane	120		120		36-147	0		20
Chloromethane	140	Q	140	Q	64-130	0		20
Vinyl chloride	120		120		55-140	0		20
Bromomethane	75		71		39-139	5		20
Chloroethane	110		100		55-138	10		20
Trichlorofluoromethane	110		110		62-150	0		20
1,1-Dichloroethene	110		110		61-145	0		20
Carbon disulfide	110		110		51-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		110		70-130	0		20
Methylene chloride	100		100		70-130	0		20
Acetone	130		140		58-148	7		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Methyl Acetate	130		130		70-130	0		20
Methyl tert butyl ether	100		110		63-130	10		20
1,1-Dichloroethane	120		120		70-130	0		20
cis-1,2-Dichloroethene	100		110		70-130	10		20
Cyclohexane	130		130		70-130	0		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
2-Butanone	110		130		63-138	17		20
Benzene	110		110		70-130	0		20
1,2-Dichloroethane	120		120		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1941569-3 WG1941569-4								
Trichloroethene	110		110		70-130	0		20
1,2-Dichloropropane	120		110		70-130	9		20
Bromodichloromethane	110		110		67-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
Toluene	110		110		70-130	0		20
Tetrachloroethene	98		100		70-130	2		20
4-Methyl-2-pentanone	100		100		59-130	0		20
trans-1,3-Dichloropropene	120		120		70-130	0		20
1,1,2-Trichloroethane	110		120		70-130	9		20
Dibromochloromethane	100		100		63-130	0		20
1,2-Dibromoethane	110		110		70-130	0		20
2-Hexanone	110		120		57-130	9		20
Chlorobenzene	110		110		75-130	0		20
Ethylbenzene	110		110		70-130	0		20
p/m-Xylene	110		110		70-130	0		20
o-Xylene	100		100		70-130	0		20
Styrene	100		100		70-130	0		20
Bromoform	86		90		54-136	5		20
Isopropylbenzene	96		99		70-130	3		20
1,1,2,2-Tetrachloroethane	120		120		67-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	100		100		70-130	0		20
1,2-Dichlorobenzene	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-07 Batch: WG1941569-3 WG1941569-4								
1,2-Dibromo-3-chloropropane	88		95		41-144	8		20
1,2,4-Trichlorobenzene	87		91		70-130	4		20
1,2,3-Trichlorobenzene	91		96		70-130	5		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	111		111		70-130
Toluene-d8	109		110		70-130
4-Bromofluorobenzene	103		108		70-130
Dibromofluoromethane	100		100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-07 Batch: WG1941577-3 WG1941577-4								
1,1,2,2-Tetrachloroethane	116		121		70-130	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		110		70-130
4-Bromofluorobenzene	97		97		70-130

SEMIVOLATILES

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/01/24 01:32
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.39	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	29		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	3.7		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	0.37	J	ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	0.72	J	ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	0.45	J	ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	3	Q	21-120
Phenol-d6	7	Q	10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	5	Q	10-120
4-Terphenyl-d14	53		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/30/24 14:05
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	3.7		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.41		ug/l	0.10	0.03	1
Acenaphthylene	0.03	J	ug/l	0.10	0.02	1
Acenaphthene	0.76		ug/l	0.10	0.02	1
Fluorene	0.57		ug/l	0.10	0.03	1
Phenanthrene	0.57		ug/l	0.05	0.04	1
Anthracene	0.07	J	ug/l	0.10	0.02	1
Fluoranthene	0.12		ug/l	0.10	0.03	1
Pyrene	0.09	J	ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	56		15-120
4-Terphenyl-d14	66		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01 RE
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/03/24 10:30
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.50	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	34		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	2.3		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-01 **RE**
Client ID: HI02R-PZM006
Sample Location: Not Specified

Date Collected: 06/25/24 11:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	0.70	J	ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	0.52	J	ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	0.62	J	ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	0.34	J	ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	4	Q	21-120
Phenol-d6	7	Q	10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	6	Q	10-120
4-Terphenyl-d14	66		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-02
Client ID: HI20R-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 11:55
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/01/24 01:55
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	2.2	J	ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	12		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-02
Client ID: HI20R-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 11:55
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	16	Q	21-120
Phenol-d6	15		10-120
Nitrobenzene-d5	55		23-120
2-Fluorobiphenyl	57		15-120
2,4,6-Tribromophenol	25		10-120
4-Terphenyl-d14	50		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-02
Client ID: HI20R-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 11:55
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/30/24 14:21
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.16		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.12		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.05	J	ug/l	0.10	0.02	1
Fluorene	0.05	J	ug/l	0.10	0.03	1
Phenanthrene	0.10		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	0.07	J	ug/l	0.10	0.03	1
Pyrene	0.07	J	ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	65		15-120
4-Terphenyl-d14	62		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-03
Client ID: HI07R-PZM005
Sample Location: Not Specified

Date Collected: 06/25/24 12:45
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/01/24 02:19
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.76	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	5.7		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	0.76	J	ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-03
Client ID: HI07R-PZM005
Sample Location: Not Specified

Date Collected: 06/25/24 12:45
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	0.51	J	ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	0.83	J	ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	2.5	J	ug/l	10	2.5	1
Phenanthrene	1.4	J	ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	0.72	J	ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	0.64	J	ug/l	2.0	0.41	1
Pyrene	0.53	J	ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	22		21-120
Phenol-d6	16		10-120
Nitrobenzene-d5	47		23-120
2-Fluorobiphenyl	44		15-120
2,4,6-Tribromophenol	37		10-120
4-Terphenyl-d14	46		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-03
Client ID: HI07R-PZM005
Sample Location: Not Specified

Date Collected: 06/25/24 12:45
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/30/24 14:37
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	6.1		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.99		ug/l	0.10	0.03	1
Acenaphthylene	0.42		ug/l	0.10	0.02	1
Acenaphthene	0.49		ug/l	0.10	0.02	1
Fluorene	1.0		ug/l	0.10	0.03	1
Phenanthrene	1.5		ug/l	0.05	0.04	1
Anthracene	0.29		ug/l	0.10	0.02	1
Fluoranthene	0.92		ug/l	0.10	0.03	1
Pyrene	0.61		ug/l	0.10	0.04	1
Benzo(a)anthracene	0.06		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	54		15-120
4-Terphenyl-d14	60		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-04
Client ID: HI16-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 14:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/03/24 10:53
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-04
Client ID: HI16-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 14:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	17	Q	21-120
Phenol-d6	16		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	63		15-120
2,4,6-Tribromophenol	25		10-120
4-Terphenyl-d14	63		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-04
Client ID: HI16-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 14:15
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/30/24 14:53
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.19		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.21		ug/l	0.10	0.03	1
Acenaphthylene	0.11		ug/l	0.10	0.02	1
Acenaphthene	0.12		ug/l	0.10	0.02	1
Fluorene	0.10	J	ug/l	0.10	0.03	1
Phenanthrene	0.10		ug/l	0.05	0.04	1
Anthracene	0.10	J	ug/l	0.10	0.02	1
Fluoranthene	0.14		ug/l	0.10	0.03	1
Pyrene	0.13		ug/l	0.10	0.04	1
Benzo(a)anthracene	0.08		ug/l	0.05	0.03	1
Chrysene	0.06	J	ug/l	0.10	0.03	1
Benzo(b)fluoranthene	0.06		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	0.07	J	ug/l	0.10	0.03	1
Benzo(a)pyrene	0.07	J	ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	0.07	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.06		ug/l	0.05	0.02	1
Benzo(ghi)perylene	0.06	J	ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	48		23-120
2-Fluorobiphenyl	38		15-120
4-Terphenyl-d14	38	Q	41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-05
Client ID: HI14-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 15:05
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/03/24 11:15
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-05
Client ID: HI14-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 15:05
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	1.0	J	ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	0.50	J	ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	0.67	J	ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	17	Q	21-120
Phenol-d6	16		10-120
Nitrobenzene-d5	52		23-120
2-Fluorobiphenyl	59		15-120
2,4,6-Tribromophenol	27		10-120
4-Terphenyl-d14	59		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-05
Client ID: HI14-MWS
Sample Location: Not Specified

Date Collected: 06/25/24 15:05
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/30/24 15:09
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.32		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.10		ug/l	0.10	0.03	1
Acenaphthylene	0.04	J	ug/l	0.10	0.02	1
Acenaphthene	1.1		ug/l	0.10	0.02	1
Fluorene	0.56		ug/l	0.10	0.03	1
Phenanthrene	0.58		ug/l	0.05	0.04	1
Anthracene	0.16		ug/l	0.10	0.02	1
Fluoranthene	0.18		ug/l	0.10	0.03	1
Pyrene	0.12		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	62		15-120
4-Terphenyl-d14	62		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-07
Client ID: DUP
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/03/24 11:38
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-07
Client ID: DUP
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	13	Q	21-120
Phenol-d6	14		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	24		10-120
4-Terphenyl-d14	55		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2435895-07
Client ID: DUP
Sample Location: Not Specified

Date Collected: 06/25/24 00:00
Date Received: 06/25/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/30/24 15:26
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/29/24 15:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	ND		ug/l	0.10	0.02	1
Fluorene	ND		ug/l	0.10	0.03	1
Phenanthrene	ND		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	0.08	J	ug/l	0.10	0.03	1
Pyrene	0.07	J	ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	67		23-120
2-Fluorobiphenyl	51		15-120
4-Terphenyl-d14	53		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1940992-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1940992-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1940992-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	23		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	33		10-120
4-Terphenyl-d14	67		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 14:39
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-05,07 Batch: WG1940994-1					
Naphthalene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	ND		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	ND		ug/l	0.10	0.03
Pyrene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	97		23-120
2-Fluorobiphenyl	73		15-120
4-Terphenyl-d14	75		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/03/24 08:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,04-05,07 Batch: WG1942560-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/03/24 08:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,04-05,07 Batch: WG1942560-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/03/24 08:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,04-05,07 Batch: WG1942560-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	52		10-120
4-Terphenyl-d14	53		41-149

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1940992-2 WG1940992-3								
Benzaldehyde	59		60		40-140	2		30
Phenol	31		37		12-110	18		30
Bis(2-chloroethyl)ether	60		65		40-140	8		30
2-Chlorophenol	60		63		27-123	5		30
2-Methylphenol	53		62		30-130	16		30
Bis(2-chloroisopropyl)ether	58		60		40-140	3		30
Acetophenone	58		62		39-129	7		30
n-Nitrosodi-n-propylamine	64		66		29-132	3		30
3-Methylphenol/4-Methylphenol	53		58		30-130	9		30
Hexachloroethane	60		57		40-140	5		30
Nitrobenzene	59		61		40-140	3		30
Isophorone	62		62		40-140	0		30
2,4-Dimethylphenol	56		57		30-130	2		30
Bis(2-chloroethoxy)methane	60		61		40-140	2		30
2,4-Dichlorophenol	62		66		30-130	6		30
Naphthalene	62		61		40-140	2		30
4-Chloroaniline	57		57		40-140	0		30
Hexachlorobutadiene	60		56		40-140	7		30
Caprolactam	17		21		10-130	21		30
2-Methylnaphthalene	61		61		40-140	0		30
Hexachlorocyclopentadiene	53		56		40-140	6		30
1,2,4,5-Tetrachlorobenzene	58		56		2-134	4		30
2,4,6-Trichlorophenol	67		68		30-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1940992-2 WG1940992-3								
2,4,5-Trichlorophenol	62		63		30-130	2		30
Biphenyl	58		58		40-140	0		30
2-Chloronaphthalene	61		60		40-140	2		30
2-Nitroaniline	63		65		52-143	3		30
2,6-Dinitrotoluene	65		66		40-140	2		30
Acenaphthylene	64		66		45-123	3		30
Acenaphthene	66		64		37-111	3		30
2,4-Dinitrophenol	46		41		20-130	11		30
2,4-Dinitrotoluene	65		61		48-143	6		30
2,3,4,6-Tetrachlorophenol	68		67		54-145	1		30
Diethyl phthalate	66		65		40-140	2		30
Fluorene	67		65		40-140	3		30
4-Nitroaniline	64		70		51-143	9		30
NDPA/DPA	67		66		40-140	2		30
Hexachlorobenzene	67		66		40-140	2		30
Pentachlorophenol	62		60		9-103	3		30
Phenanthrene	69		64		40-140	8		30
Anthracene	70		64		40-140	9		30
Carbazole	66		63		55-144	5		30
Di-n-butylphthalate	67		63		40-140	6		30
Fluoranthene	66		63		40-140	5		30
Pyrene	66		63		26-127	5		30
3,3'-Dichlorobenzidine	79		71		40-140	11		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1940992-2 WG1940992-3								
Benzo(a)anthracene	70		62		40-140	12		30
Chrysene	73		64		40-140	13		30
Bis(2-ethylhexyl)phthalate	69		62		40-140	11		30
Di-n-octylphthalate	64		59		40-140	8		30
Benzo(b)fluoranthene	67		63		40-140	6		30
Benzo(k)fluoranthene	67		64		40-140	5		30
Benzo(a)pyrene	72		69		40-140	4		30
Indeno(1,2,3-cd)pyrene	75		67		40-140	11		30
Dibenzo(a,h)anthracene	80		70		40-140	13		30
Benzo(ghi)perylene	84		76		40-140	10		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		47		21-120
Phenol-d6	30		34		10-120
Nitrobenzene-d5	59		62		23-120
2-Fluorobiphenyl	63		63		15-120
2,4,6-Tribromophenol	70		70		10-120
4-Terphenyl-d14	63		60		41-149

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-05,07 Batch: WG1940994-2 WG1940994-3								
Naphthalene	64		62		40-140	3		40
2-Methylnaphthalene	71		69		40-140	3		40
Acenaphthylene	73		70		40-140	4		40
Acenaphthene	76		69		37-111	10		40
Fluorene	77		69		40-140	11		40
Phenanthrene	77		66		40-140	15		40
Anthracene	83		72		40-140	14		40
Fluoranthene	82		70		40-140	16		40
Pyrene	81		69		26-127	16		40
Benzo(a)anthracene	81		72		40-140	12		40
Chrysene	87		71		40-140	20		40
Benzo(b)fluoranthene	87		78		40-140	11		40
Benzo(k)fluoranthene	88		71		40-140	21		40
Benzo(a)pyrene	94		80		40-140	16		40
Indeno(1,2,3-cd)pyrene	99		81		40-140	20		40
Dibenzo(a,h)anthracene	96		79		40-140	19		40
Benzo(ghi)perylene	92		75		40-140	20		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-05,07 Batch: WG1940994-2 WG1940994-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	89		86		23-120
2-Fluorobiphenyl	66		64		15-120
4-Terphenyl-d14	76		64		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04-05,07 Batch: WG1942560-2 WG1942560-3								
Benzaldehyde	54		58		40-140	7		30
Phenol	33		35		12-110	6		30
Bis(2-chloroethyl)ether	58		68		40-140	16		30
2-Chlorophenol	59		66		27-123	11		30
2-Methylphenol	56		64		30-130	13		30
Bis(2-chloroisopropyl)ether	55		62		40-140	12		30
Acetophenone	55		61		39-129	10		30
n-Nitrosodi-n-propylamine	55		66		29-132	18		30
3-Methylphenol/4-Methylphenol	55		59		30-130	7		30
Hexachloroethane	54		64		40-140	17		30
Nitrobenzene	58		66		40-140	13		30
Isophorone	56		64		40-140	13		30
2,4-Dimethylphenol	60		61		30-130	2		30
Bis(2-chloroethoxy)methane	55		63		40-140	14		30
2,4-Dichlorophenol	58		65		30-130	11		30
Naphthalene	57		64		40-140	12		30
4-Chloroaniline	56		63		40-140	12		30
Hexachlorobutadiene	59		65		40-140	10		30
Caprolactam	23		24		10-130	4		30
2-Methylnaphthalene	57		64		40-140	12		30
Hexachlorocyclopentadiene	49		50		40-140	2		30
1,2,4,5-Tetrachlorobenzene	56		60		2-134	7		30
2,4,6-Trichlorophenol	61		68		30-130	11		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04-05,07 Batch: WG1942560-2 WG1942560-3								
2,4,5-Trichlorophenol	62		72		30-130	15		30
Biphenyl	55		62		40-140	12		30
2-Chloronaphthalene	60		64		40-140	6		30
2-Nitroaniline	64		65		52-143	2		30
2,6-Dinitrotoluene	58		66		40-140	13		30
Acenaphthylene	61		68		45-123	11		30
Acenaphthene	66		69		37-111	4		30
2,4-Dinitrophenol	56		61		20-130	9		30
2,4-Dinitrotoluene	62		71		48-143	14		30
2,3,4,6-Tetrachlorophenol	66		74		54-145	11		30
Diethyl phthalate	61		66		40-140	8		30
Fluorene	65		67		40-140	3		30
4-Nitroaniline	63		68		51-143	8		30
NDPA/DPA	63		67		40-140	6		30
Hexachlorobenzene	63		66		40-140	5		30
Pentachlorophenol	57		65		9-103	13		30
Phenanthrene	64		69		40-140	8		30
Anthracene	64		70		40-140	9		30
Carbazole	65		71		55-144	9		30
Di-n-butylphthalate	63		68		40-140	8		30
Fluoranthene	64		68		40-140	6		30
Pyrene	66		70		26-127	6		30
3,3'-Dichlorobenzidine	65		72		40-140	10		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2435895
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04-05,07 Batch: WG1942560-2 WG1942560-3								
Benzo(a)anthracene	65		69		40-140	6		30
Chrysene	68		74		40-140	8		30
Bis(2-ethylhexyl)phthalate	60		65		40-140	8		30
Di-n-octylphthalate	62		66		40-140	6		30
Benzo(b)fluoranthene	66		71		40-140	7		30
Benzo(k)fluoranthene	69		73		40-140	6		30
Benzo(a)pyrene	70		76		40-140	8		30
Indeno(1,2,3-cd)pyrene	62		64		40-140	3		30
Dibenzo(a,h)anthracene	66		71		40-140	7		30
Benzo(ghi)perylene	65		68		40-140	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		49		21-120
Phenol-d6	30		34		10-120
Nitrobenzene-d5	52		55		23-120
2-Fluorobiphenyl	56		63		15-120
2,4,6-Tribromophenol	63		67		10-120
4-Terphenyl-d14	58		60		41-149

Project Name: B14 GW**Lab Number:** L2435895**Project Number:** 21010214**Report Date:** 07/03/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2435895-01A	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-01B	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-01C	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-01D	Amber 100ml unpreserved	A	9	9	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435895-01E	Amber 100ml unpreserved	A	9	9	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435895-02A	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-02B	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-02C	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-02D	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435895-02E	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435895-03A	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-03B	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-03C	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-03D	Amber 100ml unpreserved	A	11	11	4.3	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2435895-03E	Amber 100ml unpreserved	A	11	11	4.3	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2435895-04A	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-04B	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-04C	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-04D	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2435895-04E	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2435895-05A	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-05B	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-05C	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)

Project Name: B14 GW
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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2435895-05D	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435895-05E	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435895-06A	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-06B	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-06C	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-06D	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-07A	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-07B	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-07C	Vial HCl preserved	A	NA		4.3	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2435895-07D	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2435895-07E	Amber 100ml unpreserved	A	7	7	4.3	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

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Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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Project Name: B14 GW
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REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		NEW JERSEY CHAIN OF CUSTODY Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page of		Date Rec'd in Lab 6/26/24		ALPHA Job # 12435895	
Client Information Client: <u>THA</u> Address: <u>THA</u> Phone: <u> </u> Fax: <u> </u> Email: <u> </u>		Project Information Project Name: <u>B14 GW</u> Project Location: <u> </u> Project # <u>21010214</u> (Use Project name as Project #) ☐ Project Manager: <u>BOB T.</u> ALPHAQuote #: <u> </u> Turn-Around Time Standard ☐ Due Date: <u> </u> Rush (only if pre approved) ☐ # of Days: <u> </u>		Deliverables ☐ NJ Full / Reduced ☐ EQUIS (1 File) ☐ EQUIS (4 File) ☐ Other		Billing Information ☐ Same as Client Info PO # <u> </u>		Regulatory Requirement ☐ SRS Residential/Non Residential ☐ SRS Impact to Groundwater ☐ NJ Ground Water Quality Standards ☐ NJ IGW SPLP Leachate Criteria ☐ Other		Site Information Is this site impacted by Petroleum? Yes ☐ Petroleum Product: <u> </u>	
These samples have been previously analyzed by Alpha ☐		For EPH, selection is REQUIRED: ☐ Category 1 ☐ Category 2		For VOC, selection is REQUIRED: ☐ 1,4-Dioxane ☐ 8011		Other project specific requirements/comments: <u>Please specify Metals or TAL.</u>		ANALYSIS		Sample Filtration ☐ Done ☐ Lab to do Preservation ☐ Lab to do <u>(Please Specify below)</u>	
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials		Sample Specific Comments	
<u>33895 -01</u>		<u>HIQ2R-P2M006</u>		<u>6/25/24 1115</u>		<u>GW</u>		<u>TP</u>		<u>PH 7.10</u>	
<u>02</u>		<u>HI2AR-MWS</u>		<u>1155</u>		<u>✓</u>		<u>✓</u>		<u> </u>	
<u>03</u>		<u>HIQ7R-P2M005</u>		<u>1245</u>		<u>✓</u>		<u>✓</u>		<u> </u>	
<u>04</u>		<u>HI16-MWS</u>		<u>1415</u>		<u>✓</u>		<u>✓</u>		<u> </u>	
<u>05</u>		<u>HI14-MWS</u>		<u>1505</u>		<u>✓</u>		<u>✓</u>		<u> </u>	
<u>06</u>		<u>TB-WT-01</u>		<u> </u>		<u> </u>		<u> </u>		<u> </u>	
<u>07</u>		<u>DUP</u>		<u> </u>		<u> </u>		<u> </u>		<u> </u>	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type <u>VA</u>		Preservative <u>BA</u>		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
Form No: 01-14 HC (rev. 30-Sept-2013)		Relinquished By: <u>Anthony Green</u>		Date/Time <u>6/25/24 1515</u>		Received By: <u>Nelson F. Lee</u>		Date/Time <u>6-25-24 1515</u>			
		<u>Anthony Green</u>		<u>6-25-24 1515</u>		<u>Anthony Green</u>		<u>6-25-24 1515</u>			



ANALYTICAL REPORT

Lab Number:	L2436238
Client:	Tradepoint Atlantic 1600 Sparrows Point Boulevard Baltimore, MD 21219
ATTN:	Robert Tworkowski
Phone:	(443) 649-5073
Project Name:	B14 GW
Project Number:	21010214
Report Date:	07/03/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2436238-01	HI21-MWS	WATER	Not Specified	06/24/24 10:20	06/26/24
L2436238-02	HI22-MWS	WATER	Not Specified	06/24/24 11:15	06/26/24
L2436238-03	HI13-MWS	WATER	Not Specified	06/24/24 12:35	06/26/24
L2436238-04	HI10-MWS	WATER	Not Specified	06/24/24 13:35	06/26/24
L2436238-05	TB-WT-01	WATER	Not Specified	06/24/24 00:00	06/26/24

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

L2436238-02: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (6%) and 2,4,6-tribromophenol (4%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

The WG1940992-4/-5 MS/MSD recoveries, performed on L2436238-03, are below the acceptance criteria for 3,3'-dichlorobenzidine (0%/0%) due to the concentration of this compound in the MS/MSD falling below the reported detection limit.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Caitlin Walukevich

Title: Technical Director/Representative

Date: 07/03/24

ORGANICS

VOLATILES

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-01
Client ID: HI21-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 10:20
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/01/24 07:01
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-01
Client ID: HI21-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 10:20
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	114		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-01
Client ID: HI21-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 10:20
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/01/24 07:01
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,2-Dichloroethane-d4	92			70-130		
4-Bromofluorobenzene	96			70-130		

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/01/24 07:29
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.6	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.46	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	111		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/01/24 07:29
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			91		70-130	
4-Bromofluorobenzene			95		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-03
Client ID: HI13-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 12:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/01/24 06:33
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.46	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-03
Client ID: HI13-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 12:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	112		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-03
Client ID: HI13-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 12:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/01/24 06:33
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,2-Dichloroethane-d4	92			70-130		
4-Bromofluorobenzene	96			70-130		

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-04
Client ID: HI10-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 13:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/01/24 07:56
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.88		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	0.42	J	ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-04
Client ID: HI10-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 13:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	0.42	J	ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	0.42	J	ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	116		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-04
Client ID: HI10-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 13:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/01/24 07:56
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,2-Dichloroethane-d4	94			70-130		
4-Bromofluorobenzene	94			70-130		

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-05
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/24/24 00:00
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/01/24 06:06
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-05
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/24/24 00:00
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	110		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-05
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/24/24 00:00
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/01/24 06:06
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			91		70-130	
4-Bromofluorobenzene			96		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/01/24 05:38
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1942038-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Cyclohexane	ND		ug/l	10	0.27
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/01/24 05:38
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1942038-5					
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/01/24 05:38
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-05 Batch: WG1942038-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	112		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/01/24 05:38
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-05 Batch: WG1942040-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
4-Bromofluorobenzene	96		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1942038-3 WG1942038-4								
Dichlorodifluoromethane	95		98		36-147	3		20
Chloromethane	90		94		64-130	4		20
Vinyl chloride	99		100		55-140	1		20
Bromomethane	130		130		39-139	0		20
Chloroethane	100		92		55-138	8		20
Trichlorofluoromethane	110		110		62-150	0		20
1,1-Dichloroethene	100		110		61-145	10		20
Carbon disulfide	100		100		51-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		120		70-130	9		20
Methylene chloride	96		98		70-130	2		20
Acetone	100		100		58-148	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Methyl Acetate	100		94		70-130	6		20
Methyl tert butyl ether	96		93		63-130	3		20
1,1-Dichloroethane	100		100		70-130	0		20
cis-1,2-Dichloroethene	99		100		70-130	1		20
Cyclohexane	100		100		70-130	0		20
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	100		100		63-132	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
2-Butanone	97		96		63-138	1		20
Benzene	100		99		70-130	1		20
1,2-Dichloroethane	100		100		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1942038-3 WG1942038-4								
Trichloroethene	95		92		70-130	3		20
1,2-Dichloropropane	98		97		70-130	1		20
Bromodichloromethane	100		100		67-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
Toluene	94		95		70-130	1		20
Tetrachloroethene	99		99		70-130	0		20
4-Methyl-2-pentanone	88		89		59-130	1		20
trans-1,3-Dichloropropene	91		91		70-130	0		20
1,1,2-Trichloroethane	100		96		70-130	4		20
Dibromochloromethane	100		99		63-130	1		20
1,2-Dibromoethane	100		100		70-130	0		20
2-Hexanone	93		90		57-130	3		20
Chlorobenzene	96		97		75-130	1		20
Ethylbenzene	95		95		70-130	0		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	90		90		70-130	0		20
Styrene	90		90		70-130	0		20
Bromoform	93		90		54-136	3		20
Isopropylbenzene	99		100		70-130	1		20
1,1,2,2-Tetrachloroethane	110		110		67-130	0		20
1,3-Dichlorobenzene	97		98		70-130	1		20
1,4-Dichlorobenzene	98		99		70-130	1		20
1,2-Dichlorobenzene	95		98		70-130	3		20

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 Batch: WG1942038-3 WG1942038-4								
1,2-Dibromo-3-chloropropane	100		100		41-144	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		94		70-130
Toluene-d8	99		98		70-130
4-Bromofluorobenzene	104		104		70-130
Dibromofluoromethane	100		99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-05 Batch: WG1942040-3 WG1942040-4								
1,1,2,2-Tetrachloroethane	88		93		70-130	6		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		94		70-130
4-Bromofluorobenzene	98		97		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1942038-6 WG1942038-7 QC Sample: L2436238-03 Client ID: HI13-MWS												
Dichlorodifluoromethane	ND	10	11	110		10	100		36-147	10		20
Chloromethane	ND	10	10	100		10	100		64-130	0		20
Vinyl chloride	ND	10	12	120		12	120		55-140	0		20
Bromomethane	ND	10	9.1	91		10	100		39-139	9		20
Chloroethane	ND	10	12	120		11	110		55-138	9		20
Trichlorofluoromethane	ND	10	13	130		12	120		62-150	8		20
1,1-Dichloroethene	ND	10	12	120		12	120		61-145	0		20
Carbon disulfide	ND	10	12	120		12	120		51-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	12	120		12	120		70-130	0		20
Methylene chloride	ND	10	10	100		11	110		70-130	10		20
Acetone	ND	10	11	110		9.9	99		58-148	11		20
trans-1,2-Dichloroethene	ND	10	11	110		11	110		70-130	0		20
Methyl Acetate	ND	10	9.6	96		9.1	91		70-130	5		20
Methyl tert butyl ether	ND	10	9.4	94		9.5	95		63-130	1		20
1,1-Dichloroethane	ND	10	11	110		11	110		70-130	0		20
cis-1,2-Dichloroethene	ND	10	11	110		11	110		70-130	0		20
Cyclohexane	ND	10	11	110		11	110		70-130	0		20
Chloroform	ND	10	12	120		11	110		70-130	9		20
Carbon tetrachloride	ND	10	12	120		11	110		63-132	9		20
1,1,1-Trichloroethane	ND	10	12	120		12	120		67-130	0		20
2-Butanone	ND	10	9.9	99		9.3	93		63-138	6		20
Benzene	0.46J	10	11	110		11	110		70-130	0		20
1,2-Dichloroethane	ND	10	11	110		10	100		70-130	10		20

Matrix Spike Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1942038-6 WG1942038-7 QC Sample: L2436238-03 Client ID: HI13-MWS												
Trichloroethene	ND	10	10	100		9.7	97		70-130	3		20
1,2-Dichloropropane	ND	10	10	100		10	100		70-130	0		20
Bromodichloromethane	ND	10	11	110		11	110		67-130	0		20
cis-1,3-Dichloropropene	ND	10	10	100		10	100		70-130	0		20
Toluene	ND	10	10	100		10	100		70-130	0		20
Tetrachloroethene	ND	10	10	100		10	100		70-130	0		20
4-Methyl-2-pentanone	ND	10	9.1	91		8.8	88		59-130	3		20
trans-1,3-Dichloropropene	ND	10	9.1	91		8.9	89		70-130	2		20
1,1,2-Trichloroethane	ND	10	9.7	97		9.4	94		70-130	3		20
Dibromochloromethane	ND	10	10	100		10	100		63-130	0		20
1,2-Dibromoethane	ND	10	10	100		10	100		70-130	0		20
2-Hexanone	ND	10	9.0	90		9.0	90		57-130	0		20
Chlorobenzene	ND	10	10	100		10	100		75-130	0		20
Ethylbenzene	ND	10	9.9	99		10	100		70-130	1		20
p/m-Xylene	ND	20	19	95		19	95		70-130	0		20
o-Xylene	ND	20	19	95		19	95		70-130	0		20
Styrene	ND	20	18	90		18	90		70-130	0		20
Bromoform	ND	10	9.2	92		9.1	91		54-136	1		20
Isopropylbenzene	ND	10	11	110		11	110		70-130	0		20
1,1,2,2-Tetrachloroethane	ND	10	11	110		11	110		67-130	0		20
1,3-Dichlorobenzene	ND	10	9.9	99		9.9	99		70-130	0		20
1,4-Dichlorobenzene	ND	10	9.8	98		9.9	99		70-130	1		20
1,2-Dichlorobenzene	ND	10	9.8	98		9.7	97		70-130	1		20

Matrix Spike Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1942038-6 WG1942038-7 QC Sample: L2436238-03 Client ID: HI13-MWS												
1,2-Dibromo-3-chloropropane	ND	10	9.8	98		9.4	94		41-144	4		20
1,2,4-Trichlorobenzene	ND	10	9.8	98		10	100		70-130	2		20
1,2,3-Trichlorobenzene	ND	10	10	100		10	100		70-130	0		20

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		91		70-130
4-Bromofluorobenzene	101		103		70-130
Dibromofluoromethane	98		101		70-130
Toluene-d8	98		98		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG1942040-6 WG1942040-7 QC Sample: L2436238-03 Client ID: HI13-MWS												
1,1,2,2-Tetrachloroethane	ND	0.1	0.096	96		0.075	75		70-130	25		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		94		70-130
4-Bromofluorobenzene	94		94		70-130

SEMIVOLATILES

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-01
Client ID: HI21-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 10:20
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/01/24 05:51
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.43	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-01
Client ID: HI21-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 10:20
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	23		21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	57		15-120
2,4,6-Tribromophenol	36		10-120
4-Terphenyl-d14	59		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-01
Client ID: HI21-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 10:20
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 15:28
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	ND		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	ND		ug/l	0.10	0.02	1
Fluorene	ND		ug/l	0.10	0.03	1
Phenanthrene	ND		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	ND		ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	61		15-120
4-Terphenyl-d14	63		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/01/24 06:15
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	0.54	J	ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	21-120
Phenol-d6	6	Q	10-120
Nitrobenzene-d5	53		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	4	Q	10-120
4-Terphenyl-d14	54		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/03/24 12:21
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.08	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	0.05	J	ug/l	0.10	0.02	1
Acenaphthene	0.04	J	ug/l	0.10	0.02	1
Fluorene	0.04	J	ug/l	0.10	0.03	1
Phenanthrene	0.49		ug/l	0.05	0.04	1
Anthracene	0.18		ug/l	0.10	0.02	1
Fluoranthene	0.77		ug/l	0.10	0.03	1
Pyrene	0.60		ug/l	0.10	0.04	1
Benzo(a)anthracene	0.38		ug/l	0.05	0.03	1
Chrysene	0.35		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	0.50		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	0.16		ug/l	0.10	0.03	1
Benzo(a)pyrene	0.38		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	0.28		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	0.07		ug/l	0.05	0.02	1
Benzo(ghi)perylene	0.26		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	71		15-120
4-Terphenyl-d14	79		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02 **RE**
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/03/24 12:00
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-02 **RE**
Client ID: HI22-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 11:15
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	24		21-120
Phenol-d6	24		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	65		15-120
2,4,6-Tribromophenol	42		10-120
4-Terphenyl-d14	63		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-03
Client ID: HI13-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 12:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 06/30/24 23:38
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.68	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-03
Client ID: HI13-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 12:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	17	Q	21-120
Phenol-d6	16		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	31		10-120
4-Terphenyl-d14	73		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-03
Client ID: HI13-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 12:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 16:00
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.12		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	ND		ug/l	0.10	0.02	1
Fluorene	ND		ug/l	0.10	0.03	1
Phenanthrene	ND		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	ND		ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	97		23-120
2-Fluorobiphenyl	74		15-120
4-Terphenyl-d14	69		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-04
Client ID: HI10-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 13:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/01/24 06:39
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.92	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	31		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	1.6	J	ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-04
Client ID: HI10-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 13:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	0.46	J	ug/l	2.0	0.32	1
Acenaphthene	1.9	J	ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	1.6	J	ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	2.7		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	3.2		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	0.49	J	ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	59		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	60		10-120
4-Terphenyl-d14	54		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

SAMPLE RESULTS

Lab ID: L2436238-04
Client ID: HI10-MWS
Sample Location: Not Specified

Date Collected: 06/24/24 13:35
Date Received: 06/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 16:48
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	30		ug/l	0.10	0.02	1
2-Methylnaphthalene	2.0		ug/l	0.10	0.03	1
Acenaphthylene	0.58		ug/l	0.10	0.02	1
Acenaphthene	2.3		ug/l	0.10	0.02	1
Fluorene	2.0		ug/l	0.10	0.03	1
Phenanthrene	2.7		ug/l	0.05	0.04	1
Anthracene	0.45		ug/l	0.10	0.02	1
Fluoranthene	0.70		ug/l	0.10	0.03	1
Pyrene	0.53		ug/l	0.10	0.04	1
Benzo(a)anthracene	0.06		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	98		23-120
2-Fluorobiphenyl	72		15-120
4-Terphenyl-d14	67		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1940992-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1940992-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/29/24 04:20
Analyst: ALS

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1940992-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	23		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	66		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	33		10-120
4-Terphenyl-d14	67		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 06/29/24 14:39
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 06/28/24 16:23

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-04 Batch: WG1940994-1					
Naphthalene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	ND		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	ND		ug/l	0.10	0.03
Pyrene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	97		23-120
2-Fluorobiphenyl	73		15-120
4-Terphenyl-d14	75		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/03/24 08:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1942560-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/03/24 08:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1942560-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/03/24 08:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1942560-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	52		10-120
4-Terphenyl-d14	53		41-149

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1940992-2 WG1940992-3								
Benzaldehyde	59		60		40-140	2		30
Phenol	31		37		12-110	18		30
Bis(2-chloroethyl)ether	60		65		40-140	8		30
2-Chlorophenol	60		63		27-123	5		30
2-Methylphenol	53		62		30-130	16		30
Bis(2-chloroisopropyl)ether	58		60		40-140	3		30
Acetophenone	58		62		39-129	7		30
n-Nitrosodi-n-propylamine	64		66		29-132	3		30
3-Methylphenol/4-Methylphenol	53		58		30-130	9		30
Hexachloroethane	60		57		40-140	5		30
Nitrobenzene	59		61		40-140	3		30
Isophorone	62		62		40-140	0		30
2,4-Dimethylphenol	56		57		30-130	2		30
Bis(2-chloroethoxy)methane	60		61		40-140	2		30
2,4-Dichlorophenol	62		66		30-130	6		30
Naphthalene	62		61		40-140	2		30
4-Chloroaniline	57		57		40-140	0		30
Hexachlorobutadiene	60		56		40-140	7		30
Caprolactam	17		21		10-130	21		30
2-Methylnaphthalene	61		61		40-140	0		30
Hexachlorocyclopentadiene	53		56		40-140	6		30
1,2,4,5-Tetrachlorobenzene	58		56		2-134	4		30
2,4,6-Trichlorophenol	67		68		30-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1940992-2 WG1940992-3								
2,4,5-Trichlorophenol	62		63		30-130	2		30
Biphenyl	58		58		40-140	0		30
2-Chloronaphthalene	61		60		40-140	2		30
2-Nitroaniline	63		65		52-143	3		30
2,6-Dinitrotoluene	65		66		40-140	2		30
Acenaphthylene	64		66		45-123	3		30
Acenaphthene	66		64		37-111	3		30
2,4-Dinitrophenol	46		41		20-130	11		30
2,4-Dinitrotoluene	65		61		48-143	6		30
2,3,4,6-Tetrachlorophenol	68		67		54-145	1		30
Diethyl phthalate	66		65		40-140	2		30
Fluorene	67		65		40-140	3		30
4-Nitroaniline	64		70		51-143	9		30
NDPA/DPA	67		66		40-140	2		30
Hexachlorobenzene	67		66		40-140	2		30
Pentachlorophenol	62		60		9-103	3		30
Phenanthrene	69		64		40-140	8		30
Anthracene	70		64		40-140	9		30
Carbazole	66		63		55-144	5		30
Di-n-butylphthalate	67		63		40-140	6		30
Fluoranthene	66		63		40-140	5		30
Pyrene	66		63		26-127	5		30
3,3'-Dichlorobenzidine	79		71		40-140	11		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1940992-2 WG1940992-3								
Benzo(a)anthracene	70		62		40-140	12		30
Chrysene	73		64		40-140	13		30
Bis(2-ethylhexyl)phthalate	69		62		40-140	11		30
Di-n-octylphthalate	64		59		40-140	8		30
Benzo(b)fluoranthene	67		63		40-140	6		30
Benzo(k)fluoranthene	67		64		40-140	5		30
Benzo(a)pyrene	72		69		40-140	4		30
Indeno(1,2,3-cd)pyrene	75		67		40-140	11		30
Dibenzo(a,h)anthracene	80		70		40-140	13		30
Benzo(ghi)perylene	84		76		40-140	10		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		47		21-120
Phenol-d6	30		34		10-120
Nitrobenzene-d5	59		62		23-120
2-Fluorobiphenyl	63		63		15-120
2,4,6-Tribromophenol	70		70		10-120
4-Terphenyl-d14	63		60		41-149

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1940994-2 WG1940994-3								
Naphthalene	64		62		40-140	3		40
2-Methylnaphthalene	71		69		40-140	3		40
Acenaphthylene	73		70		40-140	4		40
Acenaphthene	76		69		37-111	10		40
Fluorene	77		69		40-140	11		40
Phenanthrene	77		66		40-140	15		40
Anthracene	83		72		40-140	14		40
Fluoranthene	82		70		40-140	16		40
Pyrene	81		69		26-127	16		40
Benzo(a)anthracene	81		72		40-140	12		40
Chrysene	87		71		40-140	20		40
Benzo(b)fluoranthene	87		78		40-140	11		40
Benzo(k)fluoranthene	88		71		40-140	21		40
Benzo(a)pyrene	94		80		40-140	16		40
Indeno(1,2,3-cd)pyrene	99		81		40-140	20		40
Dibenzo(a,h)anthracene	96		79		40-140	19		40
Benzo(ghi)perylene	92		75		40-140	20		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1940994-2 WG1940994-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	89		86		23-120
2-Fluorobiphenyl	66		64		15-120
4-Terphenyl-d14	76		64		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1942560-2 WG1942560-3								
Benzaldehyde	54		58		40-140	7		30
Phenol	33		35		12-110	6		30
Bis(2-chloroethyl)ether	58		68		40-140	16		30
2-Chlorophenol	59		66		27-123	11		30
2-Methylphenol	56		64		30-130	13		30
Bis(2-chloroisopropyl)ether	55		62		40-140	12		30
Acetophenone	55		61		39-129	10		30
n-Nitrosodi-n-propylamine	55		66		29-132	18		30
3-Methylphenol/4-Methylphenol	55		59		30-130	7		30
Hexachloroethane	54		64		40-140	17		30
Nitrobenzene	58		66		40-140	13		30
Isophorone	56		64		40-140	13		30
2,4-Dimethylphenol	60		61		30-130	2		30
Bis(2-chloroethoxy)methane	55		63		40-140	14		30
2,4-Dichlorophenol	58		65		30-130	11		30
Naphthalene	57		64		40-140	12		30
4-Chloroaniline	56		63		40-140	12		30
Hexachlorobutadiene	59		65		40-140	10		30
Caprolactam	23		24		10-130	4		30
2-Methylnaphthalene	57		64		40-140	12		30
Hexachlorocyclopentadiene	49		50		40-140	2		30
1,2,4,5-Tetrachlorobenzene	56		60		2-134	7		30
2,4,6-Trichlorophenol	61		68		30-130	11		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1942560-2 WG1942560-3								
2,4,5-Trichlorophenol	62		72		30-130	15		30
Biphenyl	55		62		40-140	12		30
2-Chloronaphthalene	60		64		40-140	6		30
2-Nitroaniline	64		65		52-143	2		30
2,6-Dinitrotoluene	58		66		40-140	13		30
Acenaphthylene	61		68		45-123	11		30
Acenaphthene	66		69		37-111	4		30
2,4-Dinitrophenol	56		61		20-130	9		30
2,4-Dinitrotoluene	62		71		48-143	14		30
2,3,4,6-Tetrachlorophenol	66		74		54-145	11		30
Diethyl phthalate	61		66		40-140	8		30
Fluorene	65		67		40-140	3		30
4-Nitroaniline	63		68		51-143	8		30
NDPA/DPA	63		67		40-140	6		30
Hexachlorobenzene	63		66		40-140	5		30
Pentachlorophenol	57		65		9-103	13		30
Phenanthrene	64		69		40-140	8		30
Anthracene	64		70		40-140	9		30
Carbazole	65		71		55-144	9		30
Di-n-butylphthalate	63		68		40-140	8		30
Fluoranthene	64		68		40-140	6		30
Pyrene	66		70		26-127	6		30
3,3'-Dichlorobenzidine	65		72		40-140	10		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1942560-2 WG1942560-3								
Benzo(a)anthracene	65		69		40-140	6		30
Chrysene	68		74		40-140	8		30
Bis(2-ethylhexyl)phthalate	60		65		40-140	8		30
Di-n-octylphthalate	62		66		40-140	6		30
Benzo(b)fluoranthene	66		71		40-140	7		30
Benzo(k)fluoranthene	69		73		40-140	6		30
Benzo(a)pyrene	70		76		40-140	8		30
Indeno(1,2,3-cd)pyrene	62		64		40-140	3		30
Dibenzo(a,h)anthracene	66		71		40-140	7		30
Benzo(ghi)perylene	65		68		40-140	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		49		21-120
Phenol-d6	30		34		10-120
Nitrobenzene-d5	52		55		23-120
2-Fluorobiphenyl	56		63		15-120
2,4,6-Tribromophenol	63		67		10-120
4-Terphenyl-d14	58		60		41-149

Matrix Spike Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1940992-4 WG1940992-5 QC Sample: L2436238-03 Client ID: HI13-MWS												
Benzaldehyde	ND	20	12	60		13	65		40-140	8		30
Phenol	0.68J	20	8.6	43		3.8J	19		12-110	77	Q	30
Bis(2-chloroethyl)ether	ND	20	14	70		14	70		40-140	0		30
2-Chlorophenol	ND	20	13	65		5.3	27		27-123	84	Q	30
2-Methylphenol	ND	20	12	60		9.9	50		30-130	19		30
Bis(2-chloroisopropyl)ether	ND	20	14	70		15	75		40-140	7		30
Acetophenone	ND	20	14	70		14	70		39-129	0		30
n-Nitrosodi-n-propylamine	ND	20	13	65		14	70		29-132	7		30
3-Methylphenol/4-Methylphenol	ND	20	12	60		9.2	46		30-130	26		30
Hexachloroethane	ND	20	13	65		14	70		40-140	7		30
Nitrobenzene	ND	20	15	75		15	75		40-140	0		30
Isophorone	ND	20	12	60		13	65		40-140	8		30
2,4-Dimethylphenol	ND	20	9.7	49		9.6	48		30-130	1		30
Bis(2-chloroethoxy)methane	ND	20	14	70		14	70		40-140	0		30
2,4-Dichlorophenol	ND	20	14	70		5.4	27	Q	30-130	89	Q	30
Naphthalene	ND	20	14	70		15	75		40-140	7		30
4-Chloroaniline	ND	20	8.3	42		9.0	45		40-140	8		30
Hexachlorobutadiene	ND	20	14	70		15	75		40-140	7		30
Caprolactam	ND	20	4.5J	23		5.0J	25		10-130	11		30
2-Methylnaphthalene	ND	20	14	70		15	75		40-140	7		30
Hexachlorocyclopentadiene	ND	20	12J	60		13J	65		40-140	8		30
1,2,4,5-Tetrachlorobenzene	ND	20	13	65		14	70		2-134	7		30
2,4,6-Trichlorophenol	ND	20	14	70		3.2J	16	Q	30-130	126	Q	30

Matrix Spike Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1940992-4 WG1940992-5 QC Sample: L2436238-03 Client ID: HI13-MWS												
2,4,5-Trichlorophenol	ND	20	13	65		3.8J	19	Q	30-130	110	Q	30
Biphenyl	ND	20	14	70		14	70		40-140	0		30
2-Chloronaphthalene	ND	20	14	70		14	70		40-140	0		30
2-Nitroaniline	ND	20	7.0	35	Q	6.7	34	Q	52-143	4		30
2,6-Dinitrotoluene	ND	20	14	70		15	75		40-140	7		30
Acenaphthylene	ND	20	13	65		14	70		45-123	7		30
Acenaphthene	ND	20	14	70		15	75		37-111	7		30
2,4-Dinitrophenol	ND	20	21	110		11J	55		20-130	63	Q	30
2,4-Dinitrotoluene	ND	20	15	75		15	75		48-143	0		30
2,3,4,6-Tetrachlorophenol	ND	20	15	75		2.8J	14	Q	54-145	137	Q	30
Diethyl phthalate	ND	20	14	70		15	75		40-140	7		30
Fluorene	ND	20	14	70		15	75		40-140	7		30
4-Nitroaniline	ND	20	2.3J	12	Q	2.2J	11	Q	51-143	4		30
NDPA/DPA	ND	20	13	65		13	65		40-140	0		30
Hexachlorobenzene	ND	20	14	70		14	70		40-140	0		30
Pentachlorophenol	ND	20	15	75		2.5J	13		9-103	143	Q	30
Phenanthrene	ND	20	14	70		14	70		40-140	0		30
Anthracene	ND	20	14	70		14	70		40-140	0		30
Carbazole	ND	20	13	65		14	70		55-144	7		30
Di-n-butylphthalate	ND	20	14	70		15	75		40-140	7		30
Fluoranthene	ND	20	13	65		14	70		40-140	7		30
Pyrene	ND	20	13	65		13	65		26-127	0		30
3,3'-Dichlorobenzidine	ND	20	ND	0	Q	ND	0	Q	40-140	NC		30

Matrix Spike Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1940992-4 WG1940992-5 QC Sample: L2436238-03 Client ID: HI13-MWS												
Benzo(a)anthracene	ND	20	14	70		14	70		40-140	0		30
Chrysene	ND	20	14	70		15	75		40-140	7		30
Bis(2-ethylhexyl)phthalate	ND	20	16	80		16	80		40-140	0		30
Di-n-octylphthalate	ND	20	17	85		17	85		40-140	0		30
Benzo(b)fluoranthene	ND	20	14	70		14	70		40-140	0		30
Benzo(k)fluoranthene	ND	20	14	70		14	70		40-140	0		30
Benzo(a)pyrene	ND	20	14	70		14	70		40-140	0		30
Indeno(1,2,3-cd)pyrene	ND	20	15	75		14	70		40-140	7		30
Dibenzo(a,h)anthracene	ND	20	15	75		15	75		40-140	0		30
Benzo(ghi)perylene	ND	20	14	70		14	70		40-140	0		30

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	80		23		10-120
2-Fluorobiphenyl	71		72		15-120
2-Fluorophenol	49		13	Q	21-120
4-Terphenyl-d14	68		68		41-149
Nitrobenzene-d5	69		76		23-120
Phenol-d6	35		17		10-120

Project Name: B14 GW**Lab Number:** L2436238**Project Number:** 21010214**Report Date:** 07/03/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2436238-01A	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-01B	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-01C	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-01D	Amber 100ml unpreserved	A	7	7	2.4	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2436238-01E	Amber 100ml unpreserved	A	7	7	2.4	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2436238-02A	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-02B	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-02C	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-02D	Amber 100ml unpreserved	A	7	7	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-02E	Amber 100ml unpreserved	A	7	7	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-03A	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03A1	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03A2	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03B	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03B1	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03B2	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03C	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03C1	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03C2	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-03D	Amber 100ml unpreserved	A	8	8	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-03D1	Amber 100ml unpreserved	A	8	8	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-03D2	Amber 100ml unpreserved	A	8	8	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-03E	Amber 100ml unpreserved	A	8	8	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)

Project Name: B14 GW
Project Number: 21010214

Serial_No:07032417:16
Lab Number: L2436238
Report Date: 07/03/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2436238-03E1	Amber 100ml unpreserved	A	8	8	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-03E2	Amber 100ml unpreserved	A	8	8	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-04A	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-04B	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-04C	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-04D	Amber 100ml unpreserved	A	12	12	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-04E	Amber 100ml unpreserved	A	12	12	2.4	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436238-05A	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-05B	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-05C	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-05D	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-05E	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-05F	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-05G	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436238-05H	Vial HCl preserved	A	NA		2.4	Y	Absent		PA-8260-SIM(14),PA-8260(14)

Project Name: B14 GW
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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: B14 GW
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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2436238
Report Date: 07/03/24

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases**

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

CHAIN OF CUSTODY

PAGE 1 OF 1

Client Information

Client: **TPA**
Address:

Phone:

Fax:

Email:

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Project Information

Project Name: **B14-GW**

Project Location:

Project #: **21010219**

Project Manager: **Bob T**

ALPHA Quote #:

Turn-Around Time

☐ Standard

☐ RUSH (only confirmed if pre-approved!)

Date Due:

Time:

Date Rec'd in Lab: **6/27/24**

ALPHA Job #: **12436238**

Report Information - Data Deliverables

☐ FAX

☐ EMAIL

☐ ADEx

☐ Add'l Deliverables

☐ Same as Client info

PO #:

Regulatory Requirements/Report Limits

State /Fed Program

Criteria

SAMPLE HANDLING

Filtration _____

☐ Done

☐ Not needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	ANALYSIS										TOTAL # BOTTLES
		Date	Time													
36238-01	HI 21-MWS	6/24/24	1020	GW	T	X	X									5
-02	HI 22-MWS		1115			X	X									5
-03	HI 13-MWS		1235			X	X									15
	HI 10															
-04	HI 10-MWS		1335			X	X									5
-05	TB-Wt-01					X										1

Rel: **6/27/24 0400**
Mound **06127124-0400**

Container Type **U A**

Preservative **B A**

Relinquished By:

Date/Time

Received By:

Date/Time

Anthony Green 6/27/24 0200

Anthony Green 6/27/24 0200

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.



ANALYTICAL REPORT

Lab Number:	L2436598
Client:	Tradepoint Atlantic 1600 Sparrows Point Boulevard Baltimore, MD 21219
ATTN:	Robert Tworkowski
Phone:	(443) 649-5073
Project Name:	Q2 B14 GW
Project Number:	21010214
Report Date:	07/08/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2436598-01	HI19-MWS	WATER	B14	06/27/24 10:55	06/27/24
L2436598-02	HI17-MWS	WATER	B14	06/27/24 12:00	06/27/24
L2436598-03	HI15-MWS	WATER	B14	06/27/24 13:00	06/27/24
L2436598-04	TB-WT-01	WATER	B14	06/27/24 00:00	06/27/24

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

L2436598-03: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (4%) and phenol-d6 (6%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

Semivolatile Organics by SIM

The WG1942727-1 Method Blank, associated with L2436598-01, -02, and -03, has concentrations above the reporting limits for phenanthrene, fluoranthene and pyrene. The samples were re-extracted with the method required holding time exceeded and the method blank was non-detect for these target compounds. The results of both extractions are reported. The original sample result is reported with a "B" qualifier.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 07/08/24

ORGANICS

VOLATILES

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-01

Date Collected: 06/27/24 10:55

Client ID: HI19-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 07/03/24 08:41

Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	7.4		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	3.0		ug/l	0.75	0.20	1

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-01

Date Collected: 06/27/24 10:55

Client ID: HI19-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	0.19	J	ug/l	0.50	0.17	1
p/m-Xylene	1.8		ug/l	1.0	0.33	1
o-Xylene	0.99	J	ug/l	1.0	0.39	1
Xylenes, Total	2.8	J	ug/l	1.0	0.33	1
Styrene	0.54	J	ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	109		70-130
Dibromofluoromethane	109		70-130

Project Name: Q2 B14 GW**Lab Number:** L2436598**Project Number:** 21010214**Report Date:** 07/08/24**SAMPLE RESULTS**

Lab ID: L2436598-01

Date Collected: 06/27/24 10:55

Client ID: HI19-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D-SIM(M)

Analytical Date: 07/03/24 08:41

Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS-SIM - Westborough Lab

1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
4-Bromofluorobenzene	95		70-130

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-02
Client ID: HI17-MWS
Sample Location: B14

Date Collected: 06/27/24 12:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/03/24 09:09
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.6	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	27		ug/l	0.75	0.20	1

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-02

Date Collected: 06/27/24 12:00

Client ID: HI17-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	104		70-130

Project Name: Q2 B14 GW**Lab Number:** L2436598**Project Number:** 21010214**Report Date:** 07/08/24**SAMPLE RESULTS**

Lab ID: L2436598-02

Date Collected: 06/27/24 12:00

Client ID: HI17-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D-SIM(M)

Analytical Date: 07/03/24 09:09

Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS-SIM - Westborough Lab

1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	85		70-130
4-Bromofluorobenzene	96		70-130

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-03

Date Collected: 06/27/24 13:00

Client ID: HI15-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 07/03/24 09:37

Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	0.46	J	ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	1.9	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-03

Date Collected: 06/27/24 13:00

Client ID: HI15-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	110		70-130

Project Name: Q2 B14 GW**Lab Number:** L2436598**Project Number:** 21010214**Report Date:** 07/08/24**SAMPLE RESULTS**

Lab ID: L2436598-03

Date Collected: 06/27/24 13:00

Client ID: HI15-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D-SIM(M)

Analytical Date: 07/03/24 09:37

Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS-SIM - Westborough Lab

1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
4-Bromofluorobenzene	96		70-130

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-04

Date Collected: 06/27/24 00:00

Client ID: TB-WT-01

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D

Analytical Date: 07/03/24 08:13

Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	0.32	J	ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-04
Client ID: TB-WT-01
Sample Location: B14

Date Collected: 06/27/24 00:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	112		70-130

Project Name: Q2 B14 GW**Lab Number:** L2436598**Project Number:** 21010214**Report Date:** 07/08/24**SAMPLE RESULTS**

Lab ID: L2436598-04

Date Collected: 06/27/24 00:00

Client ID: TB-WT-01

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260D-SIM(M)

Analytical Date: 07/03/24 08:13

Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Volatile Organics by GC/MS-SIM - Westborough Lab

1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
4-Bromofluorobenzene	96		70-130

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 07/03/24 06:50
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1943317-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Cyclohexane	ND		ug/l	10	0.27
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 07/03/24 06:50
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1943317-5					
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/03/24 06:50
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1943317-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	110		70-130

Project Name: Q2 B14 GW**Project Number:** 21010214**Lab Number:** L2436598**Report Date:** 07/08/24**Method Blank Analysis**
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)

Analytical Date: 07/03/24 06:50

Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-04 Batch: WG1943318-5					
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
4-Bromofluorobenzene	97		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1943317-3 WG1943317-4								
Dichlorodifluoromethane	78		86		36-147	10		20
Chloromethane	77		82		64-130	6		20
Vinyl chloride	86		94		55-140	9		20
Bromomethane	75		89		39-139	17		20
Chloroethane	86		100		55-138	15		20
Trichlorofluoromethane	100		110		62-150	10		20
1,1-Dichloroethene	89		100		61-145	12		20
Carbon disulfide	90		98		51-130	9		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	100		110		70-130	10		20
Methylene chloride	86		94		70-130	9		20
Acetone	88		91		58-148	3		20
trans-1,2-Dichloroethene	92		98		70-130	6		20
Methyl Acetate	85		91		70-130	7		20
Methyl tert butyl ether	88		94		63-130	7		20
1,1-Dichloroethane	87		94		70-130	8		20
cis-1,2-Dichloroethene	90		100		70-130	11		20
Cyclohexane	94		100		70-130	6		20
Chloroform	94		99		70-130	5		20
Carbon tetrachloride	93		100		63-132	7		20
1,1,1-Trichloroethane	98		110		67-130	12		20
2-Butanone	87		93		63-138	7		20
Benzene	90		95		70-130	5		20
1,2-Dichloroethane	91		97		70-130	6		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1943317-3 WG1943317-4								
Trichloroethene	85		95		70-130	11		20
1,2-Dichloropropane	88		94		70-130	7		20
Bromodichloromethane	93		100		67-130	7		20
cis-1,3-Dichloropropene	92		100		70-130	8		20
Toluene	87		90		70-130	3		20
Tetrachloroethene	93		96		70-130	3		20
4-Methyl-2-pentanone	85		84		59-130	1		20
trans-1,3-Dichloropropene	87		87		70-130	0		20
1,1,2-Trichloroethane	96		92		70-130	4		20
Dibromochloromethane	93		95		63-130	2		20
1,2-Dibromoethane	94		97		70-130	3		20
2-Hexanone	86		87		57-130	1		20
Chlorobenzene	89		91		75-130	2		20
Ethylbenzene	87		91		70-130	4		20
p/m-Xylene	85		90		70-130	6		20
o-Xylene	85		90		70-130	6		20
Styrene	80		85		70-130	6		20
Bromoform	85		84		54-136	1		20
Isopropylbenzene	93		95		70-130	2		20
1,1,2,2-Tetrachloroethane	110		100		67-130	10		20
1,3-Dichlorobenzene	89		92		70-130	3		20
1,4-Dichlorobenzene	91		93		70-130	2		20
1,2-Dichlorobenzene	89		90		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1943317-3 WG1943317-4								
1,2-Dibromo-3-chloropropane	98		93		41-144	5		20
1,2,4-Trichlorobenzene	95		96		70-130	1		20
1,2,3-Trichlorobenzene	93		93		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	89		92		70-130
Toluene-d8	98		97		70-130
4-Bromofluorobenzene	106		101		70-130
Dibromofluoromethane	95		99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1943318-3 WG1943318-4								
1,1,2,2-Tetrachloroethane	84		87		70-130	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	89		89		70-130
4-Bromofluorobenzene	98		98		70-130

SEMIVOLATILES

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-01
Client ID: HI19-MWS
Sample Location: B14

Date Collected: 06/27/24 10:55
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/04/24 10:44
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/03/24 07:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.70	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	7.6		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	26		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	17		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	1.6	J	ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	0.56	J	ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-01
Client ID: HI19-MWS
Sample Location: B14

Date Collected: 06/27/24 10:55
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	0.69	J	ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	0.97	J	ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	1.4	J	ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	1.0	J	ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	0.49	J	ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	25		21-120
Phenol-d6	22		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	74		15-120
2,4,6-Tribromophenol	45		10-120
4-Terphenyl-d14	83		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-01
Client ID: HI19-MWS
Sample Location: B14

Date Collected: 06/27/24 10:55
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 15:29
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/03/24 07:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	16		ug/l	0.10	0.02	1
2-Methylnaphthalene	1.7		ug/l	0.10	0.03	1
Acenaphthylene	0.37		ug/l	0.10	0.02	1
Acenaphthene	0.76		ug/l	0.10	0.02	1
Fluorene	0.99		ug/l	0.10	0.03	1
Phenanthrene	1.4		ug/l	0.05	0.04	1
Anthracene	0.22		ug/l	0.10	0.02	1
Fluoranthene	0.49	B	ug/l	0.10	0.03	1
Pyrene	0.32	B	ug/l	0.10	0.04	1
Benzo(a)anthracene	0.04	J	ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	88		23-120
2-Fluorobiphenyl	69		15-120
4-Terphenyl-d14	77		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-01
Client ID: HI19-MWS
Sample Location: B14

Date Collected: 06/27/24 10:55
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/08/24 12:31
Analyst: MRG

Extraction Method: EPA 3510C
Extraction Date: 07/07/24 15:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	3.3		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.80		ug/l	0.10	0.03	1
Acenaphthylene	0.36		ug/l	0.10	0.02	1
Acenaphthene	0.83		ug/l	0.10	0.02	1
Fluorene	1.1		ug/l	0.10	0.03	1
Phenanthrene	1.4		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	0.60		ug/l	0.10	0.03	1
Pyrene	0.38		ug/l	0.10	0.04	1
Benzo(a)anthracene	0.04	J	ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	75		15-120
4-Terphenyl-d14	85		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-02
Client ID: HI17-MWS
Sample Location: B14

Date Collected: 06/27/24 12:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/04/24 11:06
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/03/24 07:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	0.67	J	ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	0.62	J	ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-02

Date Collected: 06/27/24 12:00

Client ID: HI17-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	0.52	J	ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	0.51	J	ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	0.54	J	ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	10	Q	21-120
Phenol-d6	10		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	79		15-120
2,4,6-Tribromophenol	20		10-120
4-Terphenyl-d14	84		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-02
Client ID: HI17-MWS
Sample Location: B14

Date Collected: 06/27/24 12:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 15:46
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/03/24 07:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.44		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.32		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.09	J	ug/l	0.10	0.02	1
Fluorene	0.10	J	ug/l	0.10	0.03	1
Phenanthrene	0.16	B	ug/l	0.05	0.04	1
Anthracene	0.10	J	ug/l	0.10	0.02	1
Fluoranthene	0.09	JB	ug/l	0.10	0.03	1
Pyrene	0.10	JB	ug/l	0.10	0.04	1
Benzo(a)anthracene	0.08		ug/l	0.05	0.03	1
Chrysene	0.04	J	ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	68		15-120
4-Terphenyl-d14	72		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-02
Client ID: HI17-MWS
Sample Location: B14

Date Collected: 06/27/24 12:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/08/24 12:47
Analyst: MRG

Extraction Method: EPA 3510C
Extraction Date: 07/07/24 15:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.39		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.20		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.08	J	ug/l	0.10	0.02	1
Fluorene	0.07	J	ug/l	0.10	0.03	1
Phenanthrene	0.09		ug/l	0.05	0.04	1
Anthracene	0.06	J	ug/l	0.10	0.02	1
Fluoranthene	0.05	J	ug/l	0.10	0.03	1
Pyrene	0.06	J	ug/l	0.10	0.04	1
Benzo(a)anthracene	0.05	J	ug/l	0.05	0.03	1
Chrysene	0.04	J	ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	69		15-120
4-Terphenyl-d14	71		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-03
Client ID: HI15-MWS
Sample Location: B14

Date Collected: 06/27/24 13:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/05/24 11:36
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 07/03/24 07:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-03
Client ID: HI15-MWS
Sample Location: B14

Date Collected: 06/27/24 13:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	4	Q	21-120
Phenol-d6	6	Q	10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	73		15-120
2,4,6-Tribromophenol	12		10-120
4-Terphenyl-d14	74		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-03
Client ID: HI15-MWS
Sample Location: B14

Date Collected: 06/27/24 13:00
Date Received: 06/27/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 16:02
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/03/24 07:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.07	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.05	J	ug/l	0.10	0.02	1
Fluorene	0.05	J	ug/l	0.10	0.03	1
Phenanthrene	0.06	B	ug/l	0.05	0.04	1
Anthracene	0.04	J	ug/l	0.10	0.02	1
Fluoranthene	0.03	JB	ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	72		15-120
4-Terphenyl-d14	78		41-149

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-03 RE

Date Collected: 06/27/24 13:00

Client ID: HI15-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 3510C

Analytical Method: 1,8270E

Extraction Date: 07/05/24 12:51

Analytical Date: 07/06/24 12:26

Analyst: CMM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.54	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: Q2 B14 GW

Lab Number: L2436598

Project Number: 21010214

Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2436598-03 RE

Date Collected: 06/27/24 13:00

Client ID: HI15-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	21		21-120
Phenol-d6	21		10-120
Nitrobenzene-d5	57		23-120
2-Fluorobiphenyl	59		15-120
2,4,6-Tribromophenol	37		10-120
4-Terphenyl-d14	82		41-149

Project Name: Q2 B14 GW**Lab Number:** L2436598**Project Number:** 21010214**Report Date:** 07/08/24**SAMPLE RESULTS**

Lab ID: L2436598-03 RE

Date Collected: 06/27/24 13:00

Client ID: HI15-MWS

Date Received: 06/27/24

Sample Location: B14

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 3510C

Analytical Method: 1,8270E-SIM

Extraction Date: 07/05/24 12:51

Analytical Date: 07/08/24 11:26

Analyst: MRG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.05	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.04	J	ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.04	J	ug/l	0.10	0.02	1
Fluorene	0.03	J	ug/l	0.10	0.03	1
Phenanthrene	0.04	J	ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	48		15-120
4-Terphenyl-d14	55		41-149

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
 Analytical Date: 07/03/24 08:16
 Analyst: LJG

Extraction Method: EPA 3510C
 Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1942560-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
 Analytical Date: 07/03/24 08:16
 Analyst: LJG

Extraction Method: EPA 3510C
 Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1942560-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/03/24 08:16
Analyst: LJG

Extraction Method: EPA 3510C
Extraction Date: 07/02/24 22:19

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1942560-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	35		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	51		23-120
2-Fluorobiphenyl	56		15-120
2,4,6-Tribromophenol	52		10-120
4-Terphenyl-d14	53		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 14:41
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/03/24 07:36

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1942727-1					
Naphthalene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	0.05		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	0.30		ug/l	0.10	0.03
Pyrene	0.20		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		21-120
Phenol-d6	37		10-120
Nitrobenzene-d5	96		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	88		41-149

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
 Analytical Date: 07/05/24 08:25
 Analyst: JG

Extraction Method: EPA 3510C
 Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1943265-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/05/24 08:25
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1943265-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: Q2 B14 GW**Project Number:** 21010214**Lab Number:** L2436598**Report Date:** 07/08/24**Method Blank Analysis**
Batch Quality ControlAnalytical Method: 1,8270E
Analytical Date: 07/05/24 08:25
Analyst: JGExtraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1943265-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		21-120
Phenol-d6	26		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	55		10-120
4-Terphenyl-d14	56		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 13:04
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 03 Batch: WG1943266-1					
Naphthalene	0.10	J	ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	ND		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	ND		ug/l	0.10	0.03
Pyrene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	64		10-120
4-Terphenyl-d14	63		41-149

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 07/08/24 12:15
Analyst: MRG

Extraction Method: EPA 3510C
Extraction Date: 07/07/24 15:46

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1944047-1					
Naphthalene	0.03	J	ug/l	0.10	0.02
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	ND		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	ND		ug/l	0.10	0.03
Pyrene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		21-120
Phenol-d6	38		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	76		10-120
4-Terphenyl-d14	71		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1942560-2 WG1942560-3								
Benzaldehyde	54		58		40-140	7		30
Phenol	33		35		12-110	6		30
Bis(2-chloroethyl)ether	58		68		40-140	16		30
2-Chlorophenol	59		66		27-123	11		30
2-Methylphenol	56		64		30-130	13		30
Bis(2-chloroisopropyl)ether	55		62		40-140	12		30
Acetophenone	55		61		39-129	10		30
n-Nitrosodi-n-propylamine	55		66		29-132	18		30
3-Methylphenol/4-Methylphenol	55		59		30-130	7		30
Hexachloroethane	54		64		40-140	17		30
Nitrobenzene	58		66		40-140	13		30
Isophorone	56		64		40-140	13		30
2,4-Dimethylphenol	60		61		30-130	2		30
Bis(2-chloroethoxy)methane	55		63		40-140	14		30
2,4-Dichlorophenol	58		65		30-130	11		30
Naphthalene	57		64		40-140	12		30
4-Chloroaniline	56		63		40-140	12		30
Hexachlorobutadiene	59		65		40-140	10		30
Caprolactam	23		24		10-130	4		30
2-Methylnaphthalene	57		64		40-140	12		30
Hexachlorocyclopentadiene	49		50		40-140	2		30
1,2,4,5-Tetrachlorobenzene	56		60		2-134	7		30
2,4,6-Trichlorophenol	61		68		30-130	11		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1942560-2 WG1942560-3								
2,4,5-Trichlorophenol	62		72		30-130	15		30
Biphenyl	55		62		40-140	12		30
2-Chloronaphthalene	60		64		40-140	6		30
2-Nitroaniline	64		65		52-143	2		30
2,6-Dinitrotoluene	58		66		40-140	13		30
Acenaphthylene	61		68		45-123	11		30
Acenaphthene	66		69		37-111	4		30
2,4-Dinitrophenol	56		61		20-130	9		30
2,4-Dinitrotoluene	62		71		48-143	14		30
2,3,4,6-Tetrachlorophenol	66		74		54-145	11		30
Diethyl phthalate	61		66		40-140	8		30
Fluorene	65		67		40-140	3		30
4-Nitroaniline	63		68		51-143	8		30
NDPA/DPA	63		67		40-140	6		30
Hexachlorobenzene	63		66		40-140	5		30
Pentachlorophenol	57		65		9-103	13		30
Phenanthrene	64		69		40-140	8		30
Anthracene	64		70		40-140	9		30
Carbazole	65		71		55-144	9		30
Di-n-butylphthalate	63		68		40-140	8		30
Fluoranthene	64		68		40-140	6		30
Pyrene	66		70		26-127	6		30
3,3'-Dichlorobenzidine	65		72		40-140	10		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1942560-2 WG1942560-3								
Benzo(a)anthracene	65		69		40-140	6		30
Chrysene	68		74		40-140	8		30
Bis(2-ethylhexyl)phthalate	60		65		40-140	8		30
Di-n-octylphthalate	62		66		40-140	6		30
Benzo(b)fluoranthene	66		71		40-140	7		30
Benzo(k)fluoranthene	69		73		40-140	6		30
Benzo(a)pyrene	70		76		40-140	8		30
Indeno(1,2,3-cd)pyrene	62		64		40-140	3		30
Dibenzo(a,h)anthracene	66		71		40-140	7		30
Benzo(ghi)perylene	65		68		40-140	5		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	44		49		21-120
Phenol-d6	30		34		10-120
Nitrobenzene-d5	52		55		23-120
2-Fluorobiphenyl	56		63		15-120
2,4,6-Tribromophenol	63		67		10-120
4-Terphenyl-d14	58		60		41-149

Lab Control Sample Analysis Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1942727-2 WG1942727-3								
Naphthalene	75		70		40-140	7		40
2-Methylnaphthalene	84		78		40-140	7		40
Acenaphthylene	83		77		40-140	8		40
Acenaphthene	85		80		37-111	6		40
Fluorene	85		79		40-140	7		40
Phenanthrene	84		78		40-140	7		40
Anthracene	89		82		40-140	8		40
Fluoranthene	90		84		40-140	7		40
Pyrene	89		83		26-127	7		40
Benzo(a)anthracene	88		80		40-140	10		40
Chrysene	90		86		40-140	5		40
Benzo(b)fluoranthene	93		86		40-140	8		40
Benzo(k)fluoranthene	92		88		40-140	4		40
Benzo(a)pyrene	100		93		40-140	7		40
Indeno(1,2,3-cd)pyrene	108		101		40-140	7		40
Dibenzo(a,h)anthracene	102		94		40-140	8		40
Benzo(ghi)perylene	98		91		40-140	7		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1942727-2 WG1942727-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	63		56		21-120
Phenol-d6	48		42		10-120
Nitrobenzene-d5	99		90		23-120
2-Fluorobiphenyl	76		70		15-120
2,4,6-Tribromophenol	100		91		10-120
4-Terphenyl-d14	85		77		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1943265-2 WG1943265-3								
Benzaldehyde	71		67		40-140	6		30
Phenol	38		39		12-110	3		30
Bis(2-chloroethyl)ether	79		78		40-140	1		30
2-Chlorophenol	75		73		27-123	3		30
2-Methylphenol	69		67		30-130	3		30
Bis(2-chloroisopropyl)ether	72		71		40-140	1		30
Acetophenone	73		70		39-129	4		30
n-Nitrosodi-n-propylamine	77		73		29-132	5		30
3-Methylphenol/4-Methylphenol	68		65		30-130	5		30
Hexachloroethane	61		61		40-140	0		30
Nitrobenzene	75		74		40-140	1		30
Isophorone	74		74		40-140	0		30
2,4-Dimethylphenol	74		73		30-130	1		30
Bis(2-chloroethoxy)methane	78		73		40-140	7		30
2,4-Dichlorophenol	82		76		30-130	8		30
Naphthalene	69		70		40-140	1		30
4-Chloroaniline	71		66		40-140	7		30
Hexachlorobutadiene	63		63		40-140	0		30
Caprolactam	27		24		10-130	12		30
2-Methylnaphthalene	67		66		40-140	2		30
Hexachlorocyclopentadiene	56		56		40-140	0		30
1,2,4,5-Tetrachlorobenzene	58		62		2-134	7		30
2,4,6-Trichlorophenol	79		80		30-130	1		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1943265-2 WG1943265-3								
2,4,5-Trichlorophenol	86		86		30-130	0		30
Biphenyl	64		66		40-140	3		30
2-Chloronaphthalene	69		68		40-140	1		30
2-Nitroaniline	86		78		52-143	10		30
2,6-Dinitrotoluene	82		77		40-140	6		30
Acenaphthylene	75		74		45-123	1		30
Acenaphthene	74		74		37-111	0		30
2,4-Dinitrophenol	64		68		20-130	6		30
2,4-Dinitrotoluene	85		82		48-143	4		30
2,3,4,6-Tetrachlorophenol	83		78		54-145	6		30
Diethyl phthalate	86		75		40-140	14		30
Fluorene	75		77		40-140	3		30
4-Nitroaniline	89		85		51-143	5		30
NDPA/DPA	81		76		40-140	6		30
Hexachlorobenzene	83		77		40-140	8		30
Pentachlorophenol	74		81		9-103	9		30
Phenanthrene	85		80		40-140	6		30
Anthracene	88		81		40-140	8		30
Carbazole	89		83		55-144	7		30
Di-n-butylphthalate	84		80		40-140	5		30
Fluoranthene	88		82		40-140	7		30
Pyrene	92		87		26-127	6		30
3,3'-Dichlorobenzidine	85		78		40-140	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1943265-2 WG1943265-3								
Benzo(a)anthracene	84		81		40-140	4		30
Chrysene	90		84		40-140	7		30
Bis(2-ethylhexyl)phthalate	78		76		40-140	3		30
Di-n-octylphthalate	81		78		40-140	4		30
Benzo(b)fluoranthene	87		82		40-140	6		30
Benzo(k)fluoranthene	87		86		40-140	1		30
Benzo(a)pyrene	93		87		40-140	7		30
Indeno(1,2,3-cd)pyrene	82		78		40-140	5		30
Dibenzo(a,h)anthracene	90		85		40-140	6		30
Benzo(ghi)perylene	85		82		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	50		47		21-120
Phenol-d6	33		36		10-120
Nitrobenzene-d5	65		72		23-120
2-Fluorobiphenyl	68		65		15-120
2,4,6-Tribromophenol	81		76		10-120
4-Terphenyl-d14	79		69		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03 Batch: WG1943266-2 WG1943266-3								
Naphthalene	72		70		40-140	3		40
2-Methylnaphthalene	76		74		40-140	3		40
Acenaphthylene	80		76		40-140	5		40
Acenaphthene	83		80		37-111	4		40
Fluorene	86		82		40-140	5		40
Phenanthrene	89		83		40-140	7		40
Anthracene	95		89		40-140	7		40
Fluoranthene	95		90		40-140	5		40
Pyrene	94		89		26-127	5		40
Benzo(a)anthracene	96		89		40-140	8		40
Chrysene	97		89		40-140	9		40
Benzo(b)fluoranthene	99		93		40-140	6		40
Benzo(k)fluoranthene	100		90		40-140	11		40
Benzo(a)pyrene	108		99		40-140	9		40
Indeno(1,2,3-cd)pyrene	113		106		40-140	6		40
Dibenzo(a,h)anthracene	108		102		40-140	6		40
Benzo(ghi)perylene	103		96		40-140	7		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 03 Batch: WG1943266-2 WG1943266-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		55		21-120
Phenol-d6	41		41		10-120
Nitrobenzene-d5	91		86		23-120
2-Fluorobiphenyl	68		65		15-120
2,4,6-Tribromophenol	93		89		10-120
4-Terphenyl-d14	81		77		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1944047-2 WG1944047-3								
Naphthalene	81		85		40-140	5		40
2-Methylnaphthalene	92		95		40-140	3		40
Acenaphthylene	92		97		40-140	5		40
Acenaphthene	96		100		37-111	4		40
Fluorene	96		100		40-140	4		40
Phenanthrene	98		100		40-140	2		40
Anthracene	105		108		40-140	3		40
Fluoranthene	103		106		40-140	3		40
Pyrene	101		104		26-127	3		40
Benzo(a)anthracene	104		108		40-140	4		40
Chrysene	109		110		40-140	1		40
Benzo(b)fluoranthene	107		112		40-140	5		40
Benzo(k)fluoranthene	113		112		40-140	1		40
Benzo(a)pyrene	120		122		40-140	2		40
Indeno(1,2,3-cd)pyrene	129		131		40-140	2		40
Dibenzo(a,h)anthracene	122		125		40-140	2		40
Benzo(ghi)perylene	115		119		40-140	3		40

Lab Control Sample Analysis **Batch Quality Control**

Project Name: Q2 B14 GW

Project Number: 21010214

Lab Number: L2436598

Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1944047-2 WG1944047-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	50		46		21-120
Phenol-d6	43		44		10-120
Nitrobenzene-d5	95		98		23-120
2-Fluorobiphenyl	73		75		15-120
2,4,6-Tribromophenol	89		77		10-120
4-Terphenyl-d14	82		83		41-149

Project Name: Q2 B14 GW**Lab Number:** L2436598**Project Number:** 21010214**Report Date:** 07/08/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2436598-01A	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-01B	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-01C	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-01D	Amber 100ml unpreserved	A	12	12	3.6	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436598-01E	Amber 100ml unpreserved	A	12	12	3.6	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2436598-02A	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-02B	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-02C	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-02D	Amber 100ml unpreserved	A	7	7	3.6	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2436598-02E	Amber 100ml unpreserved	A	7	7	3.6	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2436598-03A	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-03B	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-03C	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-03D	Amber 100ml unpreserved	A	7	7	3.6	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2436598-03E	Amber 100ml unpreserved	A	7	7	3.6	Y	Absent		PA-8270SIM-RVT(7),PA-8270-RVT(7)
L2436598-04A	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-04B	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-04C	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2436598-04D	Vial HCl preserved	A	NA		3.6	Y	Absent		PA-8260-SIM(14),PA-8260(14)

Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: Q2 B14 GW
Project Number: 21010214

Lab Number: L2436598
Report Date: 07/08/24

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 21

Published Date: 04/17/2024

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.**EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



ANALYTICAL REPORT

Lab Number:	L2437031
Client:	Tradepoint Atlantic 1600 Sparrows Point Boulevard Baltimore, MD 21219
ATTN:	Robert Tworkowski
Phone:	(443) 649-5073
Project Name:	B14 GW
Project Number:	21010214
Report Date:	07/08/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2437031-01	HI11-MWS	WATER	Not Specified	06/28/24 11:30	06/28/24
L2437031-02	FIELD BLANK	WATER	Not Specified	06/28/24 11:10	06/28/24
L2437031-03	TM04-PZM006	WATER	Not Specified	06/28/24 12:10	06/28/24
L2437031-04	HI12-MWS	WATER	Not Specified	06/28/24 12:40	06/28/24
L2437031-05	TB-WT-01	WATER	Not Specified	06/28/24 00:00	06/28/24

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L2437031-01D: The sample has elevated detection limits due to the dilution required by the sample matrix (foam).

Volatile Organics by SIM

L2437031-01D: The sample has elevated detection limits due to the dilution required by the sample matrix (foam).

L2437031-03D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Semivolatile Organics

L2437031-03: The surrogate recoveries were outside the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (4%) and 2,4,6-tribromophenol (0%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Caitlin Walukevich

Title: Technical Director/Representative

Date: 07/08/24

ORGANICS

VOLATILES

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-01 **D**
Client ID: HI11-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 11:30
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/03/24 13:18
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	20	0.98	4
Chloromethane	ND		ug/l	10	0.80	4
Vinyl chloride	ND		ug/l	4.0	0.28	4
Bromomethane	ND		ug/l	4.0	1.0	4
Chloroethane	ND		ug/l	4.0	0.54	4
Trichlorofluoromethane	ND		ug/l	10	0.64	4
1,1-Dichloroethene	ND		ug/l	2.0	0.68	4
Carbon disulfide	ND		ug/l	20	1.2	4
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10	0.59	4
Methylene chloride	ND		ug/l	10	2.7	4
Acetone	ND		ug/l	20	5.8	4
trans-1,2-Dichloroethene	ND		ug/l	3.0	0.65	4
Methyl Acetate	ND		ug/l	8.0	0.94	4
Methyl tert butyl ether	ND		ug/l	4.0	0.66	4
1,1-Dichloroethane	ND		ug/l	3.0	0.84	4
cis-1,2-Dichloroethene	ND		ug/l	2.0	0.75	4
Cyclohexane	ND		ug/l	40	1.1	4
Chloroform	ND		ug/l	3.0	0.89	4
Carbon tetrachloride	ND		ug/l	2.0	0.54	4
1,1,1-Trichloroethane	ND		ug/l	2.0	0.63	4
2-Butanone	ND		ug/l	20	7.8	4
Benzene	ND		ug/l	2.0	0.64	4
1,2-Dichloroethane	ND		ug/l	2.0	0.53	4
Trichloroethene	ND		ug/l	2.0	0.70	4
1,2-Dichloropropane	ND		ug/l	4.0	0.55	4
Bromodichloromethane	ND		ug/l	2.0	0.77	4
cis-1,3-Dichloropropene	ND		ug/l	2.0	0.58	4
Toluene	ND		ug/l	3.0	0.81	4

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-01 D
Client ID: HI11-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 11:30
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	2.0	0.72	4
4-Methyl-2-pentanone	ND		ug/l	20	1.7	4
trans-1,3-Dichloropropene	ND		ug/l	2.0	0.66	4
1,3-Dichloropropene, Total	ND		ug/l	2.0	0.58	4
1,1,2-Trichloroethane	ND		ug/l	3.0	0.58	4
Dibromochloromethane	ND		ug/l	2.0	0.60	4
1,2-Dibromoethane	ND		ug/l	8.0	0.77	4
2-Hexanone	ND		ug/l	20	2.1	4
Chlorobenzene	ND		ug/l	2.0	0.71	4
Ethylbenzene	ND		ug/l	2.0	0.67	4
p/m-Xylene	ND		ug/l	4.0	1.3	4
o-Xylene	ND		ug/l	4.0	1.6	4
Xylenes, Total	ND		ug/l	4.0	1.3	4
Styrene	ND		ug/l	4.0	1.4	4
Bromoform	ND		ug/l	8.0	0.99	4
Isopropylbenzene	ND		ug/l	2.0	0.75	4
1,1,2,2-Tetrachloroethane	ND		ug/l	2.0	0.67	4
1,3-Dichlorobenzene	ND		ug/l	10	0.74	4
1,4-Dichlorobenzene	ND		ug/l	10	0.75	4
1,2-Dichlorobenzene	ND		ug/l	10	0.74	4
1,2-Dibromo-3-chloropropane	ND		ug/l	10	1.4	4
1,2,4-Trichlorobenzene	ND		ug/l	10	0.88	4
1,2,3-Trichlorobenzene	ND		ug/l	10	0.94	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	113		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-01 D
 Client ID: HI11-MWS
 Sample Location: Not Specified

Date Collected: 06/28/24 11:30
 Date Received: 06/28/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 07/03/24 13:18
 Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.200	0.023	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
4-Bromofluorobenzene	97		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-02
Client ID: FIELD BLANK
Sample Location: Not Specified

Date Collected: 06/28/24 11:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/05/24 07:13
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-02
Client ID: FIELD BLANK
Sample Location: Not Specified

Date Collected: 06/28/24 11:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	108		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-02
Client ID: FIELD BLANK
Sample Location: Not Specified

Date Collected: 06/28/24 11:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/05/24 07:13
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,2-Dichloroethane-d4	89			70-130		
4-Bromofluorobenzene	99			70-130		

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03 D
Client ID: TM04-PZM006
Sample Location: Not Specified

Date Collected: 06/28/24 12:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/05/24 08:09
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	20	0.98	4
Chloromethane	ND		ug/l	10	0.80	4
Vinyl chloride	0.54	J	ug/l	4.0	0.28	4
Bromomethane	ND		ug/l	4.0	1.0	4
Chloroethane	ND		ug/l	4.0	0.54	4
Trichlorofluoromethane	ND		ug/l	10	0.64	4
1,1-Dichloroethene	ND		ug/l	2.0	0.68	4
Carbon disulfide	ND		ug/l	20	1.2	4
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10	0.59	4
Methylene chloride	ND		ug/l	10	2.7	4
Acetone	ND		ug/l	20	5.8	4
trans-1,2-Dichloroethene	ND		ug/l	3.0	0.65	4
Methyl Acetate	ND		ug/l	8.0	0.94	4
Methyl tert butyl ether	ND		ug/l	4.0	0.66	4
1,1-Dichloroethane	ND		ug/l	3.0	0.84	4
cis-1,2-Dichloroethene	ND		ug/l	2.0	0.75	4
Cyclohexane	ND		ug/l	40	1.1	4
Chloroform	ND		ug/l	3.0	0.89	4
Carbon tetrachloride	ND		ug/l	2.0	0.54	4
1,1,1-Trichloroethane	ND		ug/l	2.0	0.63	4
2-Butanone	ND		ug/l	20	7.8	4
Benzene	400		ug/l	2.0	0.64	4
1,2-Dichloroethane	ND		ug/l	2.0	0.53	4
Trichloroethene	ND		ug/l	2.0	0.70	4
1,2-Dichloropropane	ND		ug/l	4.0	0.55	4
Bromodichloromethane	ND		ug/l	2.0	0.77	4
cis-1,3-Dichloropropene	ND		ug/l	2.0	0.58	4
Toluene	1.8	J	ug/l	3.0	0.81	4

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03 D
Client ID: TM04-PZM006
Sample Location: Not Specified

Date Collected: 06/28/24 12:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	2.0	0.72	4
4-Methyl-2-pentanone	ND		ug/l	20	1.7	4
trans-1,3-Dichloropropene	ND		ug/l	2.0	0.66	4
1,3-Dichloropropene, Total	ND		ug/l	2.0	0.58	4
1,1,2-Trichloroethane	ND		ug/l	3.0	0.58	4
Dibromochloromethane	ND		ug/l	2.0	0.60	4
1,2-Dibromoethane	ND		ug/l	8.0	0.77	4
2-Hexanone	ND		ug/l	20	2.1	4
Chlorobenzene	ND		ug/l	2.0	0.71	4
Ethylbenzene	4.8		ug/l	2.0	0.67	4
p/m-Xylene	4.8		ug/l	4.0	1.3	4
o-Xylene	ND		ug/l	4.0	1.6	4
Xylenes, Total	4.8		ug/l	4.0	1.3	4
Styrene	2.4	J	ug/l	4.0	1.4	4
Bromoform	ND		ug/l	8.0	0.99	4
Isopropylbenzene	ND		ug/l	2.0	0.75	4
1,1,2,2-Tetrachloroethane	ND		ug/l	2.0	0.67	4
1,3-Dichlorobenzene	ND		ug/l	10	0.74	4
1,4-Dichlorobenzene	ND		ug/l	10	0.75	4
1,2-Dichlorobenzene	ND		ug/l	10	0.74	4
1,2-Dibromo-3-chloropropane	ND		ug/l	10	1.4	4
1,2,4-Trichlorobenzene	ND		ug/l	10	0.88	4
1,2,3-Trichlorobenzene	ND		ug/l	10	0.94	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	100		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03 D
 Client ID: TM04-PZM006
 Sample Location: Not Specified

Date Collected: 06/28/24 12:10
 Date Received: 06/28/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260D-SIM(M)
 Analytical Date: 07/05/24 08:09
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.200	0.023	4
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			85		70-130	
4-Bromofluorobenzene			99		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-04
Client ID: HI12-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 12:40
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/05/24 08:37
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	3.8	J	ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	0.43	J	ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-04
Client ID: HI12-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 12:40
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	111		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-04
Client ID: HI12-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 12:40
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/05/24 08:37
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			89		70-130	
4-Bromofluorobenzene			99		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-05
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/28/24 00:00
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 07/03/24 07:46
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Chloromethane	ND		ug/l	2.5	0.20	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Bromomethane	ND		ug/l	1.0	0.26	1
Chloroethane	ND		ug/l	1.0	0.13	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15	1
Methylene chloride	ND		ug/l	2.5	0.68	1
Acetone	ND		ug/l	5.0	1.5	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Methyl Acetate	ND		ug/l	2.0	0.23	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Cyclohexane	ND		ug/l	10	0.27	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
2-Butanone	ND		ug/l	5.0	1.9	1
Benzene	ND		ug/l	0.50	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
Toluene	ND		ug/l	0.75	0.20	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-05
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/28/24 00:00
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Tetrachloroethene	ND		ug/l	0.50	0.18	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
Styrene	ND		ug/l	1.0	0.36	1
Bromoform	ND		ug/l	2.0	0.25	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	107		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-05
Client ID: TB-WT-01
Sample Location: Not Specified

Date Collected: 06/28/24 00:00
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/03/24 07:46
Analyst: MAG

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,1,2,2-Tetrachloroethane	ND		ug/l	0.050	0.006	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,2-Dichloroethane-d4			90		70-130	
4-Bromofluorobenzene			97		70-130	

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/03/24 06:50
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,05 Batch: WG1943317-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Cyclohexane	ND		ug/l	10	0.27
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/03/24 06:50
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,05 Batch: WG1943317-5					
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/03/24 06:50
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,05 Batch: WG1943317-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	110		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/03/24 06:50
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,05 Batch: WG1943318-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
4-Bromofluorobenzene	97		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 07/05/24 06:46
 Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-04 Batch: WG1944134-5					
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Chloromethane	ND		ug/l	2.5	0.20
Vinyl chloride	ND		ug/l	1.0	0.07
Bromomethane	ND		ug/l	1.0	0.26
Chloroethane	ND		ug/l	1.0	0.13
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,1-Dichloroethene	ND		ug/l	0.50	0.17
Carbon disulfide	ND		ug/l	5.0	0.30
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.5	0.15
Methylene chloride	ND		ug/l	2.5	0.68
Acetone	ND		ug/l	5.0	1.5
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Methyl Acetate	ND		ug/l	2.0	0.23
Methyl tert butyl ether	ND		ug/l	1.0	0.17
1,1-Dichloroethane	ND		ug/l	0.75	0.21
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Cyclohexane	ND		ug/l	10	0.27
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
2-Butanone	ND		ug/l	5.0	1.9
Benzene	ND		ug/l	0.50	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Bromodichloromethane	ND		ug/l	0.50	0.19
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
Toluene	ND		ug/l	0.75	0.20
Tetrachloroethene	ND		ug/l	0.50	0.18

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/05/24 06:46
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-04 Batch: WG1944134-5					
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,2-Dibromoethane	ND		ug/l	2.0	0.19
2-Hexanone	ND		ug/l	5.0	0.52
Chlorobenzene	ND		ug/l	0.50	0.18
Ethylbenzene	ND		ug/l	0.50	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
Xylenes, Total	ND		ug/l	1.0	0.33
Styrene	ND		ug/l	1.0	0.36
Bromoform	ND		ug/l	2.0	0.25
Isopropylbenzene	ND		ug/l	0.50	0.19
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 07/05/24 06:46
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02-04 Batch: WG1944134-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	110		70-130

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D-SIM(M)
Analytical Date: 07/05/24 06:46
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 02-04 Batch: WG1944137-5					
1,1,1,2-Tetrachloroethane	ND		ug/l	0.050	0.006

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
4-Bromofluorobenzene	99		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,05 Batch: WG1943317-3 WG1943317-4								
Dichlorodifluoromethane	78		86		36-147	10		20
Chloromethane	77		82		64-130	6		20
Vinyl chloride	86		94		55-140	9		20
Bromomethane	75		89		39-139	17		20
Chloroethane	86		100		55-138	15		20
Trichlorofluoromethane	100		110		62-150	10		20
1,1-Dichloroethene	89		100		61-145	12		20
Carbon disulfide	90		98		51-130	9		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	100		110		70-130	10		20
Methylene chloride	86		94		70-130	9		20
Acetone	88		91		58-148	3		20
trans-1,2-Dichloroethene	92		98		70-130	6		20
Methyl Acetate	85		91		70-130	7		20
Methyl tert butyl ether	88		94		63-130	7		20
1,1-Dichloroethane	87		94		70-130	8		20
cis-1,2-Dichloroethene	90		100		70-130	11		20
Cyclohexane	94		100		70-130	6		20
Chloroform	94		99		70-130	5		20
Carbon tetrachloride	93		100		63-132	7		20
1,1,1-Trichloroethane	98		110		67-130	12		20
2-Butanone	87		93		63-138	7		20
Benzene	90		95		70-130	5		20
1,2-Dichloroethane	91		97		70-130	6		20

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,05 Batch: WG1943317-3 WG1943317-4								
Trichloroethene	85		95		70-130	11		20
1,2-Dichloropropane	88		94		70-130	7		20
Bromodichloromethane	93		100		67-130	7		20
cis-1,3-Dichloropropene	92		100		70-130	8		20
Toluene	87		90		70-130	3		20
Tetrachloroethene	93		96		70-130	3		20
4-Methyl-2-pentanone	85		84		59-130	1		20
trans-1,3-Dichloropropene	87		87		70-130	0		20
1,1,2-Trichloroethane	96		92		70-130	4		20
Dibromochloromethane	93		95		63-130	2		20
1,2-Dibromoethane	94		97		70-130	3		20
2-Hexanone	86		87		57-130	1		20
Chlorobenzene	89		91		75-130	2		20
Ethylbenzene	87		91		70-130	4		20
p/m-Xylene	85		90		70-130	6		20
o-Xylene	85		90		70-130	6		20
Styrene	80		85		70-130	6		20
Bromoform	85		84		54-136	1		20
Isopropylbenzene	93		95		70-130	2		20
1,1,2,2-Tetrachloroethane	110		100		67-130	10		20
1,3-Dichlorobenzene	89		92		70-130	3		20
1,4-Dichlorobenzene	91		93		70-130	2		20
1,2-Dichlorobenzene	89		90		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,05 Batch: WG1943317-3 WG1943317-4								
1,2-Dibromo-3-chloropropane	98		93		41-144	5		20
1,2,4-Trichlorobenzene	95		96		70-130	1		20
1,2,3-Trichlorobenzene	93		93		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	89		92		70-130
Toluene-d8	98		97		70-130
4-Bromofluorobenzene	106		101		70-130
Dibromofluoromethane	95		99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,05 Batch: WG1943318-3 WG1943318-4								
1,1,2,2-Tetrachloroethane	84		87		70-130	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	89		89		70-130
4-Bromofluorobenzene	98		98		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-04 Batch: WG1944134-3 WG1944134-4								
Dichlorodifluoromethane	88		86		36-147	2		20
Chloromethane	80		79		64-130	1		20
Vinyl chloride	88		88		55-140	0		20
Bromomethane	67		75		39-139	11		20
Chloroethane	96		89		55-138	8		20
Trichlorofluoromethane	120		120		62-150	0		20
1,1-Dichloroethene	110		110		61-145	0		20
Carbon disulfide	100		100		51-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	120		120		70-130	0		20
Methylene chloride	100		100		70-130	0		20
Acetone	89		87		58-148	2		20
trans-1,2-Dichloroethene	110		100		70-130	10		20
Methyl Acetate	94		94		70-130	0		20
Methyl tert butyl ether	97		99		63-130	2		20
1,1-Dichloroethane	100		97		70-130	3		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Cyclohexane	100		100		70-130	0		20
Chloroform	110		100		70-130	10		20
Carbon tetrachloride	110		110		63-132	0		20
1,1,1-Trichloroethane	110		110		67-130	0		20
2-Butanone	93		95		63-138	2		20
Benzene	100		100		70-130	0		20
1,2-Dichloroethane	100		100		70-130	0		20

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-04 Batch: WG1944134-3 WG1944134-4								
Trichloroethene	100		100		70-130	0		20
1,2-Dichloropropane	100		98		70-130	2		20
Bromodichloromethane	100		100		67-130	0		20
cis-1,3-Dichloropropene	100		110		70-130	10		20
Toluene	100		100		70-130	0		20
Tetrachloroethene	100		110		70-130	10		20
4-Methyl-2-pentanone	92		91		59-130	1		20
trans-1,3-Dichloropropene	98		98		70-130	0		20
1,1,2-Trichloroethane	110		110		70-130	0		20
Dibromochloromethane	110		110		63-130	0		20
1,2-Dibromoethane	110		110		70-130	0		20
2-Hexanone	94		95		57-130	1		20
Chlorobenzene	100		100		75-130	0		20
Ethylbenzene	100		100		70-130	0		20
p/m-Xylene	100		105		70-130	5		20
o-Xylene	100		100		70-130	0		20
Styrene	100		100		70-130	0		20
Bromoform	100		100		54-136	0		20
Isopropylbenzene	110		110		70-130	0		20
1,1,2,2-Tetrachloroethane	120		120		67-130	0		20
1,3-Dichlorobenzene	110		110		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
1,2-Dichlorobenzene	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02-04 Batch: WG1944134-3 WG1944134-4								
1,2-Dibromo-3-chloropropane	110		110		41-144	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		90		70-130
Toluene-d8	101		102		70-130
4-Bromofluorobenzene	104		105		70-130
Dibromofluoromethane	99		97		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 02-04 Batch: WG1944137-3 WG1944137-4								
1,1,2,2-Tetrachloroethane	98		90		70-130	9		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	88		89		70-130
4-Bromofluorobenzene	101		99		70-130

SEMIVOLATILES

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-01
Client ID: HI11-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 11:30
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/05/24 12:14
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.97	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-01
Client ID: HI11-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 11:30
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	17	Q	21-120
Phenol-d6	12		10-120
Nitrobenzene-d5	38		23-120
2-Fluorobiphenyl	43		15-120
2,4,6-Tribromophenol	29		10-120
4-Terphenyl-d14	46		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-01
Client ID: HI11-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 11:30
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 18:28
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.17		ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	ND		ug/l	0.10	0.02	1
Fluorene	ND		ug/l	0.10	0.03	1
Phenanthrene	ND		ug/l	0.05	0.04	1
Anthracene	0.04	J	ug/l	0.10	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	55		23-120
2-Fluorobiphenyl	43		15-120
4-Terphenyl-d14	46		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-02
Client ID: FIELD BLANK
Sample Location: Not Specified

Date Collected: 06/28/24 11:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/05/24 12:37
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	1.7	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-02
Client ID: FIELD BLANK
Sample Location: Not Specified

Date Collected: 06/28/24 11:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	28		21-120
Phenol-d6	18		10-120
Nitrobenzene-d5	56		23-120
2-Fluorobiphenyl	57		15-120
2,4,6-Tribromophenol	45		10-120
4-Terphenyl-d14	63		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-02
Client ID: FIELD BLANK
Sample Location: Not Specified

Date Collected: 06/28/24 11:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 18:44
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.07	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	ND		ug/l	0.10	0.02	1
Fluorene	ND		ug/l	0.10	0.03	1
Phenanthrene	ND		ug/l	0.05	0.04	1
Anthracene	ND		ug/l	0.10	0.02	1
Fluoranthene	ND		ug/l	0.10	0.03	1
Pyrene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	65		15-120
4-Terphenyl-d14	74		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03
Client ID: TM04-PZM006
Sample Location: Not Specified

Date Collected: 06/28/24 12:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/05/24 12:59
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	ND		ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	13		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03
Client ID: TM04-PZM006
Sample Location: Not Specified

Date Collected: 06/28/24 12:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	0.85	J	ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	0	Q	21-120
Phenol-d6	4	Q	10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	55		15-120
2,4,6-Tribromophenol	0	Q	10-120
4-Terphenyl-d14	60		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03
Client ID: TM04-PZM006
Sample Location: Not Specified

Date Collected: 06/28/24 12:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 19:00
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	13		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.47		ug/l	0.10	0.03	1
Acenaphthylene	0.95		ug/l	0.10	0.02	1
Acenaphthene	0.26		ug/l	0.10	0.02	1
Fluorene	0.15		ug/l	0.10	0.03	1
Phenanthrene	0.21		ug/l	0.05	0.04	1
Anthracene	0.03	J	ug/l	0.10	0.02	1
Fluoranthene	0.06	J	ug/l	0.10	0.03	1
Pyrene	0.05	J	ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.05	0.03	1
Chrysene	ND		ug/l	0.10	0.03	1
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	53		15-120
4-Terphenyl-d14	62		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03
Client ID: TM04-PZM006
Sample Location: Not Specified

Date Collected: 06/28/24 12:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/07/24 16:48
Analyst: CMM

Extraction Method: EPA 3510C
Extraction Date: 07/06/24 07:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	1.3	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-03 **RE**
Client ID: TM04-PZM006
Sample Location: Not Specified

Date Collected: 06/28/24 12:10
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	25		21-120
Phenol-d6	20		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	62		15-120
2,4,6-Tribromophenol	45		10-120
4-Terphenyl-d14	64		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-04
Client ID: HI12-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 12:40
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8270E
Analytical Date: 07/05/24 13:22
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzaldehyde	ND		ug/l	5.0	1.1	1
Phenol	0.63	J	ug/l	5.0	0.35	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39	1
2-Chlorophenol	ND		ug/l	2.0	0.65	1
2-Methylphenol	ND		ug/l	5.0	2.3	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40	1
Acetophenone	ND		ug/l	5.0	0.92	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.20	1
Nitrobenzene	ND		ug/l	1.4	0.20	1
Isophorone	ND		ug/l	5.0	0.86	1
2,4-Dimethylphenol	ND		ug/l	5.0	2.0	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84	1
2,4-Dichlorophenol	ND		ug/l	5.0	1.7	1
Naphthalene	ND		ug/l	2.0	0.54	1
4-Chloroaniline	ND		ug/l	3.7	0.47	1
Hexachlorobutadiene	ND		ug/l	2.0	0.36	1
Caprolactam	ND		ug/l	10	1.2	1
2-Methylnaphthalene	ND		ug/l	2.0	0.37	1
Hexachlorocyclopentadiene	ND		ug/l	20	1.2	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1	1
Biphenyl	ND		ug/l	2.0	0.20	1
2-Chloronaphthalene	ND		ug/l	2.0	0.35	1
2-Nitroaniline	ND		ug/l	5.0	1.0	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84	1

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-04
Client ID: HI12-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 12:40
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthylene	ND		ug/l	2.0	0.32	1
Acenaphthene	ND		ug/l	2.0	0.40	1
2,4-Dinitrophenol	ND		ug/l	20	5.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54	1
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2	1
Diethyl phthalate	ND		ug/l	5.0	0.76	1
Fluorene	ND		ug/l	2.0	0.44	1
4-Nitroaniline	ND		ug/l	5.0	1.4	1
NDPA/DPA	ND		ug/l	2.0	0.92	1
Hexachlorobenzene	ND		ug/l	2.0	0.45	1
Pentachlorophenol	ND		ug/l	10	2.5	1
Phenanthrene	ND		ug/l	2.0	0.42	1
Anthracene	ND		ug/l	2.0	0.47	1
Carbazole	ND		ug/l	2.0	0.31	1
Di-n-butylphthalate	ND		ug/l	5.0	0.96	1
Fluoranthene	ND		ug/l	2.0	0.41	1
Pyrene	ND		ug/l	2.0	0.41	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Chrysene	ND		ug/l	1.5	0.22	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4	1
Di-n-octylphthalate	ND		ug/l	5.0	2.3	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62	1
Benzo(a)pyrene	ND		ug/l	2.0	0.37	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.37	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	20	Q	21-120
Phenol-d6	17		10-120
Nitrobenzene-d5	52		23-120
2-Fluorobiphenyl	53		15-120
2,4,6-Tribromophenol	30		10-120
4-Terphenyl-d14	56		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

SAMPLE RESULTS

Lab ID: L2437031-04
Client ID: HI12-MWS
Sample Location: Not Specified

Date Collected: 06/28/24 12:40
Date Received: 06/28/24
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 19:17
Analyst: JJW

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Naphthalene	0.30		ug/l	0.10	0.02	1
2-Methylnaphthalene	0.07	J	ug/l	0.10	0.03	1
Acenaphthylene	ND		ug/l	0.10	0.02	1
Acenaphthene	0.11		ug/l	0.10	0.02	1
Fluorene	0.07	J	ug/l	0.10	0.03	1
Phenanthrene	0.12		ug/l	0.05	0.04	1
Anthracene	0.04	J	ug/l	0.10	0.02	1
Fluoranthene	0.10		ug/l	0.10	0.03	1
Pyrene	0.10	J	ug/l	0.10	0.04	1
Benzo(a)anthracene	0.05	J	ug/l	0.05	0.03	1
Chrysene	0.03	J	ug/l	0.10	0.03	1
Benzo(b)fluoranthene	0.07		ug/l	0.05	0.03	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03	1
Benzo(a)pyrene	0.06	J	ug/l	0.10	0.02	1
Indeno(1,2,3-cd)pyrene	0.04	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02	1
Benzo(ghi)perylene	0.04	J	ug/l	0.10	0.02	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	56		15-120
4-Terphenyl-d14	61		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/05/24 08:25
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1943265-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/05/24 08:25
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1943265-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/05/24 08:25
Analyst: JG

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1943265-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		21-120
Phenol-d6	26		10-120
Nitrobenzene-d5	54		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	55		10-120
4-Terphenyl-d14	56		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E-SIM
Analytical Date: 07/05/24 13:04
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 07/05/24 00:34

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-04 Batch: WG1943266-1					
Naphthalene	0.10	J	ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.03
Acenaphthylene	ND		ug/l	0.10	0.02
Acenaphthene	ND		ug/l	0.10	0.02
Fluorene	ND		ug/l	0.10	0.03
Phenanthrene	ND		ug/l	0.05	0.04
Anthracene	ND		ug/l	0.10	0.02
Fluoranthene	ND		ug/l	0.10	0.03
Pyrene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.05	0.03
Chrysene	ND		ug/l	0.10	0.03
Benzo(b)fluoranthene	ND		ug/l	0.05	0.03
Benzo(k)fluoranthene	ND		ug/l	0.10	0.03
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.05	0.02
Benzo(ghi)perylene	ND		ug/l	0.10	0.02

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	42		21-120
Phenol-d6	29		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	64		10-120
4-Terphenyl-d14	63		41-149

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/07/24 13:48
Analyst: CMM

Extraction Method: EPA 3510C
Extraction Date: 07/06/24 07:46

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1943933-1					
Benzaldehyde	ND		ug/l	5.0	1.1
Phenol	ND		ug/l	5.0	0.35
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.39
2-Chlorophenol	ND		ug/l	2.0	0.65
2-Methylphenol	ND		ug/l	5.0	2.3
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.40
Acetophenone	ND		ug/l	5.0	0.92
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.91
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.4
Hexachloroethane	ND		ug/l	2.0	0.20
Nitrobenzene	ND		ug/l	1.4	0.20
Isophorone	ND		ug/l	5.0	0.86
2,4-Dimethylphenol	ND		ug/l	5.0	2.0
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.84
2,4-Dichlorophenol	ND		ug/l	5.0	1.7
Naphthalene	ND		ug/l	2.0	0.54
4-Chloroaniline	ND		ug/l	3.7	0.47
Hexachlorobutadiene	ND		ug/l	2.0	0.36
Caprolactam	ND		ug/l	10	1.2
2-Methylnaphthalene	ND		ug/l	2.0	0.37
Hexachlorocyclopentadiene	ND		ug/l	20	1.2
1,2,4,5-Tetrachlorobenzene	ND		ug/l	1.7	0.24
2,4,6-Trichlorophenol	ND		ug/l	5.0	2.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	2.1
Biphenyl	ND		ug/l	2.0	0.20
2-Chloronaphthalene	ND		ug/l	2.0	0.35
2-Nitroaniline	ND		ug/l	5.0	1.0
2,6-Dinitrotoluene	ND		ug/l	5.0	0.84
Acenaphthylene	ND		ug/l	2.0	0.32

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/07/24 13:48
Analyst: CMM

Extraction Method: EPA 3510C
Extraction Date: 07/06/24 07:46

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1943933-1					
Acenaphthene	ND		ug/l	2.0	0.40
2,4-Dinitrophenol	ND		ug/l	20	5.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.54
2,3,4,6-Tetrachlorophenol	ND		ug/l	5.0	2.2
Diethyl phthalate	ND		ug/l	5.0	0.76
Fluorene	ND		ug/l	2.0	0.44
4-Nitroaniline	ND		ug/l	5.0	1.4
NDPA/DPA	ND		ug/l	2.0	0.92
Hexachlorobenzene	ND		ug/l	2.0	0.45
Pentachlorophenol	ND		ug/l	10	2.5
Phenanthrene	ND		ug/l	2.0	0.42
Anthracene	ND		ug/l	2.0	0.47
Carbazole	ND		ug/l	2.0	0.31
Di-n-butylphthalate	ND		ug/l	5.0	0.96
Fluoranthene	ND		ug/l	2.0	0.41
Pyrene	ND		ug/l	2.0	0.41
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Chrysene	ND		ug/l	1.5	0.22
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.4
Di-n-octylphthalate	ND		ug/l	5.0	2.3
Benzo(b)fluoranthene	ND		ug/l	2.0	0.53
Benzo(k)fluoranthene	ND		ug/l	2.0	0.62
Benzo(a)pyrene	ND		ug/l	2.0	0.37
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.48
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.29
Benzo(ghi)perylene	ND		ug/l	2.0	0.37

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 07/07/24 13:48
Analyst: CMM

Extraction Method: EPA 3510C
Extraction Date: 07/06/24 07:46

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 03 Batch: WG1943933-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	28		10-120
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	64		41-149

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1943265-2 WG1943265-3								
Benzaldehyde	71		67		40-140	6		30
Phenol	38		39		12-110	3		30
Bis(2-chloroethyl)ether	79		78		40-140	1		30
2-Chlorophenol	75		73		27-123	3		30
2-Methylphenol	69		67		30-130	3		30
Bis(2-chloroisopropyl)ether	72		71		40-140	1		30
Acetophenone	73		70		39-129	4		30
n-Nitrosodi-n-propylamine	77		73		29-132	5		30
3-Methylphenol/4-Methylphenol	68		65		30-130	5		30
Hexachloroethane	61		61		40-140	0		30
Nitrobenzene	75		74		40-140	1		30
Isophorone	74		74		40-140	0		30
2,4-Dimethylphenol	74		73		30-130	1		30
Bis(2-chloroethoxy)methane	78		73		40-140	7		30
2,4-Dichlorophenol	82		76		30-130	8		30
Naphthalene	69		70		40-140	1		30
4-Chloroaniline	71		66		40-140	7		30
Hexachlorobutadiene	63		63		40-140	0		30
Caprolactam	27		24		10-130	12		30
2-Methylnaphthalene	67		66		40-140	2		30
Hexachlorocyclopentadiene	56		56		40-140	0		30
1,2,4,5-Tetrachlorobenzene	58		62		2-134	7		30
2,4,6-Trichlorophenol	79		80		30-130	1		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1943265-2 WG1943265-3								
2,4,5-Trichlorophenol	86		86		30-130	0		30
Biphenyl	64		66		40-140	3		30
2-Chloronaphthalene	69		68		40-140	1		30
2-Nitroaniline	86		78		52-143	10		30
2,6-Dinitrotoluene	82		77		40-140	6		30
Acenaphthylene	75		74		45-123	1		30
Acenaphthene	74		74		37-111	0		30
2,4-Dinitrophenol	64		68		20-130	6		30
2,4-Dinitrotoluene	85		82		48-143	4		30
2,3,4,6-Tetrachlorophenol	83		78		54-145	6		30
Diethyl phthalate	86		75		40-140	14		30
Fluorene	75		77		40-140	3		30
4-Nitroaniline	89		85		51-143	5		30
NDPA/DPA	81		76		40-140	6		30
Hexachlorobenzene	83		77		40-140	8		30
Pentachlorophenol	74		81		9-103	9		30
Phenanthrene	85		80		40-140	6		30
Anthracene	88		81		40-140	8		30
Carbazole	89		83		55-144	7		30
Di-n-butylphthalate	84		80		40-140	5		30
Fluoranthene	88		82		40-140	7		30
Pyrene	92		87		26-127	6		30
3,3'-Dichlorobenzidine	85		78		40-140	9		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1943265-2 WG1943265-3								
Benzo(a)anthracene	84		81		40-140	4		30
Chrysene	90		84		40-140	7		30
Bis(2-ethylhexyl)phthalate	78		76		40-140	3		30
Di-n-octylphthalate	81		78		40-140	4		30
Benzo(b)fluoranthene	87		82		40-140	6		30
Benzo(k)fluoranthene	87		86		40-140	1		30
Benzo(a)pyrene	93		87		40-140	7		30
Indeno(1,2,3-cd)pyrene	82		78		40-140	5		30
Dibenzo(a,h)anthracene	90		85		40-140	6		30
Benzo(ghi)perylene	85		82		40-140	4		30

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	50		47		21-120
Phenol-d6	33		36		10-120
Nitrobenzene-d5	65		72		23-120
2-Fluorobiphenyl	68		65		15-120
2,4,6-Tribromophenol	81		76		10-120
4-Terphenyl-d14	79		69		41-149

Lab Control Sample Analysis **Batch Quality Control**

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1943266-2 WG1943266-3								
Naphthalene	72		70		40-140	3		40
2-Methylnaphthalene	76		74		40-140	3		40
Acenaphthylene	80		76		40-140	5		40
Acenaphthene	83		80		37-111	4		40
Fluorene	86		82		40-140	5		40
Phenanthrene	89		83		40-140	7		40
Anthracene	95		89		40-140	7		40
Fluoranthene	95		90		40-140	5		40
Pyrene	94		89		26-127	5		40
Benzo(a)anthracene	96		89		40-140	8		40
Chrysene	97		89		40-140	9		40
Benzo(b)fluoranthene	99		93		40-140	6		40
Benzo(k)fluoranthene	100		90		40-140	11		40
Benzo(a)pyrene	108		99		40-140	9		40
Indeno(1,2,3-cd)pyrene	113		106		40-140	6		40
Dibenzo(a,h)anthracene	108		102		40-140	6		40
Benzo(ghi)perylene	103		96		40-140	7		40

Lab Control Sample Analysis Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-04 Batch: WG1943266-2 WG1943266-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		55		21-120
Phenol-d6	41		41		10-120
Nitrobenzene-d5	91		86		23-120
2-Fluorobiphenyl	68		65		15-120
2,4,6-Tribromophenol	93		89		10-120
4-Terphenyl-d14	81		77		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1943933-2 WG1943933-3								
Benzaldehyde	72		62		40-140	15		30
Phenol	29		36		12-110	22		30
Bis(2-chloroethyl)ether	72		67		40-140	7		30
2-Chlorophenol	53		71		27-123	29		30
2-Methylphenol	66		64		30-130	3		30
Bis(2-chloroisopropyl)ether	72		66		40-140	9		30
Acetophenone	72		66		39-129	9		30
n-Nitrosodi-n-propylamine	73		68		29-132	7		30
3-Methylphenol/4-Methylphenol	60		71		30-130	17		30
Hexachloroethane	69		65		40-140	6		30
Nitrobenzene	76		70		40-140	8		30
Isophorone	73		69		40-140	6		30
2,4-Dimethylphenol	68		56		30-130	19		30
Bis(2-chloroethoxy)methane	71		67		40-140	6		30
2,4-Dichlorophenol	53		76		30-130	36	Q	30
Naphthalene	68		70		40-140	3		30
4-Chloroaniline	65		60		40-140	8		30
Hexachlorobutadiene	69		69		40-140	0		30
Caprolactam	27		28		10-130	4		30
2-Methylnaphthalene	68		66		40-140	3		30
Hexachlorocyclopentadiene	52		52		40-140	0		30
1,2,4,5-Tetrachlorobenzene	66		64		2-134	3		30
2,4,6-Trichlorophenol	56		78		30-130	33	Q	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1943933-2 WG1943933-3								
2,4,5-Trichlorophenol	58		82		30-130	34	Q	30
Biphenyl	70		65		40-140	7		30
2-Chloronaphthalene	70		70		40-140	0		30
2-Nitroaniline	84		74		52-143	13		30
2,6-Dinitrotoluene	77		70		40-140	10		30
Acenaphthylene	74		73		45-123	1		30
Acenaphthene	76		74		37-111	3		30
2,4-Dinitrophenol	25		73		20-130	98	Q	30
2,4-Dinitrotoluene	79		77		48-143	3		30
2,3,4,6-Tetrachlorophenol	58		79		54-145	31	Q	30
Diethyl phthalate	81		71		40-140	13		30
Fluorene	77		72		40-140	7		30
4-Nitroaniline	88		69		51-143	24		30
NDPA/DPA	83		72		40-140	14		30
Hexachlorobenzene	73		73		40-140	0		30
Pentachlorophenol	43		72		9-103	50	Q	30
Phenanthrene	79		71		40-140	11		30
Anthracene	81		72		40-140	12		30
Carbazole	84		73		55-144	14		30
Di-n-butylphthalate	82		70		40-140	16		30
Fluoranthene	81		73		40-140	10		30
Pyrene	84		72		26-127	15		30
3,3'-Dichlorobenzidine	78		70		40-140	11		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 03 Batch: WG1943933-2 WG1943933-3								
Benzo(a)anthracene	87		75		40-140	15		30
Chrysene	88		76		40-140	15		30
Bis(2-ethylhexyl)phthalate	83		68		40-140	20		30
Di-n-octylphthalate	85		72		40-140	17		30
Benzo(b)fluoranthene	85		77		40-140	10		30
Benzo(k)fluoranthene	90		75		40-140	18		30
Benzo(a)pyrene	89		77		40-140	14		30
Indeno(1,2,3-cd)pyrene	81		69		40-140	16		30
Dibenzo(a,h)anthracene	87		75		40-140	15		30
Benzo(ghi)perylene	83		71		40-140	16		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	32		49		21-120
Phenol-d6	26		32		10-120
Nitrobenzene-d5	62		60		23-120
2-Fluorobiphenyl	61		57		15-120
2,4,6-Tribromophenol	56		72		10-120
4-Terphenyl-d14	67		61		41-149

Project Name: B14 GW**Lab Number:** L2437031**Project Number:** 21010214**Report Date:** 07/08/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2437031-01A	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-01B	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-01C	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-01D	Amber 100ml unpreserved	A	7	7	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-01E	Amber 100ml unpreserved	A	7	7	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-02A	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-02B	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-02C	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-02D	Amber 100ml unpreserved	A	7	7	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-02E	Amber 100ml unpreserved	A	7	7	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-03A	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-03B	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-03C	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-03D	Amber 100ml unpreserved	A	9	9	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-03E	Amber 100ml unpreserved	A	9	9	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-04A	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-04B	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-04C	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-04D	Amber 100ml unpreserved	A	9	9	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-04E	Amber 100ml unpreserved	A	9	9	2.9	Y	Absent		PA-8270-RVT(7),PA-8270SIM-RVT(7)
L2437031-05A	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-05B	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)
L2437031-05C	Vial HCl preserved	A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)

Project Name: B14 GW
Project Number: 21010214

Serial_No:07082416:32
Lab Number: L2437031
Report Date: 07/08/24

Container Information

Container ID Container Type

L2437031-05D Vial HCl preserved

Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
A	NA		2.9	Y	Absent		PA-8260-SIM(14),PA-8260(14)

Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers



Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers



Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: B14 GW
Project Number: 21010214

Lab Number: L2437031
Report Date: 07/08/24

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 21

Published Date: 04/17/2024

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.**EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

APPENDIX C

Mann-Kendall Trend Analysis

Parameter: Benzene

Location: TM04-PZM006

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
610	1400	-790	0	1
653	1400	-747	0	2
355	1400	-1045	0	3
367	1400	-1033	0	4
390	1400	-1010	0	5
390	1400	-1010	0	6
380	1400	-1020	0	7
180	1400	-1220	0	8
500	1400	-900	0	9
500	1400	-900	0	10
460	1400	-940	0	11
400	1400	-1000	0	12
500	1400	-900	0	13
540	1400	-860	0	14
500	1400	-900	0	15
370	1400	-1030	0	16
340	1400	-1060	0	17
490	1400	-910	0	18
140	1400	-1260	0	19
400	1400	-1000	0	20
653	610	43	1	20
355	610	-255	1	21
367	610	-243	1	22
390	610	-220	1	23
390	610	-220	1	24
380	610	-230	1	25
180	610	-430	1	26
500	610	-110	1	27
500	610	-110	1	28
460	610	-150	1	29
400	610	-210	1	30
500	610	-110	1	31
540	610	-70	1	32
500	610	-110	1	33
370	610	-240	1	34
340	610	-270	1	35
490	610	-120	1	36
140	610	-470	1	37
400	610	-210	1	38
355	653	-298	1	39
367	653	-286	1	40
390	653	-263	1	41
390	653	-263	1	42
380	653	-273	1	43
180	653	-473	1	44

500	653	-153	1	45
500	653	-153	1	46
460	653	-193	1	47
400	653	-253	1	48
500	653	-153	1	49
540	653	-113	1	50
500	653	-153	1	51
370	653	-283	1	52
340	653	-313	1	53
490	653	-163	1	54
140	653	-513	1	55
400	653	-253	1	56
367	355	12	2	56
390	355	35	3	56
390	355	35	4	56
380	355	25	5	56
180	355	-175	5	57
500	355	145	6	57
500	355	145	7	57
460	355	105	8	57
400	355	45	9	57
500	355	145	10	57
540	355	185	11	57
500	355	145	12	57
370	355	15	13	57
340	355	-15	13	58
490	355	135	14	58
140	355	-215	14	59
400	355	45	15	59
390	367	23	16	59
390	367	23	17	59
380	367	13	18	59
180	367	-187	18	60
500	367	133	19	60
500	367	133	20	60
460	367	93	21	60
400	367	33	22	60
500	367	133	23	60
540	367	173	24	60
500	367	133	25	60
370	367	3	26	60
340	367	-27	26	61
490	367	123	27	61
140	367	-227	27	62
400	367	33	28	62
390	390	0	28	62
380	390	-10	28	63
180	390	-210	28	64
500	390	110	29	64
500	390	110	30	64
460	390	70	31	64
400	390	10	32	64
500	390	110	33	64
540	390	150	34	64

500	390	110	35	64
370	390	-20	35	65
340	390	-50	35	66
490	390	100	36	66
140	390	-250	36	67
400	390	10	37	67
380	390	-10	37	68
180	390	-210	37	69
500	390	110	38	69
500	390	110	39	69
460	390	70	40	69
400	390	10	41	69
500	390	110	42	69
540	390	150	43	69
500	390	110	44	69
370	390	-20	44	70
340	390	-50	44	71
490	390	100	45	71
140	390	-250	45	72
400	390	10	46	72
180	380	-200	46	73
500	380	120	47	73
500	380	120	48	73
460	380	80	49	73
400	380	20	50	73
500	380	120	51	73
540	380	160	52	73
500	380	120	53	73
370	380	-10	53	74
340	380	-40	53	75
490	380	110	54	75
140	380	-240	54	76
400	380	20	55	76
500	180	320	56	76
500	180	320	57	76
460	180	280	58	76
400	180	220	59	76
500	180	320	60	76
540	180	360	61	76
500	180	320	62	76
370	180	190	63	76
340	180	160	64	76
490	180	310	65	76
140	180	-40	65	77
400	180	220	66	77
500	500	0	66	77
460	500	-40	66	78
400	500	-100	66	79
500	500	0	66	79
540	500	40	67	79
500	500	0	67	79
370	500	-130	67	80
340	500	-160	67	81

490	500	-10	67	82
140	500	-360	67	83
400	500	-100	67	84
460	500	-40	67	85
400	500	-100	67	86
500	500	0	67	86
540	500	40	68	86
500	500	0	68	86
370	500	-130	68	87
340	500	-160	68	88
490	500	-10	68	89
140	500	-360	68	90
400	500	-100	68	91
400	460	-60	68	92
500	460	40	69	92
540	460	80	70	92
500	460	40	71	92
370	460	-90	71	93
340	460	-120	71	94
490	460	30	72	94
140	460	-320	72	95
400	460	-60	72	96
500	400	100	73	96
540	400	140	74	96
500	400	100	75	96
370	400	-30	75	97
340	400	-60	75	98
490	400	90	76	98
140	400	-260	76	99
400	400	0	76	99
540	500	40	77	99
500	500	0	77	99
370	500	-130	77	100
340	500	-160	77	101
490	500	-10	77	102
140	500	-360	77	103
400	500	-100	77	104
500	540	-40	77	105
370	540	-170	77	106
340	540	-200	77	107
490	540	-50	77	108
140	540	-400	77	109
400	540	-140	77	110
370	500	-130	77	111
340	500	-160	77	112
490	500	-10	77	113
140	500	-360	77	114
400	500	-100	77	115
340	370	-30	77	116
490	370	120	78	116

140	370	-230	78	117
400	370	30	79	117
490	340	150	80	117
140	340	-200	80	118
400	340	60	81	118
140	490	-350	81	119
400	490	-90	81	120
400	140	260	82	120

S Statistic = 82 - 120 = -38

Tied Group	Value	Members
1	390	2
2	500	4
3	400	2

Time Period	Observations
12/1/2001	1
7/1/2004	1
10/13/2017	1
10/21/2021	1
11/29/2021	1
1/12/2022	1
2/18/2022	1
3/15/2022	1
4/18/2022	1
5/19/2022	1
6/15/2022	1
7/27/2022	1
8/29/2022	1
9/21/2022	1
10/26/2022	1
1/12/2023	1
4/10/2023	1
7/19/2023	1
10/4/2023	1
2/8/2024	1
6/28/2024	1

There are 0 time periods with multiple data

A = 192

B = 0

C = 24

D = 0

E = 16

F = 0

a = 19740

b = 71820

c = 840

Group Variance = 1086

Z-Score = -1.12276

Comparison Level at 95% confidence level = 1.65463 (upward trend)

-1.12276 <= 1.65463 indicating no evidence of an upward trend

Mann-Kendall Trend Analysis

Parameter: Benzene

Location: TM04-PZM006

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
610	1400	-790	0	1
653	1400	-747	0	2
355	1400	-1045	0	3
367	1400	-1033	0	4
390	1400	-1010	0	5
390	1400	-1010	0	6
380	1400	-1020	0	7
180	1400	-1220	0	8
500	1400	-900	0	9
500	1400	-900	0	10
460	1400	-940	0	11
400	1400	-1000	0	12
500	1400	-900	0	13
540	1400	-860	0	14
500	1400	-900	0	15
370	1400	-1030	0	16
340	1400	-1060	0	17
490	1400	-910	0	18
140	1400	-1260	0	19
400	1400	-1000	0	20
653	610	43	1	20
355	610	-255	1	21
367	610	-243	1	22
390	610	-220	1	23
390	610	-220	1	24
380	610	-230	1	25
180	610	-430	1	26
500	610	-110	1	27
500	610	-110	1	28
460	610	-150	1	29
400	610	-210	1	30
500	610	-110	1	31
540	610	-70	1	32
500	610	-110	1	33
370	610	-240	1	34
340	610	-270	1	35
490	610	-120	1	36
140	610	-470	1	37
400	610	-210	1	38
355	653	-298	1	39
367	653	-286	1	40
390	653	-263	1	41
390	653	-263	1	42
380	653	-273	1	43
180	653	-473	1	44

500	653	-153	1	45
500	653	-153	1	46
460	653	-193	1	47
400	653	-253	1	48
500	653	-153	1	49
540	653	-113	1	50
500	653	-153	1	51
370	653	-283	1	52
340	653	-313	1	53
490	653	-163	1	54
140	653	-513	1	55
400	653	-253	1	56
367	355	12	2	56
390	355	35	3	56
390	355	35	4	56
380	355	25	5	56
180	355	-175	5	57
500	355	145	6	57
500	355	145	7	57
460	355	105	8	57
400	355	45	9	57
500	355	145	10	57
540	355	185	11	57
500	355	145	12	57
370	355	15	13	57
340	355	-15	13	58
490	355	135	14	58
140	355	-215	14	59
400	355	45	15	59
390	367	23	16	59
390	367	23	17	59
380	367	13	18	59
180	367	-187	18	60
500	367	133	19	60
500	367	133	20	60
460	367	93	21	60
400	367	33	22	60
500	367	133	23	60
540	367	173	24	60
500	367	133	25	60
370	367	3	26	60
340	367	-27	26	61
490	367	123	27	61
140	367	-227	27	62
400	367	33	28	62
390	390	0	28	62
380	390	-10	28	63
180	390	-210	28	64
500	390	110	29	64
500	390	110	30	64
460	390	70	31	64
400	390	10	32	64
500	390	110	33	64
540	390	150	34	64

500	390	110	35	64
370	390	-20	35	65
340	390	-50	35	66
490	390	100	36	66
140	390	-250	36	67
400	390	10	37	67
380	390	-10	37	68
180	390	-210	37	69
500	390	110	38	69
500	390	110	39	69
460	390	70	40	69
400	390	10	41	69
500	390	110	42	69
540	390	150	43	69
500	390	110	44	69
370	390	-20	44	70
340	390	-50	44	71
490	390	100	45	71
140	390	-250	45	72
400	390	10	46	72
180	380	-200	46	73
500	380	120	47	73
500	380	120	48	73
460	380	80	49	73
400	380	20	50	73
500	380	120	51	73
540	380	160	52	73
500	380	120	53	73
370	380	-10	53	74
340	380	-40	53	75
490	380	110	54	75
140	380	-240	54	76
400	380	20	55	76
500	180	320	56	76
500	180	320	57	76
460	180	280	58	76
400	180	220	59	76
500	180	320	60	76
540	180	360	61	76
500	180	320	62	76
370	180	190	63	76
340	180	160	64	76
490	180	310	65	76
140	180	-40	65	77
400	180	220	66	77
500	500	0	66	77
460	500	-40	66	78
400	500	-100	66	79
500	500	0	66	79
540	500	40	67	79
500	500	0	67	79
370	500	-130	67	80
340	500	-160	67	81

490	500	-10	67	82
140	500	-360	67	83
400	500	-100	67	84
460	500	-40	67	85
400	500	-100	67	86
500	500	0	67	86
540	500	40	68	86
500	500	0	68	86
370	500	-130	68	87
340	500	-160	68	88
490	500	-10	68	89
140	500	-360	68	90
400	500	-100	68	91
400	460	-60	68	92
500	460	40	69	92
540	460	80	70	92
500	460	40	71	92
370	460	-90	71	93
340	460	-120	71	94
490	460	30	72	94
140	460	-320	72	95
400	460	-60	72	96
500	400	100	73	96
540	400	140	74	96
500	400	100	75	96
370	400	-30	75	97
340	400	-60	75	98
490	400	90	76	98
140	400	-260	76	99
400	400	0	76	99
540	500	40	77	99
500	500	0	77	99
370	500	-130	77	100
340	500	-160	77	101
490	500	-10	77	102
140	500	-360	77	103
400	500	-100	77	104
500	540	-40	77	105
370	540	-170	77	106
340	540	-200	77	107
490	540	-50	77	108
140	540	-400	77	109
400	540	-140	77	110
370	500	-130	77	111
340	500	-160	77	112
490	500	-10	77	113
140	500	-360	77	114
400	500	-100	77	115
340	370	-30	77	116
490	370	120	78	116

140	370	-230	78	117
400	370	30	79	117
490	340	150	80	117
140	340	-200	80	118
400	340	60	81	118
140	490	-350	81	119
400	490	-90	81	120
400	140	260	82	120

S Statistic = 82 - 120 = -38

Tied Group	Value	Members
1	390	2
2	500	4
3	400	2

Time Period	Observations
12/1/2001	1
7/1/2004	1
10/13/2017	1
10/21/2021	1
11/29/2021	1
1/12/2022	1
2/18/2022	1
3/15/2022	1
4/18/2022	1
5/19/2022	1
6/15/2022	1
7/27/2022	1
8/29/2022	1
9/21/2022	1
10/26/2022	1
1/12/2023	1
4/10/2023	1
7/19/2023	1
10/4/2023	1
2/8/2024	1
6/28/2024	1

There are 0 time periods with multiple data

A = 192

B = 0

C = 24

D = 0

E = 16

F = 0

a = 19740

b = 71820

c = 840

Group Variance = 1086

Z-Score = -1.12276

Comparison Level at 95% confidence level = -1.65463 (downward trend)

-1.12276 >= -1.65463 indicating no evidence of a downward trend

Mann-Kendall Trend Analysis

Parameter: Naphthalene

Location: TM04-PZM006

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
51	200	-149	0	1
405	200	205	1	1
358	200	158	2	1
432 L1	200	232	3	1
140	200	-60	3	2
69	200	-131	3	3
240	200	40	4	3
54	200	-146	4	4
230	200	30	5	4
160	200	-40	5	5
180	200	-20	5	6
140	200	-60	5	7
210	200	10	6	7
160	200	-40	6	8
210	200	10	7	8
68	200	-132	7	9
ND<0.05 U	200	-199.95	7	10
170	200	-30	7	11
0.12	200	-199.88	7	12
13	200	-187	7	13
405	51	354	8	13
358	51	307	9	13
432 L1	51	381	10	13
140	51	89	11	13
69	51	18	12	13
240	51	189	13	13
54	51	3	14	13
230	51	179	15	13
160	51	109	16	13
180	51	129	17	13
140	51	89	18	13
210	51	159	19	13
160	51	109	20	13
210	51	159	21	13
68	51	17	22	13
ND<0.05 U	51	-50.95	22	14
170	51	119	23	14
0.12	51	-50.88	23	15
13	51	-38	23	16
358	405	-47	23	17
432 L1	405	27	24	17
140	405	-265	24	18
69	405	-336	24	19
240	405	-165	24	20
54	405	-351	24	21

230	405	-175	24	22
160	405	-245	24	23
180	405	-225	24	24
140	405	-265	24	25
210	405	-195	24	26
160	405	-245	24	27
210	405	-195	24	28
68	405	-337	24	29
ND<0.05 U	405	-404.95	24	30
170	405	-235	24	31
0.12	405	-404.88	24	32
13	405	-392	24	33
432 L1	358	74	25	33
140	358	-218	25	34
69	358	-289	25	35
240	358	-118	25	36
54	358	-304	25	37
230	358	-128	25	38
160	358	-198	25	39
180	358	-178	25	40
140	358	-218	25	41
210	358	-148	25	42
160	358	-198	25	43
210	358	-148	25	44
68	358	-290	25	45
ND<0.05 U	358	-357.95	25	46
170	358	-188	25	47
0.12	358	-357.88	25	48
13	358	-345	25	49
140	432 L1	-292	25	50
69	432 L1	-363	25	51
240	432 L1	-192	25	52
54	432 L1	-378	25	53
230	432 L1	-202	25	54
160	432 L1	-272	25	55
180	432 L1	-252	25	56
140	432 L1	-292	25	57
210	432 L1	-222	25	58
160	432 L1	-272	25	59
210	432 L1	-222	25	60
68	432 L1	-364	25	61
ND<0.05 U	432 L1	-431.95	25	62
170	432 L1	-262	25	63
0.12	432 L1	-431.88	25	64
13	432 L1	-419	25	65
69	140	-71	25	66
240	140	100	26	66
54	140	-86	26	67
230	140	90	27	67
160	140	20	28	67
180	140	40	29	67
140	140	0	29	67
210	140	70	30	67
160	140	20	31	67

210	140	70	32	67
68	140	-72	32	68
ND<0.05 U	140	-139.95	32	69
170	140	30	33	69
0.12	140	-139.88	33	70
13	140	-127	33	71
240	69	171	34	71
54	69	-15	34	72
230	69	161	35	72
160	69	91	36	72
180	69	111	37	72
140	69	71	38	72
210	69	141	39	72
160	69	91	40	72
210	69	141	41	72
68	69	-1	41	73
ND<0.05 U	69	-68.95	41	74
170	69	101	42	74
0.12	69	-68.88	42	75
13	69	-56	42	76
54	240	-186	42	77
230	240	-10	42	78
160	240	-80	42	79
180	240	-60	42	80
140	240	-100	42	81
210	240	-30	42	82
160	240	-80	42	83
210	240	-30	42	84
68	240	-172	42	85
ND<0.05 U	240	-239.95	42	86
170	240	-70	42	87
0.12	240	-239.88	42	88
13	240	-227	42	89
230	54	176	43	89
160	54	106	44	89
180	54	126	45	89
140	54	86	46	89
210	54	156	47	89
160	54	106	48	89
210	54	156	49	89
68	54	14	50	89
ND<0.05 U	54	-53.95	50	90
170	54	116	51	90
0.12	54	-53.88	51	91
13	54	-41	51	92
160	230	-70	51	93
180	230	-50	51	94
140	230	-90	51	95
210	230	-20	51	96
160	230	-70	51	97
210	230	-20	51	98
68	230	-162	51	99
ND<0.05 U	230	-229.95	51	100

170	230	-60	51	101
0.12	230	-229.88	51	102
13	230	-217	51	103
180	160	20	52	103
140	160	-20	52	104
210	160	50	53	104
160	160	0	53	104
210	160	50	54	104
68	160	-92	54	105
ND<0.05 U	160	-159.95	54	106
170	160	10	55	106
0.12	160	-159.88	55	107
13	160	-147	55	108
140	180	-40	55	109
210	180	30	56	109
160	180	-20	56	110
210	180	30	57	110
68	180	-112	57	111
ND<0.05 U	180	-179.95	57	112
170	180	-10	57	113
0.12	180	-179.88	57	114
13	180	-167	57	115
210	140	70	58	115
160	140	20	59	115
210	140	70	60	115
68	140	-72	60	116
ND<0.05 U	140	-139.95	60	117
170	140	30	61	117
0.12	140	-139.88	61	118
13	140	-127	61	119
160	210	-50	61	120
210	210	0	61	120
68	210	-142	61	121
ND<0.05 U	210	-209.95	61	122
170	210	-40	61	123
0.12	210	-209.88	61	124
13	210	-197	61	125
210	160	50	62	125
68	160	-92	62	126
ND<0.05 U	160	-159.95	62	127
170	160	10	63	127
0.12	160	-159.88	63	128
13	160	-147	63	129
68	210	-142	63	130
ND<0.05 U	210	-209.95	63	131
170	210	-40	63	132
0.12	210	-209.88	63	133
13	210	-197	63	134
ND<0.05 U	68	-67.95	63	135
170	68	102	64	135

0.12	68	-67.88	64	136
13	68	-55	64	137
170	ND<0.05 U	169.95	65	137
0.12	ND<0.05 U	0.07	66	137
13	ND<0.05 U	12.95	67	137
0.12	170	-169.88	67	138
13	170	-157	67	139
13	0.12	12.88	68	139

S Statistic = 68 - 139 = -71

Tied Group	Value	Members
1	140	2
2	160	2
3	210	2

Time Period	Observations
12/1/2001	1
7/1/2004	1
10/13/2017	1
10/21/2021	1
11/29/2021	1
1/12/2022	1
2/18/2022	1
3/15/2022	1
4/18/2022	1
5/19/2022	1
6/15/2022	1
7/27/2022	1
8/29/2022	1
9/21/2022	1
10/26/2022	1
1/12/2023	1
4/10/2023	1
7/19/2023	1
10/4/2023	1
2/8/2024	1
6/28/2024	1

There are 0 time periods with multiple data

A = 54

B = 0

C = 0

D = 0

E = 6

F = 0

a = 19740

b = 71820

c = 840

Group Variance = 1093.67

Z-Score = -2.11668

Comparison Level at 95% confidence level = 1.65463 (upward trend)

-2.11668 <= 1.65463 indicating no evidence of an upward trend

Mann-Kendall Trend Analysis

Parameter: Naphthalene

Location: TM04-PZM006

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

95% Confidence Level

Xj	Xk	Xj - Xk	Positives	Negatives
51	200	-149	0	1
405	200	205	1	1
358	200	158	2	1
432 L1	200	232	3	1
140	200	-60	3	2
69	200	-131	3	3
240	200	40	4	3
54	200	-146	4	4
230	200	30	5	4
160	200	-40	5	5
180	200	-20	5	6
140	200	-60	5	7
210	200	10	6	7
160	200	-40	6	8
210	200	10	7	8
68	200	-132	7	9
ND<0.05 U	200	-199.95	7	10
170	200	-30	7	11
0.12	200	-199.88	7	12
13	200	-187	7	13
405	51	354	8	13
358	51	307	9	13
432 L1	51	381	10	13
140	51	89	11	13
69	51	18	12	13
240	51	189	13	13
54	51	3	14	13
230	51	179	15	13
160	51	109	16	13
180	51	129	17	13
140	51	89	18	13
210	51	159	19	13
160	51	109	20	13
210	51	159	21	13
68	51	17	22	13
ND<0.05 U	51	-50.95	22	14
170	51	119	23	14
0.12	51	-50.88	23	15
13	51	-38	23	16
358	405	-47	23	17
432 L1	405	27	24	17
140	405	-265	24	18
69	405	-336	24	19
240	405	-165	24	20
54	405	-351	24	21

230	405	-175	24	22
160	405	-245	24	23
180	405	-225	24	24
140	405	-265	24	25
210	405	-195	24	26
160	405	-245	24	27
210	405	-195	24	28
68	405	-337	24	29
ND<0.05 U	405	-404.95	24	30
170	405	-235	24	31
0.12	405	-404.88	24	32
13	405	-392	24	33
432 L1	358	74	25	33
140	358	-218	25	34
69	358	-289	25	35
240	358	-118	25	36
54	358	-304	25	37
230	358	-128	25	38
160	358	-198	25	39
180	358	-178	25	40
140	358	-218	25	41
210	358	-148	25	42
160	358	-198	25	43
210	358	-148	25	44
68	358	-290	25	45
ND<0.05 U	358	-357.95	25	46
170	358	-188	25	47
0.12	358	-357.88	25	48
13	358	-345	25	49
140	432 L1	-292	25	50
69	432 L1	-363	25	51
240	432 L1	-192	25	52
54	432 L1	-378	25	53
230	432 L1	-202	25	54
160	432 L1	-272	25	55
180	432 L1	-252	25	56
140	432 L1	-292	25	57
210	432 L1	-222	25	58
160	432 L1	-272	25	59
210	432 L1	-222	25	60
68	432 L1	-364	25	61
ND<0.05 U	432 L1	-431.95	25	62
170	432 L1	-262	25	63
0.12	432 L1	-431.88	25	64
13	432 L1	-419	25	65
69	140	-71	25	66
240	140	100	26	66
54	140	-86	26	67
230	140	90	27	67
160	140	20	28	67
180	140	40	29	67
140	140	0	29	67
210	140	70	30	67
160	140	20	31	67

210	140	70	32	67
68	140	-72	32	68
ND<0.05 U	140	-139.95	32	69
170	140	30	33	69
0.12	140	-139.88	33	70
13	140	-127	33	71
240	69	171	34	71
54	69	-15	34	72
230	69	161	35	72
160	69	91	36	72
180	69	111	37	72
140	69	71	38	72
210	69	141	39	72
160	69	91	40	72
210	69	141	41	72
68	69	-1	41	73
ND<0.05 U	69	-68.95	41	74
170	69	101	42	74
0.12	69	-68.88	42	75
13	69	-56	42	76
54	240	-186	42	77
230	240	-10	42	78
160	240	-80	42	79
180	240	-60	42	80
140	240	-100	42	81
210	240	-30	42	82
160	240	-80	42	83
210	240	-30	42	84
68	240	-172	42	85
ND<0.05 U	240	-239.95	42	86
170	240	-70	42	87
0.12	240	-239.88	42	88
13	240	-227	42	89
230	54	176	43	89
160	54	106	44	89
180	54	126	45	89
140	54	86	46	89
210	54	156	47	89
160	54	106	48	89
210	54	156	49	89
68	54	14	50	89
ND<0.05 U	54	-53.95	50	90
170	54	116	51	90
0.12	54	-53.88	51	91
13	54	-41	51	92
160	230	-70	51	93
180	230	-50	51	94
140	230	-90	51	95
210	230	-20	51	96
160	230	-70	51	97
210	230	-20	51	98
68	230	-162	51	99
ND<0.05 U	230	-229.95	51	100

170	230	-60	51	101
0.12	230	-229.88	51	102
13	230	-217	51	103
180	160	20	52	103
140	160	-20	52	104
210	160	50	53	104
160	160	0	53	104
210	160	50	54	104
68	160	-92	54	105
ND<0.05 U	160	-159.95	54	106
170	160	10	55	106
0.12	160	-159.88	55	107
13	160	-147	55	108
140	180	-40	55	109
210	180	30	56	109
160	180	-20	56	110
210	180	30	57	110
68	180	-112	57	111
ND<0.05 U	180	-179.95	57	112
170	180	-10	57	113
0.12	180	-179.88	57	114
13	180	-167	57	115
210	140	70	58	115
160	140	20	59	115
210	140	70	60	115
68	140	-72	60	116
ND<0.05 U	140	-139.95	60	117
170	140	30	61	117
0.12	140	-139.88	61	118
13	140	-127	61	119
160	210	-50	61	120
210	210	0	61	120
68	210	-142	61	121
ND<0.05 U	210	-209.95	61	122
170	210	-40	61	123
0.12	210	-209.88	61	124
13	210	-197	61	125
210	160	50	62	125
68	160	-92	62	126
ND<0.05 U	160	-159.95	62	127
170	160	10	63	127
0.12	160	-159.88	63	128
13	160	-147	63	129
68	210	-142	63	130
ND<0.05 U	210	-209.95	63	131
170	210	-40	63	132
0.12	210	-209.88	63	133
13	210	-197	63	134
ND<0.05 U	68	-67.95	63	135
170	68	102	64	135

0.12	68	-67.88	64	136
13	68	-55	64	137
170	ND<0.05 U	169.95	65	137
0.12	ND<0.05 U	0.07	66	137
13	ND<0.05 U	12.95	67	137
0.12	170	-169.88	67	138
13	170	-157	67	139
13	0.12	12.88	68	139

S Statistic = 68 - 139 = -71

Tied Group	Value	Members
1	140	2
2	160	2
3	210	2

Time Period	Observations
12/1/2001	1
7/1/2004	1
10/13/2017	1
10/21/2021	1
11/29/2021	1
1/12/2022	1
2/18/2022	1
3/15/2022	1
4/18/2022	1
5/19/2022	1
6/15/2022	1
7/27/2022	1
8/29/2022	1
9/21/2022	1
10/26/2022	1
1/12/2023	1
4/10/2023	1
7/19/2023	1
10/4/2023	1
2/8/2024	1
6/28/2024	1

There are 0 time periods with multiple data

A = 54

B = 0

C = 0

D = 0

E = 6

F = 0

a = 19740

b = 71820

c = 840

Group Variance = 1093.67

Z-Score = -2.11668

Comparison Level at 95% confidence level = -1.65463 (downward trend)

-2.11668 < -1.65463 indicating a downward trend