AECOM Environment

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December 2024

2024 Periodic Review Report, Former Carborundum Company, Hyde Park Facility Town of Niagara, Niagara County, NY NYSDEC Site No. 932036

Submitted to:

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
700 Delaware Avenue
Buffalo, NY 14209

On behalf of:

Elm Holdings Inc.

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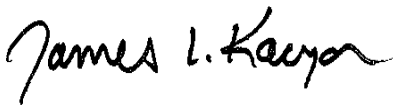
Prepared By Mark T. Becker, P.G.



Reviewed By James L. Kaczor, P.G.

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1.0 Introduction

On behalf of Elm Holdings Inc. (Elm Holdings), AECOM Technical Services, Inc. (AECOM) is submitting this Periodic Review Report (PRR) along with a completed Institutional Controls and Engineering Controls (IC/EC) Certification Form (Appendix A) summarizing ongoing groundwater monitoring activities at the former Carborundum Hyde Park Facility (Site) in the Town of Niagara, New York (see Figure 1 – Project Location Plan), New York State Department of Environmental Conservation (NYSDEC) Site No. 932036. Effective March 1, 2016, Elm Holdings Inc. retained AECOM to manage the remediation at the above referenced site. In accordance with the contractual arrangement between Elm Holdings Inc. and AECOM, AECOM has primary accountability for the site, including managing communications and regulatory program submissions with NYSDEC.

The annual groundwater monitoring is conducted on an alternating spring (even years)/fall (odd years) schedule and includes the collection of groundwater samples for the analysis of chlorinated volatile organic compounds (CVOCs) and natural attenuation parameters. The previous PRR was submitted in August 2021, and covered activities from the period July 31, 2018 to July 31, 2021 for the subject facility (Site). This PRR covers activities for the period August 1, 2021 through July 31, 2024. These activities include annual groundwater monitoring performed in April 2022, October 2023 and April 2024. The April 2022 and October 2023 groundwater monitoring events have been summarized in the following documents:

- Spring 2022 Annual Groundwater Monitoring Report (AECOM, June 30, 2022); and,
- Fall 2023 Annual Groundwater Monitoring Report (AECOM, August 29, 2024).

The Spring 2024 Groundwater Monitoring event was completed in accordance with the groundwater monitoring work plan (DE&S 2000) for Operable Unit 2 (OU2), approved by NYSDEC, correspondence from NYSDEC dated September 28, 2005 (NYSDEC 2005), April 8, 2014 (NYSDEC 2014) and October 6, 2018 (NYSDEC 2018), and letters to NYSDEC dated August 20, 2013 (Parsons 2013) and April 3, 2014 (Parsons 2014).

The scope of the Spring 2024 annual groundwater monitoring program included:

- Collection of water level measurements from overburden and bedrock monitoring wells, injection wells, and performance monitoring wells;
- Purging of select overburden and bedrock monitoring wells and collection of field measurements of pH, temperature, specific conductivity, oxidation/reduction potential (ORP), dissolved oxygen (DO), and turbidity;
- Collection of groundwater samples from select overburden and bedrock monitoring wells for specific CVOC analyses;
- Collection of groundwater samples from select overburden and bedrock monitoring wells for analysis of natural attenuation parameters to aid in remedial action optimization (RAO) evaluations; and

- Collection of groundwater samples from select overburden and bedrock monitoring wells for analysis of emerging contaminants, including 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS).

Figure 2 – Site Plan presents monitoring well locations, injection well locations, performance monitoring well locations, and site features.

AECOM submitted a revised Site Management Plan (SMP) for the former Carborundum Company Hyde Park facility on February 29, 2024; the plan was approved by NYSDEC on March 14, 2024. The SMP describes the ICs and ECs employed at Site. The SMP also describes the required groundwater monitoring and reporting program and the requirement for submittal of a PRR every three years. In email communication dated February 5, 2024, NYSDEC approved AECOM's proposal to combine the 2024 Annual Groundwater Monitoring Report with the every-third-year PRR. Results from the April 2024 groundwater monitoring event are presented herein, followed by a discussion of conditions and trends observed over the three monitoring events in the period covered by this PRR, and whether the IC/ECs continue to meet the objectives of the 2000 Record of Decision (ROD) for Operable Unit 2 (Groundwater).

2.0 Site Remedial Summary

The following section briefly summarizes the remedial work completed at the Site. Primary tasks included excavation and off-site disposal of impacted soil in 1999 and 2002, emulsified vegetable oil substrate injections in 2008, 2009, 2011 and 2013, and associated performance groundwater monitoring events. Terra Systems, Inc. (TSI) SRS®-SD was used for all overburden injections, SRS®-FR was used for all bedrock injections, and TSI-DC® bioaugmentation culture was used for microorganism bioaugmentation. Additional detail regarding Site background and remedial summaries are presented in event-specific performance reports and Five-Year Review Reports.

The following is a timeline of key remedial actions and associated groundwater monitoring:

Task	Start & Completion Date
1999 On-Site Soil (OU1) Interim Remedial Action	
Borehole Investigation and Test-Pit Pre-characterization of Soils	September 1998 – April 1999
Excavation of contaminated onsite soils and verification sampling.	May – August 1999
2000 Off-Site Soil (OU3) Interim Remedial Action	
OU3 Investigation -Extent of Contamination	August 2001
Excavation of contaminated offsite soils, and some remaining onsite soils and verification sampling.	December 2002
Initial Groundwater Monitoring Program (OU2)	
Post-Excavation Groundwater Sampling.	Year 1: October 1999; October 2000; Year 2: May 2001; November 2001; Year 3: May 2002; October 2002; Year 4: May 2003; November 2003; Year 5: May 2004; October 2004; Fall 2005: November 2005 Spring 2006: May 2006

Task	Start & Completion Date
	Fall 2007: October/November 2007 Spring 2008: April 2008
2008 Injection Event	
Baseline Performance Monitoring	August 2008
Overburden Substrate Injection (INJ-1 and INJ-2)	September 4 – 5, 2008
Overburden Bioaugmentation (INJ-1 and INJ-2)	October 21 – 22, 2008
Performance Groundwater Monitoring	October 2008, December 2008, January 2009, March 2009
2009 Injection Event	
Baseline Groundwater Monitoring	October 2009
Bedrock Substrate Injections (INJ-3 and INJ-4)	November 11 – 12, 2009
Overburden Substrate Injections (INJ-1 and INJ-2)	November 17 – 18, 2009
Overburden and Bedrock Bioaugmentation (INJ-1 through INJ-4)	December 17 – 22, 2009
Performance Groundwater Monitoring	December 2009, February 2010, March-April 2010, May 2010, November 2010
2011 Injection Event	
Overburden Injection Well Installation (INJ-5U, INJ-5L, INJ-6U, INJ-6L, INJ-7, INJ-8, INJ-9, INJ-10)	October 6 – 20, 2011
Baseline Sampling	October 20 – November 7, 2011
Overburden Substrate Injections and Bioaugmentation (INJ-1, INJ-2, INJ-5U, INJ-5L, INJ-6U, INJ-6L, INJ-7, INJ-8, INJ-9, INJ-10)	November 11 – December 13, 2011
3-month Performance Sampling	March 12 – 15, 2012
6-month Performance Sampling	June 11 – 18, 2012

Task	Start & Completion Date
12-month Performance Sampling	November 26 – 30, 2012
2013 Injection Event	
Overburden and Bedrock Substrate Injections and Bioaugmentation (INJ-1, INJ-2, INJ-3, INJ-4, MW-16B, MW-18B, INJ-9, INJ-10)	September 9 – October 1, 2013
Tracer Dye Injections (MW-16B, MW-18B)	September 19 – 24, 2013
Tracer Dye Sampling	September 20, 2013 – January 17, 2014
3-month Performance Sampling	January 13 – 20, 2014
6-month Performance Sampling	March 30 – April 3, 2014
12-month Performance Sampling	October 8 – 14, 2014
Annual Groundwater Monitoring Events (OU2)	
Groundwater Sampling (Alternating Spring/Fall)	November 16 – 20, 2015; April 19 – 22, 2016; September 11–14, 2017; April 23 – 26, 2018; June 14, 2018; December 3 – 5, 2019; March 18 – 20, 2020; December 6 – 8, 2021 May 10 – 12, 2022 October 3 – 6, 2023 April 22 – 25, 2024

3.0 Groundwater Monitoring Program Summary

The Spring 2024 annual groundwater monitoring program included water level measurements, groundwater sampling at 18 well locations, and submission of groundwater samples for analysis of CVOCs and natural attenuation parameters. The regular sampling program includes 17 monitoring wells. Well MW-15, which is located in Hyde Park Boulevard, is sampled every five years. In addition to the regular analytical parameters, at the request of NYSDEC, six wells were also sampled for 1,4-dioxane and PFAS. Quality assurance/quality control (QA/QC) samples, including one field duplicate, one matrix spike/matrix spike duplicate (MS/MSD) sample, and three trip blanks were also collected and submitted for analysis. Table 1 presents a summary of groundwater sample locations and associated QA/QC samples.

3.1 Groundwater Elevation Measurements

Water levels were measured on April 22, 2024 in the monitoring wells, injection wells, and performance monitoring wells relative to the top of the inner well casing using an electronic water level tape accurate to 0.01 foot (ft). The depth to water was measured in each well from a surveyed point on the casing. The water levels were then converted to elevations presented as feet above mean sea level (ft AMSL, NAVD 88 datum). The groundwater elevations were used to construct groundwater elevation contour maps in both the overburden and bedrock zones. Table 2 provides a summary of the groundwater level measurements and calculated groundwater elevations. Figures 3, 4, and 5 present the April 2022, October 2023 and April 2024 overburden groundwater elevation contours, respectively. Figure 6, 7, and 8 presents the April 2022, October 2023, and April 2024 bedrock groundwater potentiometric contours, respectively. Section 4.1 presents a discussion of groundwater elevations and flow directions.

3.2 Groundwater Sampling

The locations of the 18 monitoring wells sampled are shown in Figure 2. Wells were sampled following the methodology outlined in the groundwater monitoring work plan and approved revisions per subsequent correspondence with NYSDEC. For the six wells sampled for 1,4-dioxane and PFAS, special measures and sampling equipment were utilized to prevent PFAS cross-contamination. Monitoring well MW-15 is typically sampled every five years and was scheduled to be sampled during the Fall 2023 sampling event. MW-15 is located in Hyde Park Boulevard and a New York State Department of Transportation (NYSDOT) Highway Work Permit is required to close a portion of the road during sampling. The NYSDOT permit was not issued until December 2023, so MW-15 was included in the Spring 2024 annual sampling event. A list of wells, dates sampled, sample IDs, and purge volumes is provided in Table 1. A copy of the groundwater sampling logs is provided in Appendix B.

During purging, groundwater was monitored for temperature, specific conductivity, pH, DO, ORP, and turbidity. An aliquot of the groundwater sample was tested in the field for alkalinity, carbon dioxide, ferrous iron, and hydrogen sulfide using Hach™ test kits. Table 3 presents a summary of the groundwater sampling field parameter results.

Twelve of the 18 sampled monitoring wells were purged following low-flow procedures with dedicated tubing and a peristaltic pump. The six wells sampled for PFAS and 1,4-dioxane were purged of three

well volumes. MW-12A was found to be destroyed during the Fall 2019 sampling event and therefore was not sampled. All samples for chemical analyses were hand-delivered to Eurofins Environmental Testing Northeast (EETN) in Amherst, New York under secure chain-of-custody (COC). EETN Amherst transferred the samples to EETN, Barberton, Ohio which performed the analyses. The PFAS analysis was subcontracted to Eurofins in Sacramento, California. All EETN locations are New York State Department of Health Environmental Laboratory Approval Program certified laboratories for the analyses they performed.

Table 4 provides a summary of sample collection and analysis specifications for each analysis type including sample containers, preservation methods, analytical methods, and other quality control information.

Table 5 presents a summary of scheduled analyses for each well sampled. Samples from each well were analyzed for select CVOCs, including tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (DCE), trans-1,2-DCE, 1,1-DCE, 1,1-dichloroethane (DCA), 1,1,1-trichloroethane (TCA), vinyl chloride (VC), and chloroethane. In addition, samples from 14 wells consisting of six overburden and bedrock well pairs and two bedrock wells (MW-12B and MW-15) were analyzed for natural attenuation evaluation parameters, consisting of:

- dissolved iron;
- methane, ethane, and ethene;
- total chloride, sulfate, and sulfide; and,
- total organic carbon (TOC), biological oxygen demand (BOD), chemical oxygen demand (COD), nitrate, and nitrite.

The six well pairs chosen for these additional analyses are located within, upgradient, downgradient, and side gradient of the source area, and consist of MW-5A and -5B, MW-7A and -7B, MW-10A and -10B, MW-16A and -16B, MW-17A and -17B, and MW-18A and -18B. A seventh well pair, MW-12A and MW-12B, has historically also been sampled; but, in Fall 2019 MW-12A was found destroyed and only MW-12B could be sampled in Fall 2019 through Spring 2024. Natural attenuation parameters were also collected from well MW-15.

In addition, at the request of NYSDEC, six wells were also sampled for the emerging contaminants 1,4-dioxane and PFAS. These wells include overburden wells MW-5A, MW-7A, MW-10A, MW-17A and MW-18A; and bedrock well MW-12B. These wells were purged and sampled using procedures described in the NYSDEC guidance document *Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS)* (NYSDEC, April 2023). These procedures included the use of PFAS-free sample tubing and materials, and purging the wells of three well volumes.

Purge water and decontamination water were contained and staged in a secure area onsite in a 300-gallon holding tank for later characterization and proper disposal.

3.3 Data Validation

Analytical results for samples collected from April 23 - 25, 2024 were reviewed by AECOM for usability with respect to the following requirements:

- Work Plan and associated correspondence;
- NYSDEC Analytical Services Protocol (ASP); and,
- USEPA Region II Standard Operating Procedures (SOPs).

The data submitted by the laboratory have been reviewed and validated. The analytical data were found to be acceptable in terms of deliverable completeness, accuracy, precision, representativeness, completeness and comparability. Data validation was performed in accordance with the most current editions of the USEPA Region II SOPs and NYSDEC ASP for organic and inorganic data review.

Analytical holding times, laboratory control sample recoveries, laboratory method blanks, MS/MSD precision and accuracy for designated spiked project samples, and surrogate recoveries associated with project samples, were considered acceptable with the following exceptions:

As described above, the PFAS analyses were performed by Eurofins in Sacramento, California, Due to a shipping delay, the samples were not received the next day and the cooler temperature was 19.2 degrees Celsius upon receipt (all the ice had melted). All PFAS results in samples FD-20240423 (MW-17A), MW- 7A, MW-12B, MW-17A, and MW-18A have been qualified 'J' or 'UJ' due to the elevated temperature.

Due to a laboratory error, the following samples were analyzed outside of the hold time for nitrate and nitrite: MW-5A, MW-5B, MW-10A, MW-10B, MW-15, MW-18B and RB-20244024. The results for nitrate and nitrite in these samples have been qualified 'UJ' due to the hold time exceedance.

The percent difference (%D) between the initial calibration (ICAL) average relative response factor (RRF) and the RRF in the continuing calibration (CCAL) standards were greater than 20% for the VOC 1,1-DCE and showed a decreasing response (low bias). The non-detect results for this compound in samples MW- 7, MW-17B, MW-5B, MW-10A, MW-10B, MW-18B, RB-20240424, TB-20240424, and TB-20240225 were qualified 'UJ'.

The MSD performed on sample MW-12B was above the QC limit for 1,4-dioxane. The percent recovery (%R) of the MS and laboratory control sample (LCS) was acceptable. The result for 1,4-dioxane in this sample has been qualified 'J'.

The MS/MSD performed on sample MW-12B was outside of the QC limits for Nitrate-Nitrite and Nitrite-Nitrogen (analyzed by Method 353.2). The results for these parameters in sample MW-12B have been qualified 'UJ'.

The BOD_5 LCS %R for samples MW-7B and MW-17B was below the lower QC limit. The samples were not re-analyzed due to the short holding time. The results for BOD_5 in samples MW- 7B and MW-17B have been qualified 'J' or 'UJ'.

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'UJ' (estimated quantitation limit), 'J' (estimated result), or 'J-' (estimated, biased low) during the data review are considered conditionally usable. All other sample results are usable as reported.

A copy of the data usability summary report (DUSR) for groundwater samples is included in Appendix C. The laboratory data packages are included in Appendix D.

4.0 Groundwater Monitoring Program Summary

4.1 Groundwater Elevations and Flow Directions

A summary of groundwater elevation monitoring data for the Spring 2024 annual event is provided in Table 2, including New York State Plane Coordinate System location coordinates, top of casing elevation, depth to water and calculated groundwater elevations for the monitoring wells, injection wells, and performance monitoring wells.

Figures 3, 4 and 5 present overburden groundwater contour maps based on the April 29, 2022, October 3, 2024, and April 22, 2024 water level data, respectively. In April 2024, Overburden groundwater was measured at elevations between 595.53 ft AMSL (MW-3A) in the northeast corner of the Site to 588.04 ft AMSL (MW-11A) in the southwest corner of the Site. In general, groundwater flow is from northeast to southwest. The groundwater elevation contours from April 2022 (Figure 3) and April 2024 (Figure 5) are very similar, with similar groundwater elevations and flow directions, The groundwater elevation contours from October 2023, were somewhat different with slightly lower groundwater elevations site-wide, and the highest groundwater elevation at MW-19A instead of MW-3A. This suggests possible seasonal variations in overburden groundwater flow conditions. Overall, overburden groundwater in the central portion of the site exhibited little change in gradient. Gradients and flow directions were more defined in both the northeast and southwest corners of the site.

Figures 6, 7, and 8 present bedrock groundwater potentiometric surface contour maps based on the April 29, 2022, October 3, 2023, and April 2024 water level data, respectively. In April 2024, bedrock groundwater elevations ranged from 590.37 ft AMSL (MW-19B) in the eastern portion of the Site to 588.58 ft AMSL (MW-11B) in the southwest corner of the Site. The contours and flow directions show little variation between the April 2022, October 2023 and April 2024 gauging events. The general bedrock groundwater flow direction is southwesterly towards Hyde Park Boulevard and Rhode Island Avenue, consistent with historical observations of groundwater flow. Overall, the gradient is shallow. MW-15 was measured on April 22, 2024 and the groundwater elevation was 588.72 ft AMSL, consistent with the overall southwesterly gradient observed on October 3, 2023.

The pattern of vertical gradients between overburden and bedrock wells was similar during the 2022, 2023 and 2024 sampling events. Downward vertical gradients were observed more commonly in overburden/bedrock well pairs in the north, east and central portions of the Site; upward vertical gradients were observed more commonly in well pairs in the south/southwest portion of the Site.

4.2 Data Summary

Groundwater samples collected during the Spring 2024 annual groundwater monitoring program were submitted to the analytical laboratory for select CVOC analysis and other parameters as discussed in Section 3.2 and as summarized on Tables 4 and 5. Field measurements for the sampling program are provided in Table 3. A summary of the Spring 2024 analytical laboratory data is provided in Table 6. Figure 9 presents select CVOC concentrations in overburden groundwater for 2000 and 2009 through 2024 and Figure 10 presents select CVOC concentrations in bedrock groundwater for the same period. Analytical data results from monitoring well samples for the period October 2007 through April 2024 are included in Appendix E.

Comments are noted below for wells where concentrations or trends varied from recent and historical monitoring data.

4.2.1 Long-term Bioremediation Results

Bioremediation injections from 2008 to 2013 were designed to decrease total CVOCs in source area and downgradient wells over time. Figure 11 and Figure 12 illustrate the long-term time-series plots for total CVOCs at source area and downgradient wells, respectively. In Figure 11 and Figure 12, the overburden and bedrock wells are presented on separate plots for clarity. These plots indicate the improvement in groundwater conditions that has occurred as the result of enhanced bioremediation activities.

In overburden source area wells, MW-7A displayed a CVOC concentration decrease of two orders of magnitude as a result of the enhanced bioremediation injections. Concentrations have fluctuated since then. Concentrations decreased from Fall 2021 through Fall 2023, but increased to near pre-injection levels in April 2024. CVOC concentrations in well MW-16A have fluctuated over time, but have decreased an order of magnitude since Fall 2019. Concentrations in MW-17A have decreased steadily over time.

In bedrock source area wells, concentrations in well MW-6 have decreased steadily. Wells MW-7B, MW-16B, MW-17B and MW-19B, have shown decreases following the enhanced bioremediation injections (Figure 7). However, concentrations in these source area bedrock wells have fluctuated since 2020, but are within the historic range at these locations. Concentrations in MW-19B have increased from 2019 through 2024.

Concentrations in downgradient overburden wells MW-10A and MW-18A have remained fairly consistent since 2000, while those in MW-5A have fluctuated within a range. Downgradient bedrock wells MW-12B, MW-14B, and MW-15 exhibited slowly decreasing levels of total CVOC concentrations prior to injections, followed by significant decreases of approximately two orders of magnitude relative to pre-2008 total CVOC concentrations. MW-12B initially showed some rebounding in total CVOCs after the conclusion of the bioremediation injections, driven mainly by 1,2-DCE, and VC, but MW-12B has been steady since 2016. Since 2018, concentrations in downgradient bedrock wells MW-5B, MW-12B, MW-14B and MW-18B have been fairly steady, while those in wells MW-10B and MW-13B have fluctuated. Concentrations in well MW-15, which is only sampled every five years, have increased since 2013, but are below 2011 levels. (Figure 8).

4.2.2 CVOC Results – April 2024

Groundwater samples from 18 monitoring wells (6 overburden and 12 bedrock) were collected and analyzed for CVOCs. Overall, concentrations of CVOCs at most of the sample locations have decreased or remained stable since 2000. Over the past few sampling events, there are select locations that have shown a slight increase from post-injection low results for TCE degradation products DCE and/or VC (MW-5B, MW-6, MW-7B, MW-12B, and MW-19B). The overall total CVOC reductions are due to both natural attenuation and enhanced biodegradation that included four rounds of vegetable oil substrate injections in 2008, 2009, 2011, and 2013. The wells cited demonstrate that although the substrate may be depleted, degradation of CVOCs is continuing.

Appendix F presents graphs of long-term trends for overburden and bedrock wells in the current sampling program. The time-series plots typically show gradual decreasing trends in TCE and DCE, and in some cases, stable trends, followed by significant decreases in concentrations following injection events. Most of these plots show stable VC concentrations prior to the injections, followed by

significant decreases after the injections, and a slight increase of DCE degradation product VC in the most recent rounds of sampling in the wells mentioned above.

4.2.2.1 Overburden Results

Figure 9 shows a summary of the overburden well CVOC analytical results from the Spring 2024 annual sampling program, the data from the most recent fifteen previous annual sampling programs, and data from 2000 as a reference point. The results for the six overburden groundwater samples were generally consistent with previous rounds of monitoring and long-term trends. Historical data is presented in tabulated form in Appendix E and trend plots of historical data are presented in Appendix F. Key observations are listed below.

Overburden Source Area Wells:

DCE, VC, DCA and chloroethane were detected in MW-7A above groundwater standards[1] in Spring 2022. In Fall 2023, the concentrations of these compounds decreased, although VC, DCA and chloroethane at MW-7A remained above groundwater standards (Appendices E & F). In Spring 2024, TCE was present in MW-7A above groundwater standards for the first time since 2021, along with DCA, DCE and VC. MW-7A is in an area that exhibited the highest CVOC concentrations in shallow groundwater prior to the first injection and is within the area that was targeted during the emulsified vegetable oil substrate injections in 2008, 2009, 2011 and 2013. MW-7A will continue to be monitored as a part of the annual sampling program.

MW-16A was targeted in the November 2011 injection event to address VC concentrations, but only a negligible amount of substrate was injected due to low permeability of the soils. Concentrations of TCE and DCA have been below groundwater standards since 2007. DCE has been below 10 micrograms per liter (µg/L) since 2012 and was not detected in the Spring 2024 results. The VC concentration from Fall 2023 (37 µg/L) and Spring 2024 (17 µg/L) represent decreases from Spring 2022 (290 µg/L). VC is a degradation product of TCE via DCE. MW-16A will continue to be monitored as a part of the annual sampling program.

MW-17A is an overburden well in the area of targeted bedrock injections in 2009 and 2013. TCE, DCE, VC, and DCA concentrations were consistent with recent historical data. Since 2015, TCE has been reduced to non-detect, DCE has steadily decreased from the 2000 concentration (230 µg/L) to 23 µg/L in Spring 2024, the lowest concentration recorded at this location. The VC concentrations have increased as compared to its pre-injection concentration (18 µg/L) to a maximum of 120 µg/L in 2017, and has been more stable recently. VC concentrations in MW-17A have decreased since 2021 (110 µg/L) to 69 µg/L in 2024. The DCA concentration remained the same as in the previous years (Spring 2022 and Fall 2023), at a concentration of 11 µg/L. Reductive dechlorination is likely responsible for the decrease in DCE and accompanying noted production of VC and ethene. MW-17A will continue to be monitored as a part of the annual sampling program.

Overburden Downgradient Wells:

MW-5A, located south of the east end of the former facility building, showed sporadic increases and decreases in DCE and VC before and after substrate injections in 2009, 2011, and 2013 (Figure 9).

[1] NYSDEC Technical & Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations and revisions

This trend continued in April 2024 where concentrations of DCE and VC increased slightly from Fall 2023 but remained within the mid-range of the historical average (Appendices E & F). There appears to be a direct relationship between degradation product concentrations and water level fluctuations in MW-5A. Furthermore, there is a consistent upward hydraulic gradient between the bedrock and overburden zones at this location. MW-5A will continue to be monitored as a part of the annual sampling program.

MW-10A, located central to and south of the former facility building, showed DCE and VC concentrations similar to the previous few sampling events (Appendices E & F). TCE further decreased from the Spring 2022 estimated concentration of 8.7 µg/L, to the Fall 2023 estimated concentration of (7.5 µg/L) to an estimated concentration of 5.9 µg/L in Spring 2024. Both DCE and VC decreased from the Fall 2023 concentrations of 580 µg/L and 190 µg/L, respectively, to the Spring 2024 concentrations of 550 µg/L and 150 µg/L, respectively. These results are within the range of concentrations at these locations over the last 10 years. DCA has been non-detect since 2016. Groundwater elevation measurements indicate an upward hydraulic gradient between MW-10A and MW-10B (from bedrock to overburden), consistent with past results. MW-10A will continue to be monitored as a part of the annual sampling program.

MW-12A, located west of the former facility building along Hyde Park Boulevard, was found destroyed during the Fall 2019 sampling event and no sample has been collected at that location since Spring 2018.

MW-18A, located east of the former facility building, showed DCA below groundwater standards consistent with recent events. TCE (41 µg/L) and DCE (39 µg/L) were at similar concentrations as compared to concentrations observed from 2010 through 2023 (Figure 5 and Appendices E & F). MW-18A will continue to be monitored as a part of the annual sampling program.

4.2.2.2 Bedrock Results

Figure 10 shows a summary of the bedrock well CVOC analytical results from the Spring 2024 annual sampling program, data from the most recent fifteen previous annual sampling events, and data from 2000 as a reference point. Historical data is presented in tabulated form in Appendix E and trend plots of historical data are presented in Appendix F. Key observations are listed below.

Bedrock Source Area Wells:

Significant reductions in DCE and VC concentrations have been observed in MW-6 relative to 2000 concentrations, which were measured prior to bioremediation injections in the area of MW-7A in 2008. Since 2009, DCE has steadily decreased (85 µg/L in 2009 to 12 µg/L in 2022 and 2023) to non-detect in 2024. VC (71 µg/L in Spring 2024) decreased from 98 µg/L observed in Fall 2021 and has fluctuated within a narrow range for the past several years. The reduction of DCE to the current result with a generally stable VC concentration indicates natural attenuation is continuing to occur, although the rate of reduction of VC is less than that of DCE. TCE and DCA have consistently been non-detect or detected at an estimated concentration below the groundwater standard since 2000. MW-6 will continue to be monitored as a part of the annual sampling program to monitor progress of attenuation of DCE and VC.

Significant reductions in DCE and VC concentrations have been observed in MW-7B relative to 2000 concentrations, which were measured prior to bioremediation injections in the area of MW-7A in 2008. TCE and DCA concentrations have been below groundwater standards since 2012. The DCE concentration was also below standard this round (1.7 µg/L), as it has been since 2021. VC was

detected at 18 µg/L in 2020 and 2021, but has decreased since then and was11 µg/L in Spring 2024. VC has fluctuated between 9.6 µg/L and 18 µg/L since 2016. MW-7B will continue to be monitored as a part of the annual sampling program to monitor progress of attenuation of VC.

TCE, DCE, and VC concentrations increased at MW-16B in early 2012 and 2013 after injections were performed at overburden injection wells (INJ-6L, INJ-7 and INJ-8) in the vicinity of MW-16A in October 2011. TCE concentrations decreased in 2013 and have remained below the groundwater standard since that time. DCE and VC concentrations remained elevated through 2015 and then sharply decreased in 2016, with DCE below the groundwater standard and VC only slightly above groundwater standard since 2016. The Spring 2022 DCE (13 µg/L) and VC (23 µg/L) concentrations were the highest observed at this location since 2015, but are approximately two orders of magnitude below historical high concentrations (Figures 6 & 11 and Appendices E & F). During Fall 2023 and Spring 2024, both DCE (2.5 µg/L and 3.4 µg/L, respectively) and VC (7.1 µg/L and 6.0 µg/L, respectively) concentrations decreased, DCE being below the groundwater standard. MW-16B will continue to be monitored as a part of the annual sampling program to monitor progress of attenuation of VC.

The TCE concentration in MW-17B has been non-detect for more than 10 years except for an estimated value in 2017 (0.68 J µg/L). DCE has fluctuated between an estimated 0.9 J µg/L and 31 µg/L since 2017, and was detected at 5.9 µg/l in Spring 2024. (Figure 6). The VC concentration decreased over the course of the bioremediation injections from 69 µg/L in 2000 to 0.88 µg/L in April 2016 but increased to 20 µg/L in Fall 2021 and to 23 µg/L in Spring 2022. Similar to DCE, the VC concentrations have fluctuated the last several years, ranging from 2.2 µg/L to 23 µg/L. VC was detected at 5.8 µg/L in Spring 2024. DCA slightly increased from to 8.2 µg/L (during Spring 2022) to 11 µg/L (during Fall 2023), then decreased slightly to 7.7 µg/L in Spring 2024. MW-17B is located within the area of the bedrock bioremediation injections performed in November 2009 and September 2013 and was the location of the highest CVOCs in bedrock prior to bioremediation activities. MW-17B will continue to be monitored as part of the annual sampling program to monitor progress of attenuation of VC.

MW-19B is located east of the main facility in the area remediated as part of Operable Unit 1. Concentrations of TCE and DCA have been below laboratory detection limits from 2012 through Spring 2024. Concentrations of DCE and VC were below groundwater standards from Fall 2021 through Fall 2023, but increased to 21 µg/L and 4.4 µg/L respectively in Spring 2024. Overall, they have been relatively stable for the last 5 years. MW-19B will continue to be monitored as a part of the annual sampling program.

Bedrock Downgradient Wells:

At MW-5B, TCE has consistently been non-detect or detected at an estimated concentration near the reporting limit since 2000, indicating this area is not a source area for TCE. Total concentrations of DCE and VC have remained relatively stable since 2009, with a slightly decreasing trend of DCE accompanied by an increasing trend of VC, indicating ongoing reductive dechlorination is still active (Appendices E & F). In Spring 2024 DCE increased from Fall 2023 (67 µg/L) to 120 µg/L and VC increased slightly from 150 µg/L to 160 µg/L. MW-5B will continue to be monitored as a part of the annual sampling program.

At MW-10B, TCE has consistently been non-detect since 2009, indicating this area is not a source area for TCE. In addition, DCA has consistently been non-detect or detected at a concentration near the reporting limit and below the groundwater standard since 2000. DCE and VC concentrations have remained relatively stable since 2009 (Appendices E & F). DCE remained constant at 320 µg/L in Spring 2022 and Fall 2023, and 310 µg/L in Spring 2024. During this period VC increased from 140 µg/L to

260 µg/L, then decreased to 130 µg/L in Spring 2024. MW-10B will continue to be monitored as a part of the annual sampling program.

At downgradient location MW-12B, TCE has consistently been non-detect or detected at an estimated concentration near the reporting limit since 2000, indicating this area is not a source area for TCE. In addition, DCA has consistently been non-detect or detected at a concentration near the reporting limit and below the groundwater standard since 2000. Significant reductions in DCE and VC concentrations have been observed in MW-12B, relative to concentrations measured prior to bioremediation injections in the vicinity of MW-17B in 2009. Concentrations of DCE and VC increased following injections in the vicinity of MW-17B in 2013 and have remained relatively stable since 2016 (Appendices E & F). DCE has been stable recently (52 µg/l in Spring 2022, 53 µg/L in Fall 2023 and 44 µg/L in Spring 2024), while VC increased from 73 µg/L DJ to 100 D µg/L before decreasing slightly to 91 µg/L over the same period, suggesting active reductive dechlorination. MW-12B will continue to be monitored as a part of the annual sampling program to monitor attenuation of DCE and VC.

TCE, DCE, and VC concentrations in downgradient well MW-13B have steadily decreased since prior to the bioremediation injections (Figure 8 and Appendices E & F). Including Spring 2024 data, DCE concentrations have been fluctuating slightly above the groundwater standard since the injections. DCE increased from 4.1 µg/L in Spring 2022 (below the groundwater standard of 5 µg/L) to 9.9 µg/L in Fall 2023, before decreasing to 4.3 µg/L in Spring 2024. The VC concentration increased further above the groundwater standard from 5.2 µg/L in Spring 2022 to 18 µg/l in Fall 2023, before decreasing to 11 µg/L in Spring 2024, but remained below pre-injection levels. MW-13B will continue to be monitored as part of the annual sampling program.

Significant reductions in TCE, DCE, and VC concentrations have also been observed in downgradient well MW-14B relative to concentrations measured prior to bioremediation injections (Figure 10 and Appendices E & F). Including Spring 2024 data, TCE, DCE, and DCA concentrations have been below groundwater standards since 2011. Except for a September 2017 VC concentration of 2.9 µg/L and Fall 2023 VC concentration of 2.2 µg/L, VC concentrations have been below groundwater standards since August 2013; the VC concentration in Spring 2024 (1.9 µg/L) decreased to slightly below groundwater standard. It is recommended that MW-14B continue to be monitored as part of the annual sampling program to monitor for perimeter concentrations of constituents of concern.

MW-15 is currently sampled every five years. Prior to Spring 2024, the well was last sampled on June 14, 2018. Consistent with prior results, TCE and DCA concentrations were below groundwater standard. DCE and VC concentrations were above groundwater standards 16 µg/L for DCE and 20 µg/L for VC), above Spring 2018 concentrations. DCE and VC have increased slightly since the final enhanced bioremediation injections, but remain well below pre-injection concentrations. Monitoring well MW-15 will be sampled again in Spring 2028.

At MW-18B, TCE and DCA have consistently been non-detect at the reporting limit since 2009. DCE and VC concentrations have fluctuated since 2009, with historical lows occurring in October 2014 following enhanced bioremediation injections at MW-18B in September 2013. DCE and VC had post-injection peaks in Fall 2017, followed by fluctuations within a range. The Spring 2024 results show that both DCE and VC decreased from Fall 2023 (120 µg/L to 29 µg/L for DCE and 61 µg/L to 56 µg/L for VC). (Appendices E & F). MW-18B will continue to be monitored as a part of the annual sampling program to monitor progress of attenuation of DCE and VC.

4.2.3 Attenuation Monitoring Results

As part of the ongoing groundwater sampling program, natural attenuation parameters have been sampled during each monitoring event (see Table 5 and Appendix E). The results for Spring 2024 were generally consistent with previous monitoring events, with the following exceptions:

- TOC concentrations maintained a decreasing trend in several wells from 2016 through 2024. These decreases are in areas targeted during the 2013 bioremediation injections and represent continued depletion of the injected carbon substrate. TOC decreases over this period are observed in overburden wells including MW-7A, and MW-16A, and bedrock wells MW-7B, MW-16B, MW-18B with all values similar to last year's results. For the period addressed by this PRR (2022 through 2024) most wells have decreased to less than 5 mg/L and have fluctuated within a narrow range. TOC concentrations in most wells have decreased to the point where they are near pre-injection concentrations. TOC concentrations greater than 20 mg/L are generally considered favorable to reductive dechlorination and the highest observed in Spring 2024 was 5.5 mg/L in MW-16B.
- Decreases in BOD and COD levels were observed in wells (MW-5B, MW-7A, MW-7B, MW-10B, MW-12B, MW-16A and MW-16B) following injections. Similar to TOC, this may represent continued depletion of the 2013 injectate. Spring 2024 saw moderate increases of COD in MW-5B, MW-7A, MW-17B and MW-18B. The Fall 2023 COD in MW-10A was an increase of two orders of magnitude, from estimated 2.8 J mg/L to 200 mg/L, marking the highest COD value ever in this well. The Spring 2024 COD in MW-10 was a more typical 2.4 J mg/L. Spring 2024 saw also a slight increase in BOD in MW-17B.
- From 2016 through 2024, chloride concentrations decreased in overburden wells MW-7A, MW-10A, MW-17A, MW-18A, and bedrock well MW-17B. Over the period 2022 through 2024, chloride decreased notably in overburden well MW-16A. Since chloride is produced during reductive dechlorination of CVOCs, this may indicate that anaerobic biodegradation processes are ongoing, but may be slowing to pre-injection rates in the areas targeted during the 2013 injections. Chloride in these and other wells has remained fairly stable over the last few sampling rounds. The presence of chloride in several other wells suggests biodegradation is ongoing.
- Ethene is the final degradation product of TCE, providing solid evidence of substantial biodegradation. From 2014 to 2015, increases in ethene concentrations at wells MW-10B, MW-16A, and MW-16B were noted. Ethene concentrations for MW-10B and MW-16B in 2016 through 2024 are noted to be lower in each location as compared to 2015 levels. Several wells had ethene concentrations that were either stable or fluctuated somewhat following the injections. The presence of ethene is an indication that biodegradation through VC is continuing, although ethene is often rapidly converted to carbon dioxide. Some fluctuations were observed in recent years for some wells, such as MW-16A where the values from the latest years were 49 µg/L (2019), 270 µg/L (2020), 77 µg/L (2021), 160 µg/L (2022), (170 µg/L (2023) and 82 µg/L (2024).
- Elevated methane concentrations (>20 mg/L) were noted in several wells following the site injections, indicating an environment conducive to anaerobic biodegradation. As of 2024, only MW-17B and MW-18B are above 20 mg/L. MW-7A, MW-10A, MW-10B, MW-16B, and MW-17A are currently less than 20 mg/L but still elevated since the injections.

Overall, the environmental conditions and Site-wide long-term changes in concentrations indicate that the enhanced biodegradation program has been effective. Although some of the natural attenuation

parameters suggest that the enhanced bioremediation injectate may be depleted, continued degradation of CVOCs suggests that natural attenuation is an ongoing, active process.

4.2.4 Emerging Contaminants Results

As described in Section 3.2, at the request of NYSDEC, samples were collected for the emerging contaminants 1,4-dioxane and PFAS from overburden wells MW-5A, MW-7A, MW-17A and MW-18A, and from bedrock well MW-12B. Sample results were compared to the NYSDEC 2023 Technical and Operational Guidance Series (TOGS) Guidance Values and are presented in Table 7. Well MW-17B was also sampled for 1,4-dioxane and PFAS in Spring 2022.

4.2.4.1 1,4-Dioxane Results

In April 2024, 1,4-dioxane was detected at a concentration exceeding the TOGS 1.1.1 Guidance value of 0.35 µg/L in wells MW-5A (1.3 µg/L), MW-7A (4.5 µg/L), MW-10A (2.9 µg/L), and MW-12B (estimated 0.77 J µg/L). 1,4-dioxane was not detected in wells MW-17A and MW-18A. In Spring 2022,1,4-dioxane was detected at 0.93 µg/L in well MW-17B.

4.2.4.2 PFAS Results

NYSDEC has guidance values for the PFAS compounds perfluorooctanesulfonic acid (PFOS) (2.7 nanograms per liter [ng/L]) and perfluorooctanoic acid (PFOA) (6.7 ng/L). PFOA was detected at concentrations exceeding the TOGS 1,1,1 Guidance Value of 6.7 µg/L in MW-5A (12 ng/L), MW-7A (28 ng/L), MW-10A (5.2 ng/L), and MW-17A (49 ng/L). PFOA was detected at estimated concentrations of 2.1 J ng/L in MW-12B and 2.1 J ng/L in MW-18A. PFOS was not detected in any of the wells sampled. Other PFAS compounds detected were perfluorobutanesulfonic acid (PFBS), perfluorobutanoic acid (PFBA), perfluoropentanoic acid (PFPA), Perfluorohexanoic acid (PFHxA), and Perfluoroheptanoic acid (PFHpA). In April 2022, PFOS (10 ng/L) and PFOA (14 ng/L) were detected in well MW-17B.

5.0 Periodic Review of Engineering and Institutional Controls

In the Site Management Plan for the former Carborundum Company Hyde Park facility, the institutional controls include:

- An Environmental Notice
- Land use restrictions
- Groundwater use restrictions
- Excavation restrictions
- Re-occupation would require a Soil Vapor Intrusion Evaluation
- The groundwater monitoring program

The monitoring wells used to implement the groundwater monitoring program are the sole engineering control.

In the January 2000 ROD for OU2 (groundwater), the stated remediation goal is to “Reduce, to the extent practicable, offsite migration of groundwater that does not attain NYSDEC Class GA Ambient Water Quality Criteria.” The following section presents an evaluation of whether the Institutional and Engineering Controls, in combination with previous remedial measures continue to achieve the remediation goals for the Site.

5.1 CVOCs

Downgradient, Site perimeter monitoring wells in the monitoring program include MW-5A, MW-5B, MW-10A, MW-10B and MW-12B. Downgradient, offsite wells in the monitoring program include MW-13B, MW-14B and MW-15.

5.1.1 Downgradient Site Perimeter Wells

As described in Section 4.2.2, DCE and VC concentrations in overburden well MW-5A have increased since 2022, although they are still within the historical range of detections. In bedrock well MW-5B, VC has increased steadily since the bioremediation injections while DCE concentrations have remained fairly steady, suggesting ongoing reductive dechlorination of DCE to VC. From 2022 through 2024, DCE decreased from 35 µg/L to 23 µg/L. As DCE continues to degrade through biodegradation, generation of VC would be expected to decline as well.

In overburden well MW-10A, both DCE and VC have fluctuated within a range since 2018, with no increasing or decreasing trends. This pattern continued from 2022 through 2024, with concentrations of DCE and VC increasing from 2022 to 2023, then decreasing in 2024. Similarly, concentrations of DCE and VC have both fluctuated within a fairly narrow range for the past several years.

In MW-12B, concentrations of DCE and VC have fluctuated since 2016. From 2022 through 2024, the concentration of DCE has decreased slightly (52 µg/L to 44 µg/L), while the concentration of VC has increased slightly (73 µg/L to 91 µg/L), again, suggesting ongoing biodegradation of CVOCs.

5.1.2 Downgradient Offsite Wells

Well MW-13B is located south of Rhode Island Avenue, downgradient of well MW-5B. DCE and VC concentrations have decreased since the start of the bioremediation injections. Concentrations of both compounds have fluctuated from 2022 through 2024, but remain well below recent highs observed in 2017.

Well MW-14B is located south of Rhode Island Avenue, downgradient from well MW-10B. DCE concentrations have been less than 1 µg/L or non-detect since 2013, whereas VC has fluctuated between 1.1 µg/L and 2.2 µg/L over the same time period. The VC concentrations in MW-14 B in 2022, 2023 and 2024 were 1.1 µg/L, 2,2 ug/L and 1.9 µg/L, respectively.

MW-15 is only sampled every five years. Following significant decreases in concentrations of both DCE and VC following the bioremediation injections, both compounds have increased since 2013. DCE increased from below the laboratory detection limit of 5 µg/L in 2013 to 16 µg/L in 2024, and VC increased from an estimated 2 J µg/L in 2013 to 20 µg/L in 2024, although concentrations remain below 2011 levels.

5.2 Attenuation Monitoring Parameters

The attenuation monitoring parameters provide an assessment of whether the biodegradation processes, both natural and those enhanced by the bioremediation injections, are occurring. Several of the attenuation monitoring parameters, including TOC, COD and chloride showed little response to the bioremediation injections. In other downgradient wells, these parameters have generally returned to pre-injection levels. Ethene, the end product of reductive dechlorination of Site CVOCs is still somewhat elevated at MW-10B. Methane, an indicator of conditions conducive to the degradation of Site CVOCs remains elevated over baseline conditions in wells MW-5A, MW-5B, MW-10A, MW-10B. These results suggest that the enhanced bioremediation injectate may be depleted in the injection area. However continued degradation of CVOCs suggests that natural attenuation is an ongoing, active process.

5.3 Emerging Contaminants

Between 2022 and 2024, 1,4-dioxane was detected at concentration exceeding the TOGS 1.1.1 Guidance value of 0.35 µg/L in 4 of 7 wells sampled. 1,4-dioxane was commonly used as a stabilizer in certain CVOCs. The low concentrations and distribution do not suggest a definitive source area.

Between 2022 and 2024, PFOA was detected at concentrations exceeding the TOGS 1.1.1 Guidance value of 6.7 ng/L in 5 of 7 wells sampled. PFOS was detected at a concentration exceeding the Draft TOGS 1.1.1 Guidance value of 6.7 ng/L in 1 of 7 wells sampled. The highest concentrations were detected on-Site, in CVOC release areas.

5.4 Summary

Over the period of time covered by this PRR (August 1, 2021 through July 31, 2024), groundwater CVOC impacts have remained fairly stable. As shown on Figures 11 and 12, the enhanced bioremediation injections resulted in significant CVOC concentration decreases in both the source areas and in downgradient wells. Figures 11 and 12 also show that since the enhanced bioremediation injections, total CVOS concentrations have remained fairly stable or decreased. Short-term decreasing and increasing trends are observed, along with concentration fluctuations. The fluctuations may be related to changes in groundwater elevations. The bioremediation injections that were conducted in 2008, 2009, 2011 and 2013 were effective at decreasing CVOC concentrations in the injection areas and promoting ongoing contaminant attenuation.

In most locations, the parent compound TCE is absent and only degradation products DCE and VC are present. In some wells (MW-5B, MW-6 and MW-17A), DCE concentrations continue to decrease while VC increases. In time, as the DCE is depleted through degradation, the concentrations of daughter product VC will decrease as well. Similarly, although evidence of active biodegradation has decreased somewhat in the injection areas, natural attenuation parameters shows that some biodegradation is ongoing and concentrations remain orders of magnitude below pre-injection levels with little to no rebound. Vertical gradient data indicates that in the injection areas, gradients are downward from the overburden into bedrock, while downgradient, flow is upward from bedrock into the overburden. If concentrations in the injection areas remain low, these decreases will be manifested in downgradient wells over time.

The Site has remained unoccupied during the period addressed by this PRR. As a result, the primary institutional and engineering controls active during this period are the groundwater monitoring program (IC) and the monitoring well network used to implement the program (EC). Since the contaminant levels have remained fairly stable, the ECs/ICs have been effective at achieving the RAOs of the OU2 ROD.

6.0 Conclusions and Recommendations

The following conclusions and recommendations were developed following the Spring 2022, Fall 2023 and Spring 2024 groundwater monitoring events:

Conclusions:

CVOC concentrations have steadily declined in the overburden and bedrock groundwater over the past 23 years, with more recent substantial declines related to the 2008, 2009, 2011, and 2013 bioremediation injections.

MW-7A, located in the area of the vegetable oil substrate injections conducted in September 2008, November 2009, November 2011, and September 2013, continued to show decreased levels of CVOCs compared to pre-injection levels, with some increases in degradation products DCE, and VC during recent rounds. VC is also gradually increasing or stable in other wells (i.e., MW-6, MW 10A/B, MW-16A, MW-17A). Fluctuations in concentrations of CVOC degradation products at MW-5A appear to have a direct relationship with water level fluctuations and are consistent with historical concentrations following substrate injections. Overall, overburden groundwater CVOC concentrations in 2022 through 2024 were generally consistent with the previous sampling program results.

Bedrock groundwater CVOC concentrations generally showed declines in response to the previous substrate injections. Notably, CVOC concentrations decreased substantially in several downgradient bedrock monitoring wells since 2009. TCE was non-detect in all bedrock wells sampled. This trend will continue to be monitored.

Groundwater samples for natural attenuation monitoring have been collected since October 2000 and continue to indicate that natural attenuation processes are active. The results for Spring 2022, Fall 2023 and Spring 2024 were generally consistent with recent monitoring events.

Natural anaerobic biodegradation of TCE, which was occurring at the Site prior to 2008, was substantially enhanced by the bioremediation injection program conducted over multiple years. The enhanced bioremediation injections effectively contributed to the observed decreasing concentration trends, and ongoing natural attenuation processes continue to improve groundwater quality at the Site. The observed presence of the biodegradation indicator methane, and the degradation products DCE and VC, indicate that attenuation is continuing.

Recommendations:

The annual groundwater monitoring program should be continued as currently configured. At present, CVOCs within the source area and downgradient of that area have decreased as a result of remedial measures including emulsified vegetable oil substrate injections in 2008, 2009, 2011 and 2013. Terra Systems, Inc. (TSI) SRS®-SD was used to promote degradation of CVOCs for all overburden injections and TSI's SRS®-FR was used for all bedrock injections. TSI-DC® bioaugmentation culture was used for microorganism bioaugmentation. The substrate and bioaugmentation injections have been successful in decreasing levels of CVOCs in both overburden and bedrock groundwater in the injection areas. Due largely to flow in bedrock fractures, the CVOC decreases have also been observed

downgradient of the injection areas and in offsite wells. To date, offsite CVOC concentrations have not rebounded.

The remedial goal stated in the OU-2 Record of Decision is to “Reduce, to the extent practicable, off-site migration of groundwater that does not attain NYSDEC Class GA Ambient Water Quality Criteria.” Since off-site VOC concentrations have been reduced to below or near the NYSDEC Class GA Ambient Water Quality Standards, this goal has been attained. However, in some monitoring wells, VOC concentrations appear to have become asymptotic, and decreases have slowed since the last bioremediation injections. AECOM will continue to evaluate the data for concentration trends and assess appropriate response measures. A Draft Site Management Plan (SMP) for the Hyde Park Site was submitted to NYSDEC on March 31, 2022. Following NYSDEC comments, the Revised SMP was submitted to NYSDEC on February 29, 2024, and was accepted by NYSDEC on March 14, 2024. The next annual groundwater sampling event will occur in Fall 2025.

7.0 References

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NYSDEC, 2023. 2023 Addendum to June 1998 Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1. February 2023.

Parsons, 2014. Letter to NYSDEC regarding Proposed Revision to Annual Sampling- MW-15. April 3, 2014.

Tables

Table 1
Summary of Groundwater Sampling
Spring 2024 Monitoring Event
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Well ID	Date Sampled	Sample ID	Volume Purged (gallons)
MW-5A	24-Apr-24	MW-5A	6.0
MW-5B	24-Apr-24	MW-5B	10.0
MW-6	22-Apr-24	MW-6	2.5
MW-7A	23-Apr-24	MW-7A	7.5
MW-7B	25-Apr-24	MW-7B	5.5
MW-10A	24-Apr-24	MW-10A	6.2
MW-10B	24-Apr-24	MW-10B	3.0
MW-12B	22-Apr-24	MW-12B, MS/MSD	55.0
MW-13B	24-Apr-24	MW-13B	3.5
MW-14B	24-Apr-24	MW-14B	2.0
MW-15[(1)]	24-Apr-24	MW-15	5.5
MW-16A	22-Apr-24	MW-16A	2.0
MW-16B	22-Apr-24	MW-16B	2.5
MW-17A	23-Apr-24	MW-17A, Field Dup	6.5
MW-17B	25-Apr-24	MW-17B	4.5
MW-18A	23-Apr-24	MW-18A	6.75
MW-18B	24-Apr-24	MW-18B	4.5
MW-19B	22-Apr-24	MW-19B	6.0

Note:

(1) MW-15 is to be sampled every 5 years in accordance with NYSDEC approval on April 8, 2014. It was to be sampled in Fall 2023, but due to delays in obtaining a road closure permit, it was sampled in Spring 2024.

(2) Dup is a field duplicate of MW-17A.

(3) PFAS samples were collected from MW-5A, MW-7A, MW-12B, MW-17A, and MW-18A. Per NYSDEC guidance, wells were purged of 3 well volumes rather than the typical low-flow stabilization.

MS - Matrix Spike

MSD - Matrix Spike Duplicate

Table 2
Water Level Measurements
Spring 2024 Monitoring Event
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Well ID	Zone Screened	Elevation Top of Casing	Easting	Northing	4/22/2024	
					Depth to Water	Groundwater Elevation
INJ-1	Overburden	596.66	1028382.45	1136887.25	6.16	590.50
INJ-10	Overburden	591.49	1028032.17	1136890.90	2.62	588.87
INJ-2	Overburden	595.89	1028374.60	1136890.69	6.28	589.61
INJ-3	Overburden	592.87	1028313.28	1136774.48	3.58	589.29
INJ-4	Overburden	593.26	1028332.65	1136771.29	3.71	589.55
INJ-5L	Overburden	596.00	1028365.66	1136878.92	6.53	589.47
INJ-5U	Overburden	596.08	1028365.66	1136878.92	4.95	591.13
INJ-6L	Overburden	595.97	1028376.98	1136868.99	6.34	589.63
INJ-6U	Overburden	596.96	1028376.98	1136868.99	5.06	591.90
INJ-7	Overburden	592.76	1028409.44	1136837.46	2.04	590.72
INJ-8	Overburden	592.98	1028418.16	1136832.59	3.52	589.46
INJ-9	Overburden	591.62	1028023.50	1136898.15	2.36	589.26
MW-1A	Overburden	597.56	1028606.44	1136554.99	7.06	590.50
MW-1B	Bedrock	597.64	1028611.01	1136554.66	7.29	590.35
MW-2A	Overburden	595.73	1028335.27	1136881.61	4.49	591.24
MW-2B	Bedrock	595.80	1028337.09	1136888.34	6.30	589.50
MW-3A	Overburden	599.94	1028627.22	1136895.86	4.41	595.53
MW-3B	Bedrock	599.70	1028624.57	1136899.80	9.59	590.11
MW-4A	Overburden	591.60	1028027.77	1136890.77	2.50	589.10
MW-4B	Bedrock	591.49	1028023.72	1136890.65	2.38	589.11
MW-5A	Overburden	597.91	1028256.93	1136567.66	9.03	588.88
MW-5B	Bedrock	597.79	1028256.86	1136562.36	8.54	589.25
MW-6	Bedrock	595.51	1028293.24	1136889.98	6.14	589.37
MW-7A	Overburden	596.59	1028379.67	1136889.32	6.38	590.21
MW-7B	Bedrock	596.66	1028377.01	1136884.33	6.71	589.95
MW-8	Bedrock	599.63	1028584.29	1136897.91	9.28	590.35
MW-10A	Overburden	596.87	1028134.19	1136571.96	8.12	588.75
MW-10B	Bedrock	596.71	1028129.79	1136571.87	7.43	589.28
MW-11A	Overburden	595.48	1027992.43	1136576.28	7.44	588.04
MW-11B	Bedrock	595.57	1027996.44	1136575.71	6.99	588.58
MW-12A[1]	Bedrock	590.79	1027887.31	1136654.88	N/A	N/A
MW-12B	Overburden	590.89	1027886.62	1136658.22	1.61	589.28
MW-13A	Overburden	595.18	1028202.92	1136517.75	6.38	588.80
MW-13B	Bedrock	594.73	1028199.59	1136517.64	5.93	588.80
MW-14A	Overburden	592.97	1027954.11	1136524.76	7.10	585.87
MW-14B	Bedrock	592.85	1027951.17	1136524.55	3.99	588.86
MW-15[2,3]	Bedrock	591.44	1027851.99	1136475.97	2.72	588.72
MW-16A	Overburden	591.64	1028415.02	1136829.41	0.60	591.04
MW-16B	Bedrock	592.38	1028414.66	1136826.44	2.29	590.09

Table 2
Water Level Measurements
Spring 2024 Monitoring Event
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Well ID	Zone Screened	Elevation Top of Casing	Easting	Northing	4/22/2024	
					Depth to Water	Groundwater Elevation
MW-17A	Overburden	593.13	1028319.92	1136765.00	2.42	590.71
MW-17B	Bedrock	592.92	1028319.47	1136763.41	3.61	589.31
MW-18A	Overburden	593.78	1028377.39	1136661.13	4.04	589.74
MW-18B	Bedrock	593.43	1028375.07	1136659.79	4.06	589.37
MW-19A	Overburden	594.95	1028610.90	1136747.48	4.47	590.48
MW-19B	Bedrock	594.65	1028611.64	1136749.89	4.28	590.37
PMW-1	Overburden	596.62	1028372.30	1136886.30	6.40	590.22
PMW-2	Overburden	595.98	1028371.76	1136875.49	5.22	590.76
PMW-3	Overburden	596.59	1028379.73	1136882.30	5.64	590.95
PMW-4	Overburden	597.05	1028384.66	1136909.84	6.75	590.30
PMW-5	Overburden	592.65	1028308.62	1136764.72	3.31	589.34
PMW-6	Overburden	592.44	1028310.46	1136747.77	3.45	588.99
PMW-7	Overburden	592.93	1028325.51	1136758.05	3.81	589.12
PMW-8	Bedrock	593.11	1028352.65	1136824.51	3.71	589.40
PMW-9	Overburden	592.45	1028282.58	1136689.24	3.13	589.32

Note:
NA - Not Available.
1. Well MW-12A discovered destroyed during Fall 2019 sampling event.
2. MW-15 is to be sampled every 5 years in accordance with NYSDEC approval on April 8, 2014, and was to be sampled in 2023. Due to a delay on obtaining a road closure permit, it was sampled in Spring 2024.
3. MW-15 is located in Hyde Park Boulevard.

Table 3
Groundwater Sampling Field Parameter Results
Spring 2024 Sampling Event
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Monitoring Well ID	Sample Date	Temperature (deg C)	Specific Conductivity (mS/cm)	Dissolved Oxygen + (mg/L)	pH (standard units)	ORP (mV)	Turbidity (NTU)	Alkalinity (mg/L)	Carbon Dioxide (mg/L)	Ferrous Iron (mg/L)	Hydrogen Sulfide (mg/L)
MW-5A	4/24/2024	10.7	0.815	0.20	7.43	179.2	2.69	240	20	0.38	0.0
MW-5B	4/24/2024	11.3	1.307	0.34	7.20	121.3	31.77	450	40	0.48	0.0
MW-6	4/22/2024	11.9	1.717	0.43	7.21	-203.6	515.41	360	45	0.05	0.5
MW-7A	4/23/2024	10.1	1.001	0.00	6.90	-58.4	16.02	500	75	0.51	0.1
MW-7B	4/25/2024	10.5	1.503	0.00	7.43	-121.9	2.02	320	35	0.18	0.7
MW-10A	4/24/2024	11.3	1.262	0.03	7.35	-151.7	2.12	300	25	0.73	0.0
MW-10B	4/24/2024	11.6	1.515	0.04	7.11	-131.3	4.50	360	35	0.00	0.0
MW-12B	4/23/2024	12.0	1.578	0.07	7.16	-155.2	171.22	300	30	0.01	0.1
MW-13B	4/24/2024	12.0	2.893	0.15	7.22	-100.9	72.11	260	30	0.89	0.0
MW-14B	4/24/2024	11.7	1.643	0.08	7.20	-250.2	31.89	300	25	0.11	1.0
MW-15	4/24/2024	12.6	1.577	0.00	7.12	-276.3	10.35	360	40	0.44	5.0
MW-16A	4/22/2014	10.6	0.865	5.30	7.17	-44.7	28.11	215	35	0.17	0.0
MW-16B	4/22/2024	12.1	1.110	0.06	7.23	-234.1	49.88	330	75	0.16	3.0
MW-17A	4/23/2024	11.1	0.876	0.00	7.61	-86.8	11.90	385	25	0.33	0.0
MW-17B	4/25/2024	12.2	1.372	0.02	6.84	-295.4	84.20	420	70	0.12	5.0
MW-18A	4/23/2024	11.3	0.895	0.00	7.26	-76.1	4.67	600	40	0.93	0.0
MW-18B	4/24/2024	11.7	1.390	0.00	7.01	-29.4	22.87	400	65	0.00	2.0
MW-19B	4/22/2024	12.6	0.994	0.52	7.17	-39.0	5.54	280.0	35	0.21	0.1

Notes:

- Not Measured
+ Elevated dissolved oxygen readings in some cases conflict with negative oxidation/reduction potential readings.
mS/cm - milliSiemen per centimeter
mg/L - milligram per liter
mV - millivolt
NTU - nephelometric turbidity unit
ORP - oxidation-reduction potential

Table 4
Summary of Analytical Specifications
Spring 2024 Monitoring Event
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Sample Type	Container Type	Sample Volume	Preservation Method	Max. Holding Time	Analytical Method
Constituents of Concern					
Select VOCs	40 mL glass vial with septum top	3x40 mL	Hydrochloric acid, Cool 4◦C	14 days	SW846 Method 8260C
Natural Attenuation Parameters					
Methane, Ethene, Ethane, Propane	40 mL glass vial with septum top	3x40 mL	Hydrochloric acid, Cool 4◦C	14 days	USEPA RSK175
TOC	40 mL glass vial with septum top	2x40 mL	Sulfuric acid, Cool 4°C	28 days	USEPA 5310C
BOD	1000 mL plastic	1000 mL	None, Cool 4◦C	48 hours	USEPA 5120B
COD	250 mL plastic	250 mL	Sulfuric Acid,Cool 4◦C	28 days	USEPA 410.4
Dissolved Iron	500 mL plastic	500 mL	Nitric Acid, Cool 4◦C	6 months	USEPA 6010C
Chloride, Sulfate; Nitrate, Nitrite	500 mL plastic	500 mL	None, Cool 4◦C	28 days; 48 hours	USEPA 300.0 USEPA 353.2
Sulfide	500 mL plastic	500 mL	Sodium hydroxide and zinc acetate, Cool 4◦C	7 days	Standard Method (SM) 4500-S2
Emerging Contaminants					
1,4-Dioxane	40 mL glass vial with septum top	3x40 mL	Hydrochloric acid, Cool 4◦C	14 days	SW8270D SIM
PFAS	250 mL plastic	250 mL	Cool 4◦C	7 days	USEPA 537 Modified

Notes:

VOC - volatile organic compound
TOC - total organic carbon
BOD - biological oxygen demand
COD - chemical oxygen demand
PFAS - Per- and polyfluoroalkyl substances
mL - milliliter
Alkalinity, carbon dioxide, ferrous iron and hydrogen sulfide were analyzed for in the field using Hach™ test kits.

Table 5
Sample Matrix
Spring 2024 Monitoring Event
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Location	Unit	VOCs[A/] (SW8260C)	Methane, Ethane, Ethene (RSKSOP-175mod) [B/]	Propane (RSKSOP-175mod)[(2)] [B/]	Chloride, Sulfate (300.0)	Total Organic Carbon (5310C)	BOD (5120B), COD (410.4)	Dissolved Iron (6010C)	Nitrate (353.2), Nitrite (353.2)	Sulfide (SM 4500-S2)	Well Head Analysis [C/]	Field Analyses (Hach kits) [D/]	PFAS (537 mod)	1,4-Dioxane (SW8270D SIM)
Existing Site Investigation Monitoring Wells														
MW-5A	overburden	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-5B	bedrock	1	1	1	1	1	1	1	1	1	1	1		
MW-6	bedrock	1									1	1		
MW-7A	overburden	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-7B	bedrock	1	1	1	1	1	1	1	1	1	1	1		
MW-10A	overburden	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-10B	bedrock	1	1	1	1	1	1	1	1	1	1	1		
MW-12A	overburden	Well Destroyed												
MW-12B	bedrock	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-13B	bedrock	1												
MW-14B	bedrock	1												
MW-15[(1)]	bedrock	1	1	1	1	1	1	1	1	1	1	1		
MW-16A	overburden	1	1	1	1	1	1	1	1	1	1	1		
MW-16B	bedrock	1	1	1	1	1	1	1	1	1	1	1		
MW-17A	overburden	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-17B	bedrock	1	1	1	1	1	1	1	1	1	1	1		
MW-18A	overburden	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-18B	bedrock	1	1	1	1	1	1	1	1	1	1	1		
MW-19B	bedrock	1												

QA/QC

Matrix spike/matrix spike duplicate pairs and field duplicates were collected at a rate of 5%.

Name field duplicates blind, using FD followed by the date followed by the matrix and a numerical identifier in sequence for each duplicate sample collected for that day (e.g., FD-GW-060322).

Notes:

(1) MW-15 to be sampled every 5 years as approved by DEC in April 2014.

Sampling for MW-15 requires permit from the Department of Transportation (DOT), Niagara County Residency (716) 438-2396.

[A/] VOCs (volatile organic compounds): tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, trans-1,2- dichloroethene, 1,1-dichloroethene, 1,1-dichloroethane, 1-1-1-,trichloroethane, vinyl chloride, and chloroethane.

[B/] Analytical method for dissolved gases will be a laboratory-specific standard operating procedure (RSK-175).

[C/] Well head analyses include dissolved oxygen, oxidation-reduction potential, pH, temperature, electrical conductivity, turbidity and visual appearance.

[D/] Field analyses include alkalinity, carbon dioxide, hydrogen sulfide, and ferrous iron.

BOD - biological oxygen demand

COD - chemical oxygen demand

Table 6
Groundwater VOC and Attenuation Parameter Analytical Results - Spring 2024
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Parameter	Criteria[1,2,3]	MW- 5A	MW- 5B	MW- 6	MW-7A	MW- 7B	MW- 10A	MW-10B	MW-12B	MW-13B
Volatile Organic Compounds										
PCE (µg/L)	**5**	10 U	1.0 U	2.0 U	20 U	1.0 U	10 U	5.0 U	2.0 U	1.0 U
TCE (µg/L)	**5**	10 U	1.0 U	2.0 U	**210**	1.0 U	**5.9 J**	5.0 U	2.0 U	1.0 U
Cis-1,2-DCE (µg/L)	**5**	**120**	**23**	2.0 U	**740**	**1.7**	**550**	**310**	**44**	**4.3**
Trans-1,2-DCE (µg/L)	**5**	10 U	1.0 U	2.0 U	20 U	1.0 U	**7.1 J**	5.0 U	2.0 U	1.0 U
1,1-DCE (µg/L)	**5**	10 U	1.0 UJ	2.0 U	20 U	1.0 UJ	10 UJ	5.0 UJ	2.0 U	1.0 U
Vinyl Chloride (µg/L)	**2**	**160**	**88**	**71**	**170**	**11**	**150**	**130**	**91**	**11**
1,1,1-Trichloroethane (µg/L)	**5**	10 U	1.0 U	2.0 U	20 U	1.0 U	10 U	5.0 U	2.0 U	1.0 U
1,1-Dichloroethane (µg/L)	**5**	10 U	1.0 U	2.0 U	**43**	1.0 U	10 U	5.0 U	2.0 U	1.0 U
Chloroethane (µg/L)	**5**	10 U	1.0 U	2.0 U	20 U	1.0 U	10 U	5.0 U	2.0 U	1.0 U
Dissolved Metals										
Dissolved Iron (mg/L)	**--**	0.200 U	**0.25**	NA	**3.8**	0.200 U	**0.89**	**0.180 J**	0.200 U	NA
Dissolved Gases										
Ethane (µg/L)	**--**	**23**	**0.43 J**	NA	**43**	**0.42 J**	**4.9**	**0.79 J**	**0.70 J**	NA
Ethene (µg/L)	**--**	**23**	**2.2**	NA	**50**	**3.5**	**30**	**18**	**5.8**	NA
Methane (µg/L)	**--**	**1700**	**180**	NA	**8600**	**200**	**2700**	**1800**	**310**	NA
Propane (µg/L)	**--**	**1.5**	**0.64 J**	NA	1.0 U	1.0 U	1.0 U	**2.5**	**0.87 J**	NA
Miscellaneous Parameters										
BOD (mg/L)	**--**	**2.8**	2.0 U	NA	**4.8**	2.0 UJ	2.0 U	3.0 U	2.0 U	NA
COD (mg/L)	**--**	**6.3 J**	**12**	NA	NA	**11**	**2.4 J**	**5.3 J**	NA	NA
TOC (mg/L)	**--**	**0.71 J**	**3.1**	NA	**3.2**	**3.1**	**1.2**	**3.3**	**3.1**	NA
Chloride (mg/L)	**250**	**98 J+**	**120 J+**	NA	**14 J+**	**190 J+**	**140 J+**	**140 J+**	**210 J+**	NA
Sulfate (mg/L)	**250**	**72 J+**	**220 J+**	NA	**220**	**250**	**120 J+**	**220**	**220**	NA
Sulfide (mg/L)	**0.05**	1.0 U	1.0 U	NA	**1**	**0.80 J**	1.0 U	1.0 U	1.0 U	NA
Nitrate (mg/L)	**10**	0.10 UJ	0.10 UJ	NA	0.25 U	0.10 U	0.10 UJ	0.10 UJ	0.25 U	NA
Nitrite (mg/L)	**1**	0.10 UJ	0.10 UJ	NA	0.25 U	0.10 U	0.10 UJ	0.10 UJ	0.050 UJ	NA
Nitrate-Nitrite (mg/L)	**--**	0.050 U	0.050 U	NA	0.050 U	NA	0.050 U	0.050 U	0.050 UJ	NA

See Page 2 of 2 for notes.

Table 6
Groundwater VOC and Attenuation Parameter Analytical Results - Spring 2024
Former Carborundum Company, Hyde Park Facility
Niagara, New York

Parameter	Criteria[1,2]	MW-14B	MW-15	MW-16A	MW-16B	MW-17A	MW-17A Duplicate	MW-17B	MW-18A	MW-18B	MW-19B
Volatile Organic Compounds											
PCE (µg/L)	**5**	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
TCE (µg/L)	**5**	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	**41**	1.0 U	1.0 U
Cis-1,2-DCE (µg/L)	**5**	**0.75 J**	**16**	1.0 U	**3.4**	**23**	**23**	**5.9**	**39**	**29**	**21**
Trans-1,2-DCE (µg/L)	**5**	1.0 U	**0.56 J**	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	**0.77 J**	1.0 U	1.0 U
1,1-DCE (µg/L)	**5**	1.0 U	1.0 UJ	1.0 U	1.0 U	2.0 U	2.0 U	1.0 UJ	**0.99 J**	1.0 UJ	1.0 U
Vinyl Chloride (µg/L)	**2**	**1.9**	**20**	**17**	**6**	**69**	**70**	**5.8**	**3.6**	**56**	**4.4**
1,1,1-Trichloroethane (µg/L)	**5**	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane (µg/L)	**5**	1.0 U	**1.6**	1.0 U	1.0 U	**11**	**11**	**7.7**	**4.2**	1.0 U	1.0 U
Chloroethane (µg/L)	**5**	1.0 U	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U	**2.2**	1.0 U	1.0 U	1.0 U
Dissolved Metals											
Dissolved Iron (mg/L)	**--**	NA	0.200 U	**0.88**	**0.23**	**0.68**	**0.69**	**0.130 J**	**2.8**	0.200 U	NA
Dissolved Gases											
Ethane (µg/L)	**--**	NA	**8.1**	**1.1**	**0.82 J**	**11**	**11**	**36**	**0.89 J**	**2.8**	NA
Ethene (µg/L)	**--**	NA	**20**	**82**	**2.3**	**22**	**22**	**11**	**0.49 J**	**14**	NA
Methane (µg/L)	**--**	NA	**5300**	**200**	**7700**	**14000**	**14000**	**27000**	**2800**	**22000**	NA
Propane (µg/L)	**--**	NA	**0.49 J**	1.0 U	1.0 U	1.0 U	**0.47 J**	1.0 U	1.0 U	1.0 U	NA
Miscellaneous Parameters											
BOD (mg/L)	**--**	NA	**6.7**	**2.1**	**3**	**6.3**	**6.5**	**17 J**	**2.0 U**	**4.4**	NA
COD (mg/L)	**--**	NA	**22**	**8.5 J**	**25**	NA	NA	**22**	NA	**40**	NA
TOC (mg/L)	**--**	NA	**3.2**	**4.6**	**5.5**	**2**	**2**	**3.9**	**0.96 J**	**4.4**	NA
Chloride (mg/L)	**250**	NA	**170 J+**	**59 J+**	**99 J+**	**23 J+**	**23**	**120 J+**	**38 J+**	**120 J+**	NA
Sulfate (mg/L)	**250**	NA	**220**	**270**	**160 J+**	**49 J+**	**49**	**120 J+**	**130 J+**	**190**	NA
Sulfide (mg/L)	**0.05**	NA	**4**	1.0 U	**4.2**	1.0 U	1.0 U	**4**	1.0 U	**9.6**	NA
Nitrate (mg/L)	**10**	NA	0.10 UJ	0.25 U	0.25 U	0.10 U	0.10 U	0.10 U	0.25 U	0.10 UJ	NA
Nitrite (mg/L)	**1**	NA	0.10 UJ	0.25 U	0.25 U	0.10 U	0.10 U	0.10 U	0.25 U	0.10 UJ	NA
Nitrate-Nitrite (mg/L)	**--**	NA	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	NA	0.050 U	0.050 U	NA

Notes:
(1) NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, April 2000, Glass GA.
(2) **Bold** indicates analyte detected. (3) **Bold** indicates concentration exceed criteria.
J = The reported concentration is an estimated value.
J- = The reported concentration is an estmated value biased low.
D = Result reported from a secondary dilution analysis.
U = Not detected above the reporting limit.
UJ = Not detected. The reporting limit is an estimated value.
NA - Not Analyzed

µg/L - micrograms per liter
mg/L - milligrams per liter
PCE - tetrachlorethene
TCE- trichloroethene
DCE - dichloroethene

BOD - biological oxygen demand
COD - chemical oxygen demand
TOC - total organic carbon

Table 7
Groundwater Emerging Contaminants Analytical Results - Spring 2024
Former Carborundum Company, Hyde Park Facility
Niagara, New York

	Method/Parameter	Standard/ Drinking Water Health Advisory	Guidance Values NYSDEC 2023 TOGS 1.1.1 Addendum[3]	Units	MW- 5A		MW- 7A		MW-10A		MW-12B		MW-17A		MW-17A Duplicate		MW-18A	
	SW846-8270D SIM																	
	1,4-Dioxane	1.0[1]	0.35	ug/L	**1.3**		**4.5**		**2.9**		**0.77**	**J**	0.20	U	**0.19**	**J**	0.20	U
Group	**EPA 537 Modified, Perfluorinated Alkyl Acids (PFOAs)**																	
Perfluoroalkyl sultonates	Perfluorobutanesulfonic acid (PFBS)	NA	NA	ng/L	**0.90**	**J**	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	**0.58**	**J**	1.8	UJ
	Perfluorohexanesulfonic acid (PFHxS)	10[2]	NA	ng/L	1.9	U	**0.52**	**J**	2.0	U	1.8	UJ	**2.2**	**J**	**2.3**	**J**	1.8	UJ
	Perfluoro-1-heptanesulfonate (PFHPS)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
	Perfluorooctanesulfonic acid (PFOS)	10[1], 4[2]	2.7	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
	Perfluorodecane sulfonate (PFDS)	NA	NA	ng/L	0.30	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
Perfluoroalkyl carboxylates	Perfluorobutanoic acid (PFBA)	NA	NA	ng/L	**8.6**		**9.6**	**J**	**4.0**	**J**	**8.6**	**J**	**5.4**	**J**	**5.2**	**J**	**4.5**	**J**
	Perfluoropentanoic acid (PFPA)	NA	NA	ng/L	**2.4**		**5.2**	**J**	**1.2**	**J**	**9.0**	**J**	1.8	UJ	**1.4**	**J**	**1.5**	**J**
	Perfluorohexanoic acid (PFHxA)	NA	NA	ng/L	**3.5**		**6.0**	**J**	**2.7**		**5.0**	**J**	**2.3**	**J**	**2.4**	**J**	**2.5**	**J**
	Perfluoroheptanoic acid (PFHpA)	NA	NA	ng/L	**1.6**	**J**	**2.9**	**J**	**1.1**	**J**	**0.77**	**J**	**1.9**	**J**	**1.6**	**J**	**0.44**	**J**
	Perfluorooctanoic acid (PFOA)	10[1], 4[2]	6.7	ng/L	**12**		**28**	**J**	**5.2**		**2.1**	**J**	**49**	**J**	**48**	**J**	**2.0**	**J**
	Perfluorononanoic acid (PFNA)	10[2]	NA	ng/L	1.9	U	0.56	NJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
	Perfluorodecanoic acid (PFDA)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
	Perfluoroundecanoic acid (PFUnA)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
	Perfluorododecanoic acid (PFDoA)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
	Perfluorotridecanoic acid (PFTriA)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
	Perfluorotetradecanoic acid (PFTeA)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
Fluorinated Telomer Sulfonates	6:2 Fluorotelomer sulfonate (62FTS)	NA	NA	ng/L	4.7	U	4.6	UJ	5.0	U	4.6	UJ	4.5	UJ	4.6	UJ	4.5	UJ
	8:2 Fluorotelomer sulfonate (82FTS)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
Perfluorooctanesulfonamide	Perfluorooctane sulfonamide (FOSA)	NA	NA	ng/L	1.9	U	1.8	UJ	2.0	U	1.8	UJ	1.8	UJ	1.8	UJ	1.8	UJ
Perfluorooctanesulfonamidoacetic acids	N-Methyl perfluorooctanesulfonamidoacetic acid (NMEF	NA	NA	ng/L	4.7	U	4.6	UJ	5.0	U	4.6	UJ	4.5	UJ	4.6	UJ	4.5	UJ
	N-Ethyl perfluorooctanesulfonamidoacetic acid (NETFO	NA	NA	ng/L	4.7	U	4.6	UJ	5.0	U	4.6	UJ	4.5	UJ	4.6	UJ	4.5	UJ

Notes:

1 - NYSDOH Maximum Contaminant Levels (MCLs), 2020.

2 - USEPA MCLs, 2024.

3 -TOGS 1.1.1 Addendum for PFOA/PFOS and 1,4-dioxane (February, 2023).

ug/L - micrograms per liter (parts per billion)

ng/L - nanograms per liter (parts per trillion)

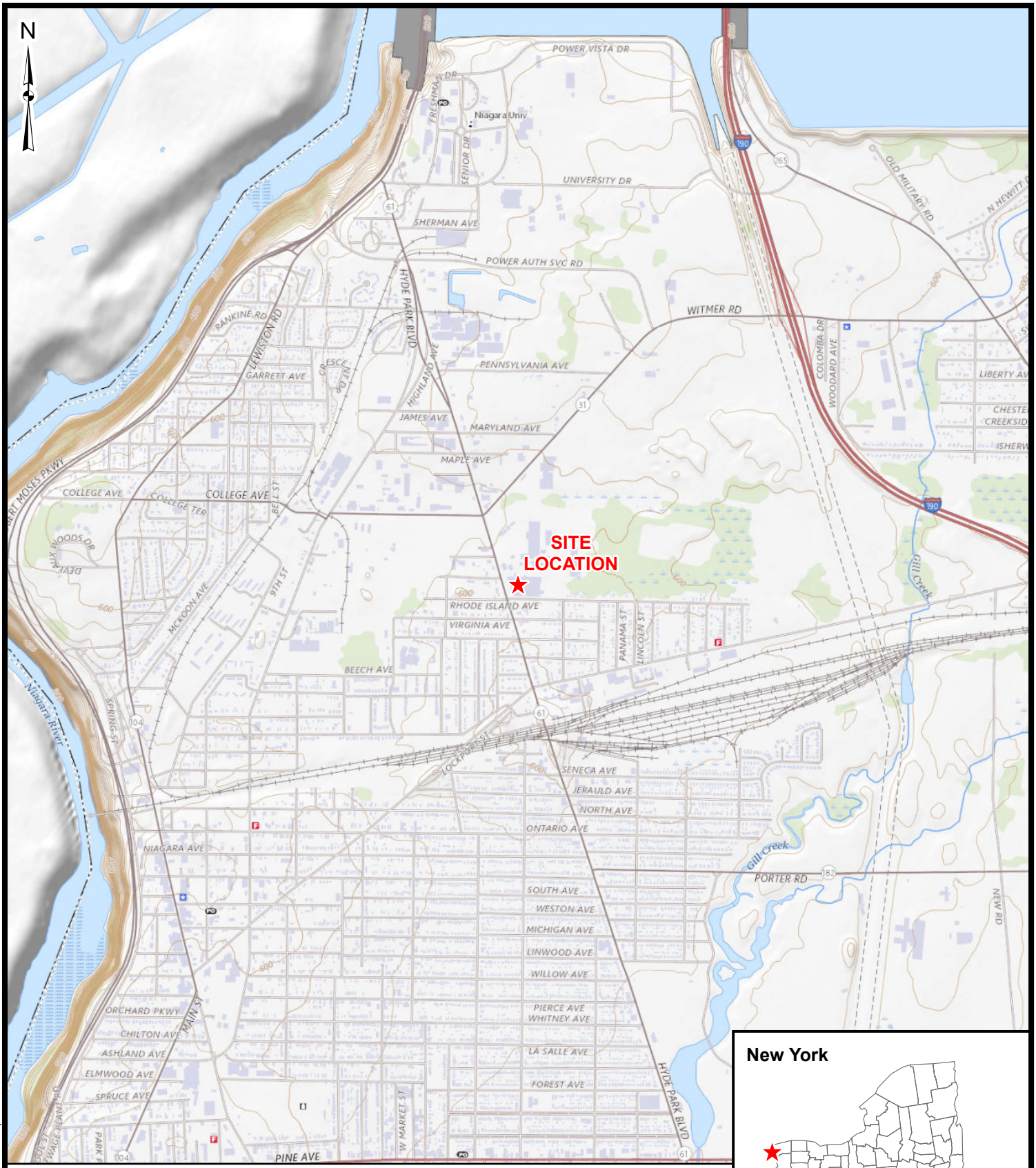
Bold - indicates compound was detected. **Bold** - result exceeds one or more criteria.

J - Result is less than the reporting limit (RL) but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value. (+ biased high)

U - not detected above the Reporting Limit shown.

NS - Not sampled.

Figures



Source: USGS The National Map Service;
1:24,000-scale USGS Topographic Map,
Lewiston, 2019
Niagara Falls, 2019

2,000 0 2,000 Feet

AECOM

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
SITE LOCATION

FIGURE 1

J:\Projects\60481767_BPIP\MISC\GIS\Hyde Park\Maps\SITE LOCATION.mxd 3/3/2022

N

KANTHAL-GLOBAR BUILDING

BRICK BLDG

HYDE PARK BOULEVARD

RHODE ISLAND AVENUE

INJ- 9
INJ-10
MW- 4B
MW- 4A
MW-12B
MW-12A
MW-11A
MW-11B
MW-14B
MW-14A
MW-15
MW-10B
MW-10A
MW-13B
MW-13A
MW- 6
MW- 2B
MW- 2A
PMW- 4
INJ- 2
PMW- 1
INJ- 5L
INJ- 5U
PMW- 2
MW- 7A
INJ- 1
MW- 7B
PMW- 3
INJ- 6L
INJ- 6U
INJ- 7
INJ- 8
MW-16A
MW-16B
PMW- 8
INJ- 3
MW-17A
INJ- 4
PMW- 5
MW-17B
PMW- 7
PMW- 6
PMW- 9
MW-18A
MW-18B
MW- 5A
MW- 5B
MW- 8
MW- 3B
MW- 3A
MW- 9
MW-19B
MW-19A
MW- 1A
MW- 1B

Legend

- Injection Well
- Monitoring Well
- Monitoring Well in the Monitoring Program
- Monitoring Well (Destroyed/Abandoned)
- Performance Monitoring Well
- Fence Line
- Approximate Site Boundary

Notes: MW-9 was abandoned on May 28, 1999 by Earth Dimensions, Inc.;
MW-12A was discovered destroyed in December 2019
Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
SITE PLAN

AECOM

FIGURE 2

J:\Projects\60481767_BPIPO\MSC\GIS\Hyde Park\Maps\SMP 2022\02 SITE PLAN.mxd 3/25/2022

N

INJ- 9, 589.02
INJ-10, 589.36
MW-4A, 588.96
INJ- 2, 589.69
PMW- 4, 590.23
PMW- 1, 590.06
MW- 7A, 590.47
MW- 2A, 591.13
INJ- 1, 590.43
INJ- 5U, 591.15
PMW- 3, 590.79
INJ- 5L, 589.49
INJ- 6U, 591.79
PMW- 2, 590.55
INJ- 6L, 589.83
INJ- 7, 590.33
INJ- 8, 589.53
MW-16A, 588.77
MW- 3A, 595.39
KANTHAL-GLOBAR BUILDING
MW-17A, 590.55
MW-19A, 590.86
BRICK BLDG
MW-18A, 589.72
MW-11A, 587.97
MW-10A, 588.73
MW- 5A, 588.87
MW- 1A, 590.34
MW-13A, 588.78
MW-14A, 585.91
HYDE PARK BOULEVARD
RHODE ISLAND AVENUE
595
594
593
592
591
590
589
588
587
586

Legend

- Injection Well
- Monitoring Well
- Performance Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Fence Line

Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
GROUNDWATER CONTOURS
OVERBURDEN WELLS (APRIL 29, 2022)

AECOM

FIGURE 3

L:\DCS\Projects\60481767_BPIPO\MISC\GIS\Hyde Park\Maps\2022\GROUNDWATER CONTOURS - OVERBURDEN.mxd 6/9/2022

N

INJ- 9, 586.50
MW- 4A, 586.77
INJ-10, 586.62
INJ- 2, 587.04
PMW- 4, 587.62
PMW- 1, 587.32
MW- 7A, 587.65
MW- 2A, 587.97
INJ- 1, 587.63
PMW- 3, 588.01
INJ- 5L, 586.86
INJ- 6U, 588.76
INJ- 5U, 587.85
INJ- 6L, 586.97
PMW- 2, 587.53
MW- 3A, 586.70
INJ- 7, 589.41
INJ- 8, 587.35
MW-16A, 588.31
KANTHAL-GLOBAR BUILDING
MW-17A, 587.92
MW-19A, 588.44
BRICK BLDG
MW-18A, 586.82
HYDE PARK BOULEVARD
MW-11A, 585.79
MW-10A, 586.19
MW- 5A, 586.30
MW- 1A, 587.32
MW-13A, 586.11
RHODE ISLAND AVENUE

587 588 587 586 587 588 586

Legend

- Injection Well
- Monitoring Well
- Performance Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Fence Line

Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
GROUNDWATER CONTOURS
OVERBURDEN WELLS (OCTOBER 3, 2023)

AECOM

FIGURE 4

C:\Users\KulkarniM2\Documents\BP Hyde Park\Hyde Park\Maps\2023\GROUNDWATER CONTOURS - OVERBURDEN.mxd 2/13/2024

N

INJ- 9, 589.26
MW- 4A, 589.10
INJ-10, 588.87
KANTHAL-GLOBAR BUILDING
589
590
591
PMW- 4, 590.30
INJ- 2, 589.61
MW- 7A, 590.21
PMW- 1, 590.22
INJ- 1, 590.50
MW- 2A, 591.24
PMW- 3, 590.95
INJ- 5L, 589.47
INJ- 6U, 591.90
INJ- 5U, 591.13
INJ- 6L, 589.63
PMW- 2, 590.76
INJ- 7, 590.72
INJ- 8, 589.46
MW-16A, 591.04
MW-17A, 590.71
MW- 3A, 595.53
595
594
593
592
591
MW-19A, 590.48
BRICK BLDG
MW-18A, 589.74
HYDE PARK BOULEVARD
MW-11A, 588.04
MW-10A, 588.75
MW- 5A, 588.88
MW-13A, 588.80
MW- 1A, 590.50
RHODE ISLAND AVENUE

Legend

- Injection Well
- Monitoring Well
- Performance Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Fence Line

Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
GROUNDWATER CONTOURS
OVERBURDEN WELLS (APRIL 22, 2024)

AECOM

FIGURE 5

C:\Users\KulkarniM2\Documents\BP Hyde Park\GIS\Maps\2024\GROUNDWATER CONTOURS - OVERBURDEN.mxd 7/29/2024

N

MW- 4B, 589.87

MW- 6, 589.31

MW- 2B, 589.41

MW- 7B, 589.84

MW- 8, 590.28

MW- 3B, 590.06

MW-16B, 590.07

PMW- 8, 589.30

KANTHAL-GLOBAR BUILDING

MW-17B, 589.27

INJ- 3, 589.26

INJ- 4, 589.47

PMW- 5, 589.30

PMW- 7, 589.04

PMW- 6, 588.95

MW-19B, 590.31

PMW- 9, 589.26

BRICK BLDG

MW-18B, 589.35

MW-12B, 589.17

MW-11B, 588.48

MW-10B, 589.19

MW- 5B, 589.14

MW- 1B, 590.30

MW-14B, 588.61

MW-13B, 588.70

HYDE PARK BOULEVARD

RHODE ISLAND AVENUE

589.8 589.7 589.6 589.5 589.4 589.3 589.2 589.1 589.0 588.9 588.8 588.7 588.6 588.5 589.0 589.1 589.2 589.3 590.1 590.2 590.3 589.4 589.5 589.6 589.7 589.8 589.9 590.0 590.1 590.2

Legend

- Injection Well
- Monitoring Well
- Performance Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Fence Line

Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
GROUNDWATER CONTOURS
BEDROCK WELLS (APRIL 29, 2022)

AECOM

FIGURE 6

L:\DCS\Projects\60481767_BPIPO\MISC\GIS\Hyde Park\Maps\2022\GROUNDWATER CONTOURS - BEDROCK.mxd 6/9/2022

N

MW- 4B, 586.70

MW- 6, 586.77

MW- 2B, 586.87

MW- 7B, 587.16

MW- 8, 587.45

MW- 3B, 587.24

MW-16B, 587.35

PMW- 8, 586.79

KANTHAL-GLOBAR BUILDING

INJ- 3, 586.70

MW-17B, 586.74

INJ- 4, 586.95

PMW- 5, 586.76

PMW- 7, 586.51

PMW- 6, 586.36

MW-19B, 587.35

BRICK BLDG

PMW- 9, 586.71

MW-18B, 586.75

HYDE PARK BOULEVARD

MW-12B, 586.67

MW-11B, 586.05

MW-10B, 586.68

MW- 5B, 586.63

MW- 1B, 587.25

RHODE ISLAND AVENUE

MW-14B, 586.05

MW-13B, 586.20

Legend

- Injection Well
- Monitoring Well
- Performance Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Fence Line

Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
GROUNDWATER CONTOURS
BEDROCK WELLS (OCTOBER 3, 2023)

AECOM

FIGURE 7

C:\Users\KulkarniM2\Documents\BP Hyde Park\Hyde Park\Maps\2023\GROUNDWATER CONTOURS - BEDROCK.mxd 2/13/2024

N

MW- 4B, 589.11

MW- 6, 589.37

MW- 2B, 589.50

MW- 7B, 589.95

MW- 8, 590.35

MW- 3B, 590.11

MW-16B, 590.09

PMW- 8, 589.40

KANTHAL-GLOBAR BUILDING

MW-17B, 589.31

INJ- 3, 589.29

INJ- 4, 589.55

PMW- 5, 589.34

PMW- 7, 589.12

PMW- 6, 588.99

MW-19B, 590.37

589.3

589.2

589.1

589

BRICK BLDG

PMW- 9, 589.32

MW-12B, 589.28

MW-18B, 589.37

HYDE PARK BOULEVARD

MW-11B, 588.58

MW-10B, 589.28

MW- 5B, 589.25

MW- 1B, 590.35

RHODE ISLAND AVENUE

MW-14B, 588.86

MW-13B, 588:80

MW-15, 588.72

Legend

- Injection Well
- Monitoring Well
- Performance Monitoring Well
- Groundwater Flow Direction
- Groundwater Elevation Contour
- Fence Line

Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY
TOWN OF NIAGARA, NEW YORK
GROUNDWATER CONTOURS
BEDROCK WELLS (APRIL 22, 2024)

AECOM

FIGURE 8

C:\Users\KulkarniM2\Documents\BP Hyde Park\GIS\Maps\2024\GROUNDWATER CONTOURS - BEDROCK.mxd 8/13/2024

MW-3A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	0.43 J	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	1.5 J	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	2 U	2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-2A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	1.2 J	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	2 U	1.3 J	1.2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	13 J	26	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-4A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	2.8 J	130	94	160	7.5	4.2 J	1.2	1.2	3.4	1.3	0.44 J	NS	NS	NS	NS	NS	NS
DCE	74	115.7	254.9	150	140	31	3.7	1.3	2.8	0.68 J	1.1	NS	NS	NS	NS	NS	NS
VC	45	41	45	73	20	11	4.1	1.1	1.1	2.6	0.96 J	NS	NS	NS	NS	NS	NS
DCA	4.6 J	17	21	18	5.4	1.3 J	0.5 U	1	1.4	1.4	1.8	NS	NS	NS	NS	NS	NS

MW-7A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	1200	1.8 J	1 U	1 U	1.2 J	1 U	0.5 U	0.5 U	0.5 U	0.66 U	1.7 U	0.25 U	0.20 U	7.3	1 U	1.0 U	210
DCE	4800	210	65	20	3.8 J	3.9 J	3	1.5	1.9	26	46	21 J	50	150	17	3.5	740
VC	220	150	50	19	1 U	2.2 J	1	3.1	3.7	33	42	35 J	45	150	33	8.5	170
DCA	1000	49	33	22	9.1	15	12	11	12	61 J	140	69	59	90	76 D	26	43

MW-16A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	NS	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	3.3 U	0.33 U	0.6 J	1.3 U	2.3 U	1 U	1.0 U	1.0 U
DCE	NS	8.2	10	11	8.4	8.5	5.9	9.1	6.5	7.3 J	1.4	3.6 J	8.7 J	8.2	8.1	0.98 J	1.0 U
VC	NS	75	180	340	110	300	140	250	18	190	33	120	560	260	290 D	37	17
DCA	NS	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	2.5 U	0.25 U	0.68 U	2.1 U	1.9 U	1 U	1.0 U	1.0 U

MW-17A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	115	22	15	11	5.3	3.1 J	0.62 J	0.5 U	0.5 U	1.7 U	1.7 U	0.20 U	0.20 U	1.8 U	1 U	1.0 U	2.0 U
DCE	230	180	210	160	140	180	150	160	110	120	59	50	38	48	36	30	23
VC	18	25	27	30	25	45	49	86	89	120	91	83	78	110	83 D	73 DJ	69
DCA	59	30	20	26	21	22	16	18	15	17	11	13	12	13	11	11	11

MW-19A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	1.7 J	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	33	3.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	2 U	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-12A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	2.6 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	NS	NS	NS	NS	NS	NS
DCE	540	64	16	19	19	22	8.9	1.6	9.5	21	16	NS	NS	NS	NS	NS	NS
VC	49	38	16	16	13	14	6.8	9.6	8.8	13	9.2	NS	NS	NS	NS	NS	NS
DCA	5.9	2.7	1.6 J	1.8 J	1.8 J	1.9 J	0.89 J	0.7 J	1.1	1.6	0.91 J	NS	NS	NS	NS	NS	NS

MW-11A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	1.3 J	5 U	1.9 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	2 U	2 U	3.2 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	5 U	5 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-18A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	36	25	25	23	21	25	27	38	37	29	36	32	34	0.92 U	34	39	41
DCE	47	43	51	42	56	58	43	53	51	58	42	43	46	47	54	57	39
VC	4.4	7	2.6 J	8.4	2.4 J	3.4 J	0.86 J	2.3	0.62 J	1.8 J	1.1	0.97 J	1.1 J	80	5.7	3.5	3.6
DCA	5.6	4.7 J	4.2 J	4.7 J	4.2 J	4.9 J	3.6	4.7	4.3	5.0	3.7	3.6	3.7	0.76 U	4.1	4	4.2

MW-10A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.57 J	6.6 U	6.6 U	5 J	7.6	13 J	8.7 J	7.5 J	5.9 J
DCE	1200	409.4	397.6	630	620	580	560	710	960 D	590	540	500	570	650	540	580	550
VC	86	140	140	250	170	130	95	130	83	130	94	130	130	180	85	190	150
DCA	25	6.4	5.7	7.7	7	5.6	4.4	5.3	5.4	5.0 UJ	5.0 U	4.3 U	3.4 U	9.5 U	13 U	10 U	10 U

MW-5A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	1.3 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.66 U	4.1 U	0.47 J	0.52 J	0.46 U	1 U	0.49 J	10 U
DCE	320	5.9	110.97	5.7	88	110	240	150	340 D	61	250	10	130	52	78	67	120
VC	42	1.8	84	3.3 J	82	190	300	140	340 D	68	310	13	180	62	70 D	150 D	160
DCA	2.1 J	5 U	1 U	1 U	1 U	1.3 U	3.3	1.4	4.2	0.88 J	3.3 J	0.17 J	2.5 J	1.0	1.9	1.7	10 U

MW-1A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	2.4 J	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	0.44 J	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	5 UJ	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-13A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	2 U	2 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-14A	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	1.6 J	1.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	0.37 J	2.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Legend

- Monitoring Well
- Fence Line

LOCATION ID — DATE

MW-1A	2000
TCE	5 U
DCE	2.4 J
VC	0.44 J
DCA	5 UJ

TRICHLOROETHENE
CIS 1,2-DICHLOROETHENE
VINYL CHLORIDE
1,1-DICHLOROETHANE
RESULT

Notes:
1. Units are shown in µg/L
2. NS = Not Sampled
3. D = Result reported from a secondary dilution analysis.
4. J = The reported concentration is an estimated value.
5. U = Not detected above the reported method detection limit.
6. UJ = Not detected. The reported method detection limit is an estimated value.
7. Monitoring well MW-12A was found destroyed in December 2019.

Source: ESRI World Imagery

60 0 60 Feet

FORMER CARBORUNDUM COMPANY TOWN OF NIAGARA, NEW YORK VOC CONCENTRATIONS IN OVERBURDEN GROUNDWATER (2000 - 2024)

AECOM

FIGURE 9

C:\Users\KulkarniM2\Documents\BP Hyde Park\GIS\Maps\2024\GROUNDWATER VOC - OVERBURDEN.mxd 8/6/2024

MW-3B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	4.8 J	1.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	2.3	2.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	5	5 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-8	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	NS	NS	NS	NS	NS	NS
DCE	5.55	2.1	2.3	1.9 J	1.6 J	1.7 J	1.6	1.7	1.9	1.7	1.9	NS	NS	NS	NS	NS	NS
VC	1.9 J	2.6	2.2	2.1 J	1.1 J	1.8 J	1.5	1.9	1.8	1.4	1.6	NS	NS	NS	NS	NS	NS
DCA	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.25 U	0.25 U	NS	NS	NS	NS	NS	NS

MW-4B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	3.2 J	5 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	39	9.7	2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	35	9.5	12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	3.2 J	5 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-7B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-17	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	0.10 U	0.10 U	0.46 U	1 U	1.0 U	1.0 U
DCE	84	7.3	4.5 J	6	1.6 J	1.2 J	0.5 U	1.2	0.82 J	2.2	2.2	1.3	5.4	1.5	1.9	1.7	1.7
VC	39	24	31	25	9.2	75	5.5	6.1	10	18	17	10	18	18	12	9.6	11
DCA	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.25 U	0.25 U	0.17 U	0.17 U	0.38 U	1 U	1.0 U	1.0 U

MW-6	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	1.7 U	0.33 U	0.10 U	0.10 U	0.92 U	1 U	1.0 U	2.0 U
DCE	560	85	39	33	30	24	18	20	18	16	12	10	11	13	12	12	2.0 U
VC	91	69	48	57	47	42	39	57	59	79	48	78	72	98	61 DJ	59 DJ	71
DCA	0.28 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	1.3 U	0.25 U	0.17 U	0.17 U	0.76 U	1 U	1.0 U	2.0 U

MW-2B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	0.44 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	NS	NS	NS	NS	NS	NS
DCE	260	9.1	3.7 J	1.8 J	2.7 J	2.3 J	1	0.87 J	0.95 J	0.77 J	1.3	NS	NS	NS	NS	NS	NS
VC	92	16	7.6 J	2.6 J	8.6	4 J	2.2	3.4	2.2	1.8	2.6	NS	NS	NS	NS	NS	NS
DCA	5 UJ	5 U	1 U	1 U	1 U	1 U	0.92 J	0.65 J	0.96 J	0.50 J	0.25 U	NS	NS	NS	NS	NS	NS

MW-16B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	0.97 J	5 U	1 U	1 U	74	2.2 J	2.5 U	4.8	0.5 U	0.33 U	0.33 U	0.10 U	0.10 U	0.46 U	1 U	1.0 U	1.0 U
DCE	130	511.8	81	27	4700	600	2300	1100	0.5 U	0.30 U	0.63 J	1	0.60 J	2.1	13	2.5	3.4
VC	35	130	48	43	600	610	2000	780	4.3	2.6	4.6	6.7	2.9	6.5	23	7.1	6
DCA	5 U	5 U	1 U	1 U	4 J	1 J	3.4 J	6.6	2	0.39 J	0.25 U	0.17 U	0.17 U	0.38 U	1 U	1.0 U	1.0 U

MW-17B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	22	3.1 J	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.68 J	0.33 U	0.10 U	0.10 U	1.7 U	1 U	1.0 U	1.0 U
DCE	1000	280	8.5	19	20	35	1.3	0.5 U	0.5 U	10	4.9	11	1.4	31	28	0.90 J	5.9
VC	69	69	9.6	27	18	40	2.1	0.8 J	0.88 J	12	7.9	14	2.6	20	23	2.2	5.8
DCA	5.4	26	45	48	43	38	8.2	1.5	1.7	6.3 J	4.5	4.3	4.5	7.3	8.2	11	7.7

MW-12B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.66 U	0.83 U	0.25 U	0.20 U	0.46 UJ	1 U	1.0 U	2.0 U
DCE	210	2.6	11	0.98 J	5.6	43	57	13	73	52	62	65	51	73 J-	52	53	44
VC	77	2 U	1 U	1 U	10	73	75	9.1	59	110	73	94	85	49 DJ-	73 DJ	100 D	91
DCA	2.3 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.66 J	0.63 U	0.43 U	0.41 J	0.40 J-	0.48 J	1.0 U	2.0 U

MW-19B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	2.4 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	0.10 U	0.10 U	0.46 U	1 U	1.0 U	1.0 U
DCE	41	68	2.1	8.7	2.3 J	2.1 J	2.9	1.8	1.1	1.6	24	1.4	11	1.8	1.5	1.5	21
VC	6.3	7.2	2.1 J	3.3 J	1.6 J	1.2 J	0.65 J	1	1.1	1.5	5.0	1.2	2.3	1.5	1.1	1.4	4.4
DCA	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.25 UJ	0.25 U	0.17 U	0.17 U	0.38 U	1 U	1.0 U	1.0 U

MW-18B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	7.7	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	6.6 U	0.83 U	0.20 U	0.20 U	0.92 U	1 U	1.0 U	1.0 U
DCE	690	62	69	150	110	120	43	35	90	380	69	56	32	47	38	120 DJ	29
VC	90	220	190	220	140	190	71	40	120	210	92	70	51	80	59	61	56
DCA	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	5.0 UJ	0.63 U	0.34 U	0.34 U	0.76 U	1 U	1.0 U	1.0 U

MW-11B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	1 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	NS	NS	NS	NS	NS	NS
DCE	590	56	1.9 J	2.2 J	1 U	0.8 U	0.5 U	0.56 J	0.54 J	1.1	0.65 J	NS	NS	NS	NS	NS	NS
VC	81	48	7.4	4.6 J	6.1	1.4 J	1.2	1.7	9.7	6.5	1.9	NS	NS	NS	NS	NS	NS
DCA	3.5 J	U	1.3 J	1.8 J	1.4 J	1.9 J	2	1	1.7	0.95 J	1.9	NS	NS	NS	NS	NS	NS

MW-10B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	68	1 U	1 U	2 U	1 U	1 U	0.5 U	0.5 U	0.5 U	3.3 U	2.6 U	2.0 U	0.50 U	4.6 U	6.3 U	5.0 U	5.0 U
DCE	1800	370	220	960	280	230	190	190	220	360	210	420	210	220	320	320	310
VC	95	150	83	180	110	120	22	190	6.1	270	12	180	23	370	140	260	130
DCA	1.2 J	1 U	1 U	2 U	1 U	1 U	0.5 U	0.9 J	0.59 J	2.5 UJ	2.0 U	3.4 U	0.85 U	3.8 U	6.3 U	5.0 U	5.0 U

MW-5B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	2.6 J	5 U	1.1 J	1 U	1 U	1 U	0.97 J	0.58 J	0.5 U	1.7 U	0.33 U	0.20 U	0.20 U	0.92 U	1 U	1.0 U	1.0 U
DCE	420	39	36	48	33	32	19	34	32	36	32	32	26	40	35	24	23
VC	45	37	39	63	34	44	33	63	71	91	78	90	68	140	71 D	140 D	88
DCA	1.1 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	1.3 U	0.30 J	0.34 U	0.34 U	0.76 U	1 U	1.0 U	1.0 U

MW-1B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCE	4.7 J	0.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VC	3.8	1.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
DCA	1.5 J	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

MW-13B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	12	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	0.19 J	0.10 U	0.92 U	1 U	1.0 U	1.0 U
DCE	310	88	46	17	27	8.6	19	18	9.9	22	7.8	16	1.6	3.7	4.1	9.9	4.3
VC	40	68	47	24	57	48	15	21	12	38	9.7	21	2.0	6.4	5.2	18	11
DCA	0.91 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.25 UJ	0.25 U	0.17 J	0.17 U	0.76 U	1 U	1.0 U	1.0 U

MW-14B	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	1 U	1 U	1 U	0.5 U	0.5 U	0.5 U	0.33 U	0.33 U	0.10 U	0.10 U	0.46 U	1 U	1.0 U	1.0 U
DCE	300	64	16	4.1 J	1.5 J	0.8 U	0.67 J	0.95 J	0.94 J	0.92 J	0.72 J	0.37 J	1.0 U	0.81 U	1 U	0.60 J	0.75 J
VC	110	86	33	5.4	5.4	1.5 J	1.2	1.5	1.2	2.9	1.3	0.7 J	1.0	1.9	1.1	2.2	1.9
DCA	0.61 J	5 U	1 U	1 U	1 U	1 U	0.5 U	0.53 J	0.5 U	0.43 J	0.34 J	0.19 J	0.24 J	0.38 U	1 U	1.0 U	1.0 U

MW-15	2000	Oct-09	May-10	Oct-11	Jun-12	Aug-13	Apr-14	Nov-15	Apr-16	Sep-17	Apr-18	Dec-19	Mar-20	Dec-21	May-22	Oct-23	Apr-24
TCE	5 U	5 U	1 U	1 U	1 U	1 U	NS	NS	NS	NS	0.10 UJ	NS	NS	NS	NS	NS	1.0 U
DCE	400	57.1	5.9	32	0.8 U	0.8 U	NS	NS	NS	NS	5.2	NS	NS	NS	NS	NS	16
VC	120	82	17	52	1.8 J	2 J	NS	NS	NS	NS	16	NS	NS	NS	NS	NS	20
DCA	0.95 J	2	1.3 J	1.4 J	1.2 J	1 U	NS	NS	NS	NS	1.1	NS	NS	NS	NS	NS	1.6

Legend

- Monitoring Well
- Fence Line

LOCATION ID	DATE
MW-1B	2000
TRICHLOROETHENE — TCE	5 U
CIS 1,2-DICHLOROETHENE — DCE	4.7 J
VINYL CHLORIDE — VC	3.8
1,1-DICHLOROETHANE — DCA	1.5 J
	RESULT

Notes:
1. Units are shown in µg/L
2. NS = Not Sampled
3. D = Result reported from a secondary dilution analysis.
4. J = The reported concentration is an estimated value.
5. J- = The reported concentration is an estimated value with low bias.
6. U = Not detected above the reported method detection limit.
7. UJ = Not detected. The reported method detection limit is an estimated value.

Source: ESRI World Imagery

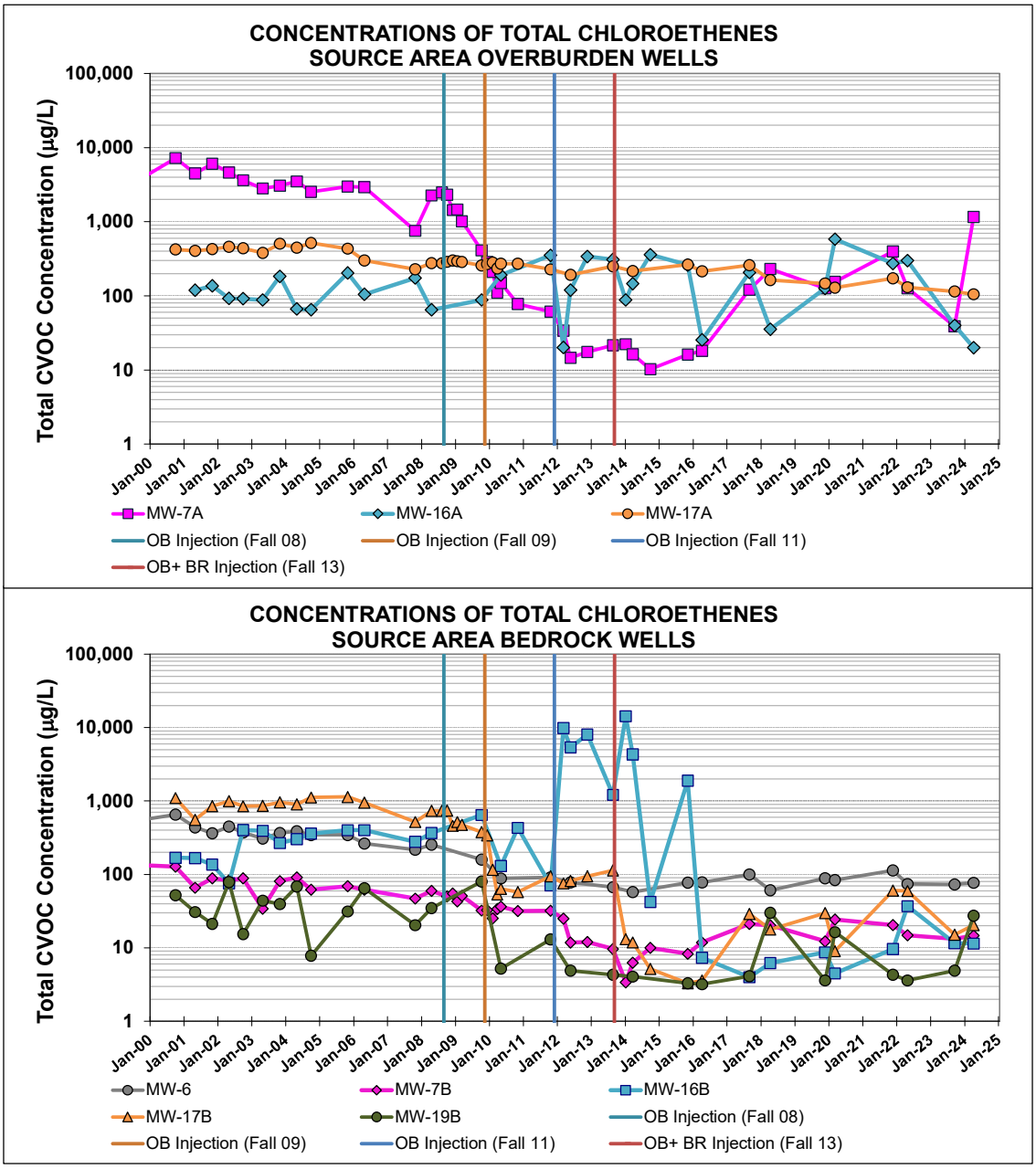
60 0 60 Feet

FORMER CARBORUNDUM COMPANY TOWN OF NIAGARA, NEW YORK VOC CONCENTRATIONS IN BEDROCK GROUNDWATER (2000 - 2024)

AECOM

FIGURE 10

C:\Users\KulkarniM2\Documents\BP Hyde Park\GIS\Maps\2024\GROUNDWATER VOC - BEDROCK.mxd 8/6/2024



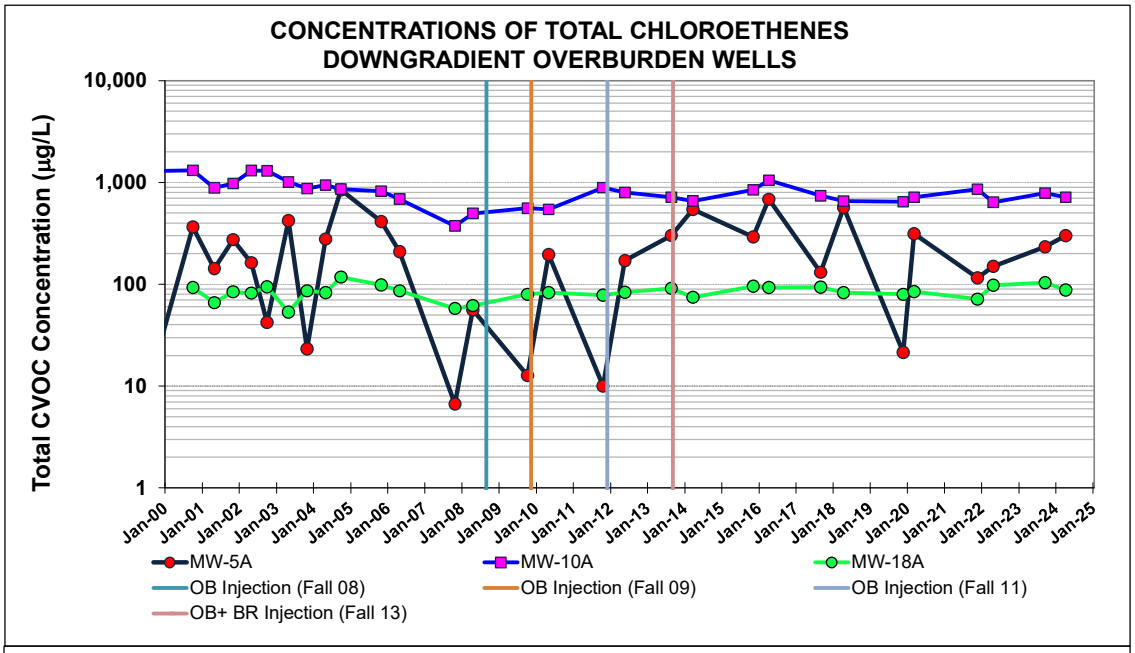
Note:
Total CVOC Concentration is the sum of TCE, cis-1,2-DCE, VC, and DCA concentrations.

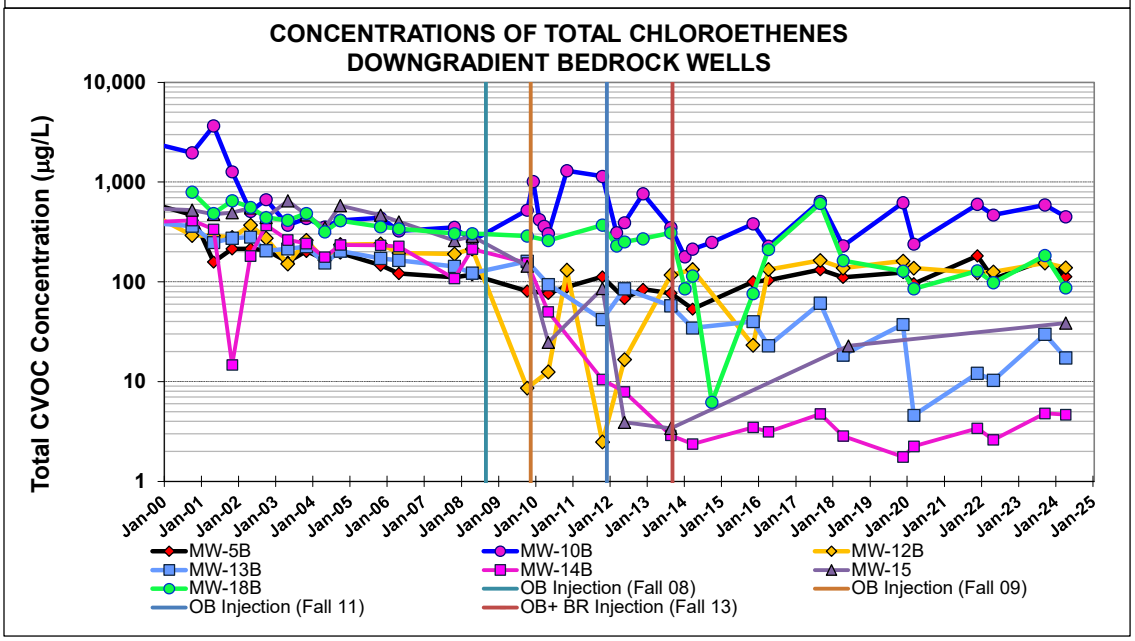
FIGURE 11

FORMER CARBORUNDUM COMPANY

LONG TERM TRENDS OF TOTAL CHLORINATED ETHENES IN SOURCE AREA OVERBURDEN AND BEDROCK WELLS

AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.





Note:
Total CVOC Concentration is the sum of TCE, cis-1,2-DCE, VC, and DCA concentrations.

FIGURE 12
FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF TOTAL CHLORINATED ETHENES IN DOWNGRADIENT OVERBURDEN AND BEDROCK WELLS
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.

Appendix A

IC/EC Certification Form

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932036

Site Name Carborundum Company, Globar

Site Address: 3425 Hyde Park Blvd. Zip Code: 14305
City/Town: Niagara
County: Niagara
Site Acreage: 7.000

Reporting Period: August 1, 2021 to July 31, 2024

	YES	NO
1. Is the information above correct?	X	
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?		X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	X	
7. Are all ICs in place and functioning as designed?	X	

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 932036 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
130.19-2-1	3425 Hyde Park Blvd, LLC	Ground Water Use Restriction Landuse Restriction Monitoring Plan Building Use Restriction

Environmental Notice filed March 6, 2012 Niagara County clerk Inst#2012-04904. Control restricts site use to industrial, restricts use of groundwater and requires soil vapor intrusion evaluation and indoor air analysis if site is re-occupied or change of use.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
130.19-2-1	Monitoring Wells

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____

Signature of Owner, Remedial Party or Designated Representative — Date

IC CERTIFICATIONS
SITE NO. 932036

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I James L. Kaczor (print name) at 50 Lakefront Blvd., Suite 111, Buffalo, NY 14202, (print business address)

am certifying as Attorney-in-Fact for Elm Holdings Inc. (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

James L. Kaczor

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

September 19, 2024
Date

Appendix B

Groundwater Sampling Logs

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name:	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-5A	2"

Samplers: T. Urban

Weather: 47F, Rainy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow | Date: 4/24/24 | Time: (hhmm) 07:30

Initial Depth to Water: 9.17 feet below top of PVC | Depth to Bottom: 21.51

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0730	9.17	350		10.00	0.842	7.60	6.70	110.0	27.77	
0735	9.91	350		10.60	0.819	0.85	7.33	132.5	15.40	
0740	9.94	350		10.60	0.800	0.55	7.44	145.6	10.97	
0745	9.97	350		10.60	0.813	0.35	7.46	158.6	7.56	
0750	9.97	350		10.60	0.804	0.37	7.47	163.1	5.71	
0755	9.97	350		10.70	0.806	0.34	7.46	167.0	3.96	
0800	9.97	350		10.70	0.805	0.31	7.45	168.9	3.39	
0805	9.97	350		10.70	0.806	0.30	7.45	170.7	2.83	
0810	9.97	350		10.70	0.807	0.26	7.44	172.9	2.57	
0815	9.97	350		10.70	0.808	0.24	7.44	173.5	2.49	
0820	9.97	350		10.70	0.811	0.22	7.43	175.5	2.25	
0825	9.97	350		10.70	0.812	0.22	7.43	176.9	2.36	
0830	9.97	350		10.70	0.813	0.20	7.43	178.1	2.52	
0835	9.97	350		10.70	0.815	0.20	7.43	179.2	2.69	

Sample Collection Method: Peristaltic Pump | **Date:** 4/24/24 | **Time:** 0835 | **Total Volume of Water Purged:** 6 gal

Hach Test Kits

Alkalinity (mg/L)	240
Carbon Dioxide (mg/L)	20
Ferrous Iron (mg/L)	0.38
Hydrogen Sulfide (mg/L)	0
DTW	

PFAs + 1,4-Dioxane, 1 well volume = 2 gal

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

Site Name: BP-IPO Hyde Park

Well ID: MW-5B

Well Diameter: 2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/24/24 Time: (hhmm) 10:10

Initial Depth to Water 8.66 feet below top of PVC

Depth to Bottom 39.30

Time hhmm	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1010	8.66	350		11.10	2.760	8.75	12.01	60.4	126.75	
1015	11.01	350		11.20	3.071	8.47	12.35	38.5	198.78	
1020	11.95	350		11.20	2.975	7.95	12.50	23.6	114.97	
1025	12.12	350		11.20	1.645	6.02	12.16	21.9	386.01	
1030	12.39	350		11.30	1.373	3.49	9.72	52.7	287.58	
1035	12.47	350		11.30	1.382	2.74	9.23	68.3	220.95	
1040	12.55	350		11.20	1.386	1.90	8.49	90.1	164.21	
1045	12.58	350		11.20	1.376	1.61	8.15	106.9	133.95	
1050	12.60	350		11.20	1.370	1.53	7.97	119.0	137.57	
1055	12.62	350		11.20	1.366	1.32	7.83	128.8	101.13	
1100	12.64	350		11.30	1.362	1.25	7.75	134.4	102.43	
1105	12.65	350		11.30	1.355	1.09	7.61	144.3	92.30	
1110	12.65	350		11.20	1.347	0.93	7.53	149.9	77.40	
1115	12.65	350		11.30	1.338	0.79	7.46	153.1	81.02	
1120	12.65	350		11.30	1.335	0.72	7.35	153.1	48.29	

Sample Collection Method: Peristaltic Pump

Date: 4/24/24 **Time:** 11:55

Total Volume of Water Purged: 10 gal

Hach Test Kits

Alkalinity (mg/L)	450
Carbon Dioxide (mg/L)	40
Ferrous Iron (mg/L)	0.48
Hydrogen Sulfide (mg/L)	0
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name: BP-IPO Hyde Park	Well ID: MW-5B	Well Diameter: 2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data: feet below top of PVC

Method: **Low Flow** | **Date:** 4/24/2024 | **Time:** 10:10 | **Initial Depth to Water** 8.66 | **Depth to Bottom** 39.30

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C˚)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1125	12.65	350		11.30	1.329	0.62	7.31	151.1	47.00	
1130	12.65	350		11.30	1.324	0.54	7.28	148.2	49.77	
1135	12.65	350		11.30	1.318	0.45	7.25	141.2	56.51	
1140	12.68	350		11.30	1.319	0.40	7.23	137.5	48.71	
1145	12.70	350		11.20	1.312	0.36	7.25	129.8	37.10	
1150	12.70	350		11.30	1.311	0.36	7.21	126.3	35.41	
1155	12.70	350		11.30	1.307	0.34	7.20	121.3	31.77	

Sample Collection Method: | **Date: 4/24/24** | **Time: 11:55** | **Total Volume of Water Purged: 10 gal**

Hach Test Kits

Alkalinity (mg/L)	450
Carbon Dioxide (mg/L)	40
Ferrous Iron (mg/L)	0.48
Hydrogen Sulfide (mg/L)	0
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	✓	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	✓	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	✓	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	✓	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/		1-500mL plastic	unpreserved	300, 353.2
BOD	✓	1-1000 mL plastic	unpreserved	5210B
COD	✓	1-250 mL plastic	H2SO4	410.4
Sulfide	✓	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-6	2"

Samplers:
S. Connelly
D. VanMarter

Weather:
47F, Rainy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow | Date: 4/22/24 | Time: 15:31 (hhmm)

Initial Depth to Water	Depth to Bottom
6.14 feet below top of PVC	43.15

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1535	6.23	350		12.30	1.585	4.32	7.61	-105.4	231.02	
1540	6.24	350		11.90	1.694	1.45	7.40	-151.4	79.23	
1545	6.25	350		11.80	1.704	0.92	7.33	-179.1	43.81	
1550	6.25	350		11.90	1.709	0.69	7.27	-190.7	702.92	
1555	6.25	350		11.90	1.712	0.56	7.24	-197.9	477.14	
1600	6.25	350		11.90	1.717	0.47	7.22	-201.5	282.30	
1605	6.25	350		11.90	1.717	0.43	7.21	-203.6	515.41	

Sample Collection Method: Peristaltic Pump | **Date:** 4/22/24 | **Time:** 16:05 | **Total Volume of Water Purged:** 2.5 gal

Hach Test Kits

Alkalinity (mg/L)	360
Carbon Dioxide (mg/L)	45
Ferrous Iron (mg/L)	0.05
Hydrogen Sulfide (mg/L)	0.5
1 Well Volume	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☐	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☐	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☐	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☐	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☐	1-1000 mL plastic	unpreserved	5210B
COD	☐	1-250 mL plastic	H2SO4	410.4
Sulfide	☐	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-7A	2"

Samplers:
T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow | **Date:** 4/23/24 | **Time:** 07:45 (hhmm)

Initial Depth to Water	Depth to Bottom
6.52 feet below top of PVC	21.80

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0745	6.52	320		9.60	1.072	1.74	7.06	83.0	10.64	
0750	8.65	320		9.60	1.040	0.35	7.04	13.1	9.23	
0755	9.45	320		9.70	1.031	0.16	6.96	-13.1	6.52	
0800	9.93	320		9.70	1.024	0.11	6.92	-19.9	5.92	
0810	10.70	320		9.80	1.019	0.07	6.90	-28.4	10.01	
0820	11.12	320		9.90	1.016	0.04	6.88	-32.9	35.17	
0830	11.27	320		10.00	1.017	0.00	6.89	-36.8	81.43	
0840	11.39	320		10.00	1.012	0.00	6.90	-45.5	21.02	
0850	11.47	320		10.00	1.006	0.00	6.90	-51.2	17.84	
0900	11.50	320		10.00	1.004	0.00	6.90	-54.9	36.84	
0905	11.50	320		10.00	1.002	0.00	6.90	-56.6	7.88	
0910	11.52	320		10.00	1.002	0.00	6.90	-57.4	12.23	
0915	11.52	320		10.10	1.001	0.00	6.90	-58.4	16.02	

Sample Collection Method: Peristaltic Pump | **Date:** 4/23/24 | **Time:** 09:15 | **Total Volume of Water Purged:** 7.5 gal

Hach Test Kits

Alkalinity (mg/L)	500
Carbon Dioxide (mg/L)	75
Ferrous Iron (mg/L)	0.51
Hydrogen Sulfide (mg/L)	0.1
1 Well Volume	

PFAS + 1,4-Dioxane, 2.5 gal/well volume

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

Site Name: BP-IPO Hyde Park

Well ID: MW-7B

Well Diameter: 2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/25/24

Time: (hhmm) 08:25

Initial Depth to Water: 7.01 feet below top of PVC

Depth to Bottom: 43.56

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0825	7.01	360		8.20	1.441	5.04	7.73	-16.8	14.08	
0830	7.29	360		9.90	1.486	1.55	7.49	-30.4	7.54	
0835	7.30	360		10.10	1.496	0.27	7.44	-70.8	3.90	
0840	7.30	360		10.20	1.499	0.11	7.45	-108.8	2.38	
0845	7.30	360		10.20	1.499	0.09	7.46	-113.7	2.39	
0850	7.30	360		10.30	1.499	0.05	7.45	-131.4	2.36	
0855	7.30	360		10.30	1.499	0.04	7.45	-140.2	1.92	
0900	7.30	360		10.40	1.498	0.03	7.45	-145.2	1.96	
0905	7.30	360		10.40	1.498	0.01	7.45	-156.8	2.67	
0910	7.30	360		10.40	1.501	0.00	7.45	-167.0	2.56	
0915	7.30	360		10.40	1.499	0.00	7.44	-174.4	2.44	
0920	7.30	360		10.50	1.502	0.00	7.43	-176.8	2.15	
0925	7.30	360		10.50	1.503	0.00	7.43	-181.9	2.02	

Sample Collection Method: Peristaltic Pump

Date: 4/25/24

Time: 09:25

Total Volume of Water Purged: 5.5 gal

Hach Test Kits

Alkalinity (mg/L)	320
Carbon Dioxide (mg/L)	35
Ferrous Iron (mg/L)	0.18
Hydrogen Sulfide (mg/L)	0.7
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name:	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-10A	2"

Samplers:
S. Connelly
D. VanMarter

Weather:
47F, Light Rain

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/24/24 Time: (hhmm) 10:46

Initial Depth to Water: 8.24 feet below top of PVC

Depth to Bottom: 20.82

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1050	8.14	350		11.20	1.278	2.45	7.56	-101.7	55.65	
1055	8.49	350		11.30	1.258	0.26	7.44	-128.6	18.74	
1100	8.49	425		11.20	1.254	0.18	7.40	-137.7	7.70	
1105	8.58	425		11.40	1.252	0.10	7.38	-144.3	9.72	
1110	8.58	425		11.40	1.254	0.08	7.37	-148.1	5.23	
1115	8.58	425		11.30	1.245	0.07	7.37	-150.4	2.80	
1120	8.58	425		11.30	1.246	0.06	7.36	-151.8	2.08	
1125	8.58	425		11.30	1.254	0.06	7.36	-152.6	2.27	
1130	8.58	425		11.40	1.256	0.05	7.35	-153.1	2.36	
1135	8.58	425		11.40	1.256	0.05	7.35	-153.3	1.85	
1140	8.58	425		11.40	1.260	0.04	7.34	-153.2	2.11	
1145	8.58	425		11.30	1.259	0.04	7.35	-152.8	1.01	
1150	8.58	425		11.30	1.259	0.04	7.35	-152.1	1.35	
1155	8.58	425		11.40	1.262	0.03	7.35	-151.9	1.59	
1200	8.58	425		11.30	1.261	0.03	7.35	-151.8	6.12	

Sample Collection Method: Peristaltic Pump

Date: 4/24/24 Time: 12:05

Total Volume of Water Purged: 6.15 gal

Hach Test Kits

Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	25
Ferrous Iron (mg/L)	0.73
Hydrogen Sulfide (mg/L)	0
DTW	

PFAs, 3 well volume = 6.15 gal

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name: BP-IPO Hyde Park	Well ID: MW-10A	Well Diameter: 2"

Samplers:
S. Connelly
D. VanMarter

Weather:
47F, Rainy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data: feet below top of PVC

Method: **Low Flow** | **Date:** 4/24/2024 | **Time:** 10:46 | **Initial Depth to Water** 8.24 | **Depth to Bottom** 20.82

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C˚)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1205	8.58	425		11.30	1.262	0.03	7.35	-151.7	2.12	

Sample Collection Method: | **Date: 4/24/24** | **Time: 12:05** | **Total Volume of Water Purged: 10 gal**

Hach Test Kits

Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	25
Ferrous Iron (mg/L)	0.73
Hydrogen Sulfide (mg/L)	0
DTW	

PFAs, 3 well volume = 6.15 gal

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0 28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

Site Name: BP-IPO Hyde Park

Well ID: MW-10B

Well Diameter: 4"

Samplers:
S. Connelly
D. VanMarter

Weather: 47F, Mostly Cloudy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/24/24 Time: (hhmm) 12:52

Initial Depth to Water: 7.59 feet below top of PVC

Depth to Bottom: 38.80

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1255	7.59	350		11.20	1.517	3.09	7.28	-71.6	2.10	
1300	7.59	350		11.50	1.525	0.29	7.14	-102.4	1.22	
1305	7.59	350		11.60	1.524	0.15	7.13	-113.5	2.34	
1310	7.59	350		11.50	1.523	0.10	7.12	-119.7	2.12	
1315	7.59	350		11.50	1.526	0.08	7.13	-123.1	2.42	
1320	7.59	350		11.50	1.525	0.09	7.13	-123.3	2.51	
1325	7.59	350		11.60	1.601	0.08	7.12	-123.2	2.33	
1330	7.59	350		11.70	1.515	0.04	7.11	-130.8	4.26	
1335	7.59	350		11.60	1.515	0.04	7.11	-131.3	4.50	

Sample Collection Method: Peristaltic Pump

Date: 4/24/24 **Time:** 13:35

Total Volume of Water Purged: 3 gal

Hach Test Kits

Alkalinity (mg/L)	360
Carbon Dioxide (mg/L)	35
Ferrous Iron (mg/L)	0
Hydrogen Sulfide (mg/L)	0
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

Site Name: BP-IPO Hyde Park

Well ID: MW-12B

Well Diameter: 4"

Samplers:
S. Connelly
D. VanMarter

Weather: 46F, Mostly Cloudy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/23/24

Time: (hhmm) 07:25

Initial Depth to Water 1.65 feet below top of PVC

Depth to Bottom 30.50

Time hhmm	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0730	1.65	600		11.10	0.586	6.51	7.71	-13.5	46.29	
0740	1.65	600		11.30	0.585	6.09	7.43	-2.5	25.73	
0750	1.65	600		11.30	0.590	5.95	7.41	3.0	54.11	
0800	1.65	600		11.60	1.366	1.81	7.18	-11.5	29.06	
0810	1.65	600		11.80	1.545	0.25	7.17	-109.9	68.57	
0820	1.65	600		11.80	1.558	0.15	7.17	-125.4	87.62	
0830	1.65	600		11.80	1.563	0.11	7.17	-130.3	111.21	
0840	1.65	600		11.80	1.571	0.09	7.16	-134.3	160.46	
0850	1.65	600		11.90	1.571	0.08	7.16	-136.8	242.82	
0900	1.65	600		11.90	1.568	0.08	7.16	-140.6	240.90	
0910	1.65	600		11.90	1.573	0.07	7.16	-144.2	279.51	
0920	1.65	600		11.90	1.575	0.07	7.16	-146.7	243.22	
0930	1.65	600		11.90	1.571	0.08	7.16	-150.2	66.18	
0940	1.65	600		11.90	1.574	0.07	7.16	-153.5	67.12	
0950	1.65	600		12.00	1.578	0.07	7.16	-155.2	171.22	

Sample Collection Method: Peristaltic Pump

Date: 4/23/24

Time: 13:30

Total Volume of Water Purged: 55 gal

Hach Test Kits

Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	30
Ferrous Iron (mg/L)	0.01
Hydrogen Sulfide (mg/L)	0.1
DTW	

PFAS + 1,4-Dioxane, MS/MSD, began downpouring in middle of sampling

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name: BP-IPO Hyde Park	Well ID: MW-12B	Well Diameter: 4"

Samplers:
S. Connelly
D. VanMarter

Weather:
46F, Mostly Cloudy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: **Low Flow**

Date:	Time:	Initial Depth to Water (feet below top of PVC)	Depth to Bottom (feet below top of PVC)
4/23/2024	7:25	1.65	30.50

Time hhmm	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1000	1.65	600		12.0	1.578	0.07	7.16	-157.2	311.06	
1010	1.65	600		12.0	1.581	0.05	7.16	-158.4	372.22	
1020	1.65	600		12.0	1.579	0.05	7.16	-160.5	235.68	
1030	1.65	600		12.0	1.579	0.05	7.16	-161.0	255.83	
1040	1.65	600		12.0	1.580	0.05	7.16	-161.9	189.83	
1050	1.65	600		12.0	1.582	0.05	7.16	-161.4	105.23	
1100	1.65	600		12.0	1.582	0.06	7.16	-162.4	198.11	
1110	1.65	600		12.1	1.580	0.04	7.16	-163.1	119.19	
1120	1.65	600		12.1	1.582	0.04	7.16	-163.8	100.04	
1130	1.65	600		12.1	1.580	0.08	7.16	-164.4	83.17	
1140	1.65	600		12.1	1.582	0.04	7.16	-164.6	144.66	
1150	1.65	600		12.2	1.581	0.06	7.16	-164.6	195.88	
1200	1.65	600		12.1	1.581	0.03	7.16	-164.9	218.89	
1210	1.65	600		12.2	1.578	0.04	7.16	-165.4	350.36	
1220	1.65	600		12.2	1.581	0.06	7.16	-165.6	405.01	
1230	1.65	600		12.20	1.583	0.03	7.15	-166.0	214.36	
1240	1.65	600		12.10	1.583	0.05	7.16	-165.9	330.74	
1250	1.65	600		12.10	1.581	0.05	7.15	-165.9	687.12	
1300	1.65	600		12.20	1.584	0.04	7.15	-166.3	710.88	
1310	1.65	600		12.10	1.583	0.05	7.15	-166.1	118.17	
1320	1.65	600		12.20	1.583	0.05	7.15	-165.7	232.31	
1330	1.65	600		12.10	1.583	0.03	7.15	-165.3	243.33	

Sample Collection Method:	Date: 4/23/24	Time: 13:30	Total Volume of Water Purged: 55 gal

Hach Test Kits

Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	30
Ferrous Iron (mg/L)	0.01
Hydrogen Sulfide (mg/L)	0.1
DTW	

PFAS + 1,4-Dioxane, MS/MSD, began downpouring in middle of sampling

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	✓	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	✓	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	✓	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	✓	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/		1-500mL plastic	unpreserved	300, 353.2
BOD	✓	1-1000 mL plastic	unpreserved	5210B
COD	✓	1-250 mL plastic	H2SO4	410.4
Sulfide	✓	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name:	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-13B	2"

Samplers:
S. Connelly
D. VanMarter

Weather:
47F, Mostly Cloudy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/24/24 Time: (hhmm) 07:21

Initial Depth to Water: 5.98 feet below top of PVC

Depth to Bottom: 39.95

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0725	6.80	500		11.50	4.206	3.15	7.52	-91.7	37.43	
0730	6.70	350		11.70	3.291	0.38	7.36	-124.6	97.66	
0735	6.70	350		11.90	2.361	0.27	7.31	-121.0	86.23	
0740	6.70	350		11.80	3.162	0.21	7.29	-117.1	77.99	
0745	6.70	350		11.90	3.110	0.19	7.27	-113.1	75.57	
0750	6.70	350		11.90	3.112	0.17	7.27	-110.1	74.56	
0755	6.70	350		11.90	3.007	0.16	7.26	-106.3	57.05	
0800	6.70	350		11.90	2.992	0.15	7.26	-104.0	79.08	
0805	6.70	350		12.00	2.893	0.15	7.22	-100.9	72.11	

Sample Collection Method: Peristaltic Pump

Date: 7/24/24 Time: 08:05

Total Volume of Water Purged: 3.5 gal

Hach Test Kits

Alkalinity (mg/L)	260
Carbon Dioxide (mg/L)	30
Ferrous Iron (mg/L)	0.89
Hydrogen Sulfide (mg/L)	0
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☐	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☐	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☐	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☐	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☐	1-1000 mL plastic	unpreserved	5210B
COD	☐	1-250 mL plastic	H2SO4	410.4
Sulfide	☐	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name: BP-IPO Hyde Park

Well ID: MW-14B

Well Diameter: 2"

Samplers:
S. Connelly
D. VanMarter

Weather: 47F, Rainy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data: feet below top of PVC

Method: Low Flow

Date: 4/24/2 4/24/24

Time: 9:48 09:48

Initial Depth to Water: 4.21

Depth to Bottom: 30.60

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0950	4.75	250		11.10	1.105	3.26	7.57	-161.4	34.84	
0955	5.28	300		11.70	1.660	0.24	7.28	-241.5	123.42	
1000	5.28	300		11.70	1.654	0.22	7.26	-244.0	99.46	
1005	5.28	300		11.60	1.638	0.19	7.24	-244.2	149.35	
1010	6.04	300		11.50	1.634	0.18	7.23	-243.2	83.05	
1015	6.10	300		11.60	1.635	0.14	7.22	-245.8	43.07	
1020	6.28	300		11.70	1.643	0.08	7.20	-250.2	31.89	

Sample Collection Method: Peristaltic Pump

Date: 4/24/24

Time: 1 10:20

Total Volume of Water Purged: 2.0 gal 2 gal

Hach Test Kits

Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	25
Ferrous Iron (mg/L)	0.11
Hydrogen Sulfide (mg/L)	1
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☐	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☐	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☐	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☐	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☐	1-1000 mL plastic	unpreserved	5210B
COD	☐	1-250 mL plastic	H2SO4	410.4
Sulfide	☐	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name:	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-15	2"

Samplers:
S. Connelly
D. VanMarter

Weather:
47F, Mostly Cloudy

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data: feet below top of PVC

Method:	Date:	Time:	Initial Depth to Water	Depth to Bottom
Low Flow	4/24/24	(hhmm) 08:37	2.72	26.95

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0840	2.79	475		12.10	1.560	3.03	7.15	-180.8	2.86	
0845	2.80	475		12.50	1.566	0.13	7.12	-250.1	11.57	
0850	2.80	475		12.50	1.565	0.07	7.13	-258.0	27.58	
0855	2.80	475		12.60	1.572	0.05	7.13	-262.6	14.40	
0900	2.80	475		12.60	1.571	0.03	7.14	-266.8	33.06	
0905	2.80	475		12.60	1.575	0.02	7.13	-270.4	16.55	
0910	2.80	475		12.60	1.578	0.01	7.13	-273.9	1.61	
0915	2.80	475		12.60	1.577	0.00	7.12	-276.3	10.35	

Sample Collection Method:	Date:	Time:	Total Volume of Water Purged:
Peristaltic Pump	4/24/24	09:15	5.5 gal

Hach Test Kits

Alkalinity (mg/L)	360
Carbon Dioxide (mg/L)	40
Ferrous Iron (mg/L)	0.44
Hydrogen Sulfide (mg/L)	5
DTW	

LEL: 36, Oxygen: 19.6, VOCs: 0.4

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name:	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-16A	2"

Samplers:
S. Connelly
D. VanMarter

Weather:
52F, Sunny

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method:	Date:	Time:	Initial Depth to Water	Depth to Bottom
Low Flow	4/22/24	13:16	1.12 feet below top of PVC	19.45

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1318	1.80	350		11.10	2.658	3.99	6.83	-41.6	2.85	
1323	2.92	350		10.80	1.479	1.71	7.02	-58.7	7.11	
1328	6.28	350		10.40	1.141	4.20	7.18	-46.7	8.35	
1333	8.65	350		10.40	1.253	4.31	7.14	-41.9	11.72	
1338	12.19	200		10.50	1.119	4.35	7.18	-45.4	21.92	
1343	13.09	200		10.60	1.001	4.63	7.17	-46.0	24.20	
1348	14.45	200		10.60	0.865	5.30	7.17	-44.7	28.11	

Sample Collection Method: Peristaltic Pump
Date: 4/22/24
Time: 13:52
Total Volume of Water Purged: 2 gal

Hach Test Kits

Alkalinity (mg/L)	215
Carbon Dioxide (mg/L)	35
Ferrous Iron (mg/L)	0.17
Hydrogen Sulfide (mg/L)	0
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name: IP-BP Hyde Park	**Well ID:** MW-16B	**Well Diameter:** 2"

Samplers:
S. Connelly
D. VanMarter

Weather:
54F, Sunny

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow | **Date:** 4/22/24 | **Time:** 14:21

feet below top of PVC

Initial Depth to Water	Depth to Bottom
2.24	39.06

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1425	2.55	250		11.60	0.733	3.74	7.18	-98.8	227.17	
1430	2.55	250		12.10	0.816	0.31	7.10	-130.2	293.38	
1435	2.55	250		12.10	0.883	0.33	7.10	-160.8	178.84	
1440	2.55	250		12.10	0.964	0.23	7.14	-186.8	25.61	
1445	2.55	250		12.30	1.044	0.11	7.22	-218.8	21.62	
1450	2.55	250		12.20	1.089	0.07	7.24	-229.2	44.66	
1455	2.55	250		12.10	1.110	0.06	7.23	-234.1	49.88	

Sample Collection Method: Peristaltic Pump | **Date:** 4/22/24 | **Time:** 14:55 | **Total Volume of Water Purged:** 2.5 gal

Hach Test Kits

Alkalinity (mg/L)	320
Carbon Dioxide (mg/L)	75
Ferrous Iron (mg/L)	0.16
Hydrogen Sulfide (mg/L)	3
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

Site Name: BP-IPO Hyde Park

Well ID: MW-17A

Well Diameter: 2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/23/24 Time: (hhmm) 09:55

Initial Depth to Water: 2.77 feet below top of PVC

Depth to Bottom: 16.12

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0955	2.77	350		10.80	0.796	1.74	7.86	4.3	132.13	
1000	3.25	350		10.70	0.800	0.68	7.88	-8.5	88.69	
1005	3.42	350		10.80	0.826	0.21	7.77	-34.3	44.14	
1010	3.55	350		10.80	0.842	0.06	7.70	-51.3	41.32	
1015	3.65	350		10.80	0.850	0.01	7.67	-59.6	35.19	
1025	3.74	350		10.90	0.857	0.00	7.65	-68.7	32.94	
1030	3.80	350		10.90	0.861	0.00	7.65	-72.7	37.52	
1035	3.84	350		10.90	0.864	0.00	7.64	-76.6	40.12	
1040	3.86	350		11.00	0.866	0.00	7.64	-78.9	41.65	
1045	3.87	350		11.00	0.869	0.00	7.62	-80.9	49.48	
1050	3.87	350		11.00	0.871	0.00	7.62	-82.2	10.98	
1055	3.80	350		11.10	0.874	0.00	7.61	-84.9	9.23	
1100	3.75	350		11.00	0.876	0.00	7.61	-86.0	11.37	
1105	3.77	350		11.10	0.876	0.00	7.61	-86.8	11.93	

Sample Collection Method: Peristaltic Pump

Date: 4/23/24 **Time:** 11:05

Total Volume of Water Purged: 6.5 gal

Hach Test Kits

Alkalinity (mg/L)	385
Carbon Dioxide (mg/L)	25
Ferrous Iron (mg/L)	0.33
Hydrogen Sulfide (mg/L)	0
DTW	

PFAS + 1,4-Dioxane, FD-20240423 taken, 13.25' water = 2.18 gal well volume

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

Site Name: BP-IPO Hyde Park

Well ID: MW-17B

Well Diameter: 2"

Samplers:
S. Connelly
D. VanMarter

Weather: 35F, Mostly Sunny

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data: feet below top of PVC

Method: Low Flow

Date: 4/25/24 Time: (hhmm) 08:21

Initial Depth to Water: 3.89

Depth to Bottom: 31.15

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
0835	3.95	425		9.30	1.260	3.21	7.08	-201.7	379.22	
0840	3.96	425		11.80	1.262	0.35	6.92	-237.4	326.15	
0845	3.97	425		12.00	1.278	0.16	6.79	-252.6	422.86	
0850	3.97	425		12.30	1.304	0.10	6.76	-258.4	266.32	
0855	3.97	425		12.30	1.333	0.09	6.80	-260.2	100.10	
0900	3.97	425		12.20	1.338	0.04	6.81	-263.4	74.21	
0905	3.97	425		12.20	1.342	0.03	6.82	-268.3	57.07	
0910	3.97	425		12.20	1.342	0.02	6.85	-286.4	52.95	
0915	3.97	425		12.20	1.372	0.02	6.84	-295.4	84.20	

Sample Collection Method: Peristaltic Pump

Date: 4/25/24 Time: 09:15

Total Volume of Water Purged: 4.5 gal

Hach Test Kits

Alkalinity (mg/L)	420
Carbon Dioxide (mg/L)	70
Ferrous Iron (mg/L)	0.12
Hydrogen Sulfide (mg/L)	5
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

Site Name: BP-IPO Hyde Park

Well ID: MW-18A

Well Diameter: 2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow

Date: 4/23/24 Time: (hhmm) 12:35

Initial Depth to Water 3.90 feet below top of PVC

Depth to Bottom 17.75

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1235	3.90	320		12.40	1.026	4.95	7.79	45.4	12.52	
1240	4.50	320		11.30	0.976	0.62	7.54	-37.1	4.41	
1245	4.90	320		11.20	0.964	0.21	7.35	-53.8	2.47	
1250	5.17	320		11.10	0.952	0.10	7.30	-59.4	2.80	
1300	5.43	320		11.30	0.939	0.05	7.28	-64.3	3.08	
1310	5.67	320		11.20	0.928	0.03	7.28	-67.5	2.68	
1320	5.69	320		11.20	0.916	0.02	7.27	-70.3	2.24	
1330	5.72	320		11.20	0.909	0.01	7.27	-72.1	2.19	
1340	5.76	320		11.20	0.900	0.00	7.27	-74.1	2.52	
1345	5.76	320		11.20	0.897	0.00	7.26	-74.8	3.08	
1350	5.76	320		11.30	0.894	0.00	7.26	-75.6	4.18	
1355	5.76	320		11.30	0.895	0.00	7.26	-76.1	4.67	

Sample Collection Method: Peristaltic Pump

Date: 4/23/24 **Time:** 13:55

Total Volume of Water Purged: 6.75 gal

Hach Test Kits

Alkalinity (mg/L)	600
Carbon Dioxide (mg/L)	0.93
Ferrous Iron (mg/L)	0
Hydrogen Sulfide (mg/L)	
DTW	

PFAS + 1,4-Dioxane, 2.25 gal/well volume

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name:	Well ID:	Well Diameter:
BP-IPO Hyde Park	MW-18B	2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow | Date: 4/24/24 | Time: (hhmm) 12:55

Initial Depth to Water	Depth to Bottom
4.20 feet below top of PVC	38.15

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1255	4.20	360		10.50	0.540	7.44	8.17	87.6	35.81	
1300	4.53	360		11.20	0.553	3.65	7.33	-36.0	22.17	
1305	4.55	360		11.40	0.903	1.34	7.22	-165.9	25.31	
1310	4.65	360		11.50	1.057	0.64	7.15	-231.9	21.19	
1315	4.62	360		11.50	1.262	0.13	7.10	-267.5	14.40	
1320	4.62	360		11.70	1.344	0.00	7.07	-284.2	12.48	
1325	4.62	360		11.70	1.358	0.00	7.05	-286.7	18.17	
1330	4.62	360		11.70	1.373	0.00	7.04	-289.4	18.11	
1335	4.62	360		11.70	1.383	0.00	7.01	-291.3	21.03	
1340	4.62	360		11.70	1.390	0.00	7.01	-293.6	22.87	

Sample Collection Method: Peristaltic Pump | **Date:** 4/24/24 | **Time:** 13:40 | **Total Volume of Water Purged:** 4.5 gal

Hach Test Kits

Alkalinity (mg/L)	400
Carbon Dioxide (mg/L)	65
Ferrous Iron (mg/L)	0
Hydrogen Sulfide (mg/L)	2
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☑	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☑	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☑	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☑	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☑	1-1000 mL plastic	unpreserved	5210B
COD	☑	1-250 mL plastic	H2SO4	410.4
Sulfide	☑	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name:	Well ID:	Well Diameter:
IP-BP Hyde Park	MW-19B	2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: Low Flow | Date: 4/22/24 | Time: (hhmm) 13:15

Initial Depth to Water: 4.30 feet below top of PVC | Depth to Bottom: 37.60

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C°)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1315	4.30	290		11.40	0.517	6.00	7.84	120.6	15.29	
1320	4.40	290		12.20	0.487	4.69	7.46	144.3	13.16	
1325	4.40	310		12.20	0.556	3.68	7.28	148.6	30.56	
1330	4.40	310		12.50	0.562	3.45	7.27	147.0	16.60	
1335	4.40	310		12.50	0.603	2.99	7.24	144.0	14.19	
1340	4.40	310		12.50	0.662	2.54	7.21	138.9	14.06	
1345	4.40	310		12.60	0.731	2.07	7.19	123.8	10.94	
1350	4.40	310		12.60	0.777	1.73	7.18	88.2	8.18	
1355	4.40	310		12.60	0.835	1.36	7.17	42.7	6.17	
1400	4.40	310		12.50	0.862	1.20	7.17	25.5	5.27	
1405	4.40	310		12.50	0.890	1.04	7.16	11.8	6.80	
1410	4.40	310		12.60	0.923	0.84	7.16	-3.6	5.02	
1415	4.40	310		12.60	0.946	0.74	7.16	-12.7	4.85	
1420	4.40	310		12.60	0.966	0.66	7.16	-20.6	5.42	
1425	4.40	310		12.60	0.973	0.64	7.16	-25.4	4.72	

Sample Collection Method: Peristaltic Pump | **Date:** 4/22/24 | **Time:** 14:40 | **Total Volume of Water Purged:** 6 gal

Hach Test Kits

Alkalinity (mg/L)	280
Carbon Dioxide (mg/L)	35
Ferrous Iron (mg/L)	0.21
Hydrogen Sulfide (mg/L)	0.1
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☐	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☐	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☐	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☐	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☐	1-1000 mL plastic	unpreserved	5210B
COD	☐	1-250 mL plastic	H2SO4	410.4
Sulfide	☐	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

AECOM

GROUNDWATER SAMPLING LOG

Low Flow Sampling Record

bp

Site Name: IP-BP Hyde Park	Well ID: MW-19B	Well Diameter: 2"

Samplers: T. Urban

Weather:

Water Volume Calculation

1 inch= 0.041	6 inch= 1.4
1.5 inch= 0.092	8 inch= 2.5
2 inch= 0.163	10 inch= 4
4 inch= 0.64	

= (Total Depth of Well - Depth to Water) × Casing volume per foot

Acceptance Criteria:

Temp	3%
pH	± 0.1 unit
Sp. Cond.	3%
ORP	± 10mV
DO	10%
Turbidity	<50 NTU
Drawdown	<0.3'

Purging Data:

Method: **Low Flow**

Date:	Time:	Initial Depth to Water (feet below top of PVC)	Depth to Bottom (feet below top of PVC)
4/22/2024	13:15	4.3	37.60

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	Temp (C˚)	Sp. Cond (ms/cm)	DO (mg/L)	pH	ORP (mV)	Turb (NTU)	Comments:
1430	4.40	310		12.50	0.984	0.54	7.17	-32.3	5.25	
1435	4.40	310		12.50	0.992	0.50	7.17	-36.8	5.10	
1440	4.40	310		12.60	0.994	0.52	7.17	-39.0	5.54	

Sample Collection Method: Peristaltic Pump | **Date:** 4/22/24 | **Time:** 14:40 | **Total Volume of Water Purged:** 6 gal

Hach Test Kits

Alkalinity (mg/L)	280
Carbon Dioxide (mg/L)	35
Ferrous Iron (mg/L)	0.21
Hydrogen Sulfide (mg/L)	0.1
DTW	

Sample Set

Parameter		Bottle	Pres.	Method
VOCs	☑	3-40 mL glass vial	HCL	EPA 8260C
Dissolved Iron	☐	1-250 mL plastic (field filtered)	HNO3	6010C
TOC	☐	2-40mL glass vial	H2SO4	5310C
M.E.E.P.	☐	3-40 mL glass vial	HCL	RSK-175 mod
Nitrate/Nitrite/ Chloride/Sulfate	☐	1-500mL plastic	unpreserved	300, 353.2 300.0_28D
BOD	☐	1-1000 mL plastic	unpreserved	5210B
COD	☐	1-250 mL plastic	H2SO4	410.4
Sulfide	☐	1-500mL plastic	NaOH/Zn Acetate	4500-S2-F

Appendix C

Data Usability Summary Report

DATA USABILITY SUMMARY REPORT

FORMER CARBORUNDUM COMPANY
HYDE PARK FACILITY
TOWN OF NIAGARA, NIAGARA COUNTY, NY
SITE ID 932036

Analyses Performed by:

EUROFINS CLEVELAND, BARBERTON, OHIO; EUROFINS BUFFALO, AMHERST, NEW YORK; and EUROFINS SACRAMENTO, SACRAMENTO, CALIFORNIA

Prepared by:

AECOM
50 LAKEFRONT DRIVE, SUITE 110
BUFFALO, NY 14202

JUNE 2024

TABLE OF CONTENTS

TABLES
(Following Text)

ATTACHMENTS

I. INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, May 2010. Discussed in this DUSR are the analytical data for eighteen (18) groundwater samples, one (1) field duplicate, one (1) matrix spike/matrix spike duplicate (MS/MSD) pair, one rinsate blank (RB), and four (4) trip blanks collected on April 22-25, 2024. The samples were collected at the former Carborundum Company, Hyde Park Facility site (Site ID Number 932036), located in the Town of Niagara, Niagara County, NY and sent to Eurofins Cleveland, Buffalo, and Sacramento for analysis. Eurofins is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory.

II. ANALYTICAL METHODOLOGIES AND DATA VALIDATION PROCEDURES

The groundwater samples were analyzed for the following parameters (not all samples were analyzed for all parameters/analytes):

Parameter	**Method Number**
Select Chlorinated Volatile Organic Compounds (CVOCs)*	SW8260D
1,4-Dioxane	SW8270D SIM
Per- and Polyfluoroalkyl Substances (PFAS)	EPA 537 Modified
Dissolved Gases (methane, ethane, ethene, and propane)	RSK SOP-175
Dissolved Iron	6010D
Anions (Chloride, Nitrate, Nitrite, and Sulfate)	EPA 300.0
Nitrate-Nitrite	EPA 353.2
Biochemical Oxygen Demand (BOD_5)	SM 5210B
Chemical Oxygen Demand	EPA 410.4
Sulfide	SM 4500-S^2E
Total Organic Carbon	SM 5310C

Notes:

* 1,1,1-Trichloroethane, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, chloroethane, tetrachloroethene, trichloroethene, and vinyl chloride.

A limited data validation was performed on the samples in accordance with the guidelines in the following USEPA Region II documents:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C*, SOP HW-24, Revision 4, October 2014;
- *Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D*, SOP HW-22, Revision 5, December 2010;
- Sampling, Analysis, and Assessment of Per- and Perfluoroalkyl Substances under NYSDEC Part 375 Remedial Programs, Appendix H, April 2023;
- *Standard Operating Procedure for the validation of ICP-AES Data*, SOP QA-HWSS-A-010, Rev. 0, March 1, 2022; and
- *Standard Operating Procedure for the validation of Cyanide Data*, SOP QA-HWSS-A-012, Rev. 0, March 1, 2022.

The limited data review included a review of: completeness of all required deliverables; holding times; QC results [blanks, instrument tunes, calibration standards, MS/MSD recoveries, surrogate and internal standard recoveries, duplicate precision, and laboratory control sample (LCS) recoveries] to determine if the data are within the protocol-required QC limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

Qualifications applied to the data during the limited data validation include 'U' (non-detect), 'UJ' (estimated quantitation limit), 'NJ' (tentatively identified, estimated result), 'J+' (estimated result, high bias), and 'J' (estimated result). Definitions of USEPA data qualifiers are presented at the end of this text. The validated analytical results are presented on Table 1 and Table 2. Documentation supporting the qualification of data is presented in Attachment A. Only analytical deviations affecting data usability are discussed in this report.

III. DATA DELIVERABLE COMPLETENESS

Full deliverable data packages (i.e., NYSDEC ASP Category B or equivalent) were provided by the laboratory (where applicable) and included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

IV. SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC) with the following exceptions.

The samples were initially shipped to the Eurofins lab located in Barberton, Ohio. The Ohio lab subcontracted the analysis for PFAS to the Eurofins lab located in Sacramento, California. Due to a delay by Fed-ex, the samples were not received the next day and the cooler temperature was 19.2 C upon receipt (all the ice had melted). All PFAS results in samples FD-20240423 (MW-17A), MW- 7A, MW-12B, MW-17A, and MW-18A have been qualified 'J' or 'UJ' due to the elevated temperature.

The sample containers for MW-16A were labeled as MW-17A. The sample containers for MW-16B were labeled as MW-17B. The samples were logged in accordance with the COC contained in the sample cooler.

All samples were analyzed within the required holding times (HT) with the following exceptions.

The following samples were analyzed outside of the HT for nitrite and nitrate: MW- 5A, MW- 5B, MW-10A, MW-10B, MW-15, MW-18B, and RB-20240424. The results for nitrite and nitrate in these samples have been qualified 'J' or "UJ' due to the HT exceedance.

V. NON-CONFORMANCES

Instrument Calibration

The percent difference (%D) between the initial calibration (ICAL) average relative response factor (RRF) and the RRF in the continuing calibration (CCAL) standards were greater than 20% for VOC 1,1-dichloroethene and showed a decreasing response (low bias). The non-detect results for this compound in samples MW-7B, MW-17B, MW-5B, MW-10A, MW-10B, MW-15, MW-18B, RB-20240424, TB-20240424, and TB-20240425 were qualified 'UJ'.

Matrix Spike/Matrix Spike Duplicate

The MSD performed on sample MW-12B was above the QC limit for SVOC 1,4-dioxane. The %R of the MS and LCS was acceptable. The result for 1,4-dioxane in this sample has been qualified 'J'.

The MS/MSD performed on sample MW-12B was outside of the QC limits for Nitrate-Nitrite and Nitrite-Nitrogen (analyzed by Method 353.2). The results for these parameters in sample MW-12B have been qualified 'UJ'.

Laboratory Control Sample

The BOD_5 LCS %R was below the lower QC limit. The samples were not re-analyzed due to the short holding time. The results for BOD_5 in samples MW- 7B and MW-17B have been qualified 'J' or 'UJ'.

Laboratory Blanks/Rinse Blanks

The RB was detected for nitrate-nitrite and nitrite-nitrogen. The detected results for these parameters in samples MW-7A, MW-16A, MW-17A, MW-5A, MW-5B, MW-10A, MW10B, MW-15, and MW-18B have been qualified 'U' at the reporting limit.

The RB was detected for sulfate at a concentration greater than the RL. The results for sulfate in samples MW- 5A, MW-5B, MW-10A, MW-16B, MW-17A, MW-17B, and MW-18A were qualified 'J+' since they were less than 10x the result in the rinse blank.

The RB was detected for chloride at a concentration greater than the RL. The results for chloride in samples MW-5A, MW- 5B, MW- 7A, MW- 7B, MW-10A, MW-10A, MW-10B, MW-12B, MW-15, MW-16A, MW-16B, MW-17A, MW-17B, MW-18A, and MW-18B were qualified 'J+' since they were less than 10x the result in the rinse blank.

Support documentation is presented in Attachment A.

VI. SAMPLE RESULTS AND REPORTING

The PFAS bottles for samples FD-20240423 (MW-17A), MW-7A, and MW-17A contained floating particles in the sample bottle. Please note the PFAS results for these samples were already qualified 'J' or 'UJ' due to their elevated temperature upon receipt at the laboratory.

The mass ratio of perfluorononanoic acid (PFNA) in sample MW-7A was outside of the QC limits for identification. Using analyst judgement this compound was reported as a hit and qualified 'I' by the laboratory. The 'I' qualifier has been changed to 'NJ.'

The laboratory flagged the analysis of sample FD-20240423 as being outside of the holding time for nitrate and BOD_5 since a sample time was not listed on the COC. This is a field duplicate of sample MW-17A with a collection time of 1105. The analysis was performed within the 48hr. holding time and no qualification is necessary.

A field duplicate was collected at location MW-17A. The FD exhibited good field and analytical precision (i.e., relative percent difference (RPD) < 20% if sample/FD >5x reporting limit (RL) or absolute difference < RL if sample/FD ≤ 5x RL).

All sample results were reported in accordance with method requirements and were adjusted for sample volume (where applicable). Results reported below the QL, but greater than the MDL, are qualified 'J' by the laboratory. Those results being reported from a secondary dilution have been qualified 'D.'

Several samples for the VOA analysis were diluted due to the presence of high concentrations of target compounds. All of these samples had detections for one or more of the target compounds. The reporting limits for the non-detect compounds are elevated due to the dilutions utilized.

Several samples were analyzed utilizing dilutions for dissolved gases and method 300 (ions). The non-detect analytes show elevated detection limits due to the dilutions utilized during the analysis.

VII. SUMMARY

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'UJ' (estimated QL), 'NJ' (tentatively identified, estimated concentration), or 'J/J+' (estimated result/estimated result high bias) during the data review are considered conditionally usable. All other sample results are usable as reported. AECOM does not recommend the re-collection of any samples at this time.

Prepared By: Ann Marie Kropovitch, Chemist **Date: 6/05/2024**

Reviewed By: Peter R. Fairbanks, Senior Chemist **Date: 6/05/2024**

DEFINITIONS OF USEPA REGION II/ DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J- – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, but biased low.

J+ – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, but biased high.

NJ-– The analyte was tentatively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

D – The sample results are reported from a secondary dilution.

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW- 5A	MW- 5B	MW- 6	MW- 7A	MW- 7B
Sample ID		MW- 5A	MW- 5B	MW- 6	MW- 7A	MW- 7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/24/24	04/22/24	04/23/24	04/25/24
Parameter	**Units**					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	10 U	1.0 U	2.0 U	20 U	1.0 U
1,1-Dichloroethane	UG/L	10 U	1.0 U	2.0 U	43	1.0 U
1,1-Dichloroethene	UG/L	10 U	1.0 UJ	2.0 U	20 U	1.0 UJ
1,2-Dichloroethene (cis)	UG/L	120	23	2.0 U	740	1.7
1,2-Dichloroethene (trans)	UG/L	10 U	1.0 U	2.0 U	20 U	1.0 U
Chloroethane	UG/L	10 U	1.0 U	2.0 U	20 U	1.0 U
Tetrachloroethene	UG/L	10 U	1.0 U	2.0 U	20 U	1.0 U
Trichloroethene	UG/L	10 U	1.0 U	2.0 U	210	1.0 U
Vinyl chloride	UG/L	160	88	71	170	11
Dissolved Gases						
Ethane	UG/L	23	0.43 J	NA	43	0.42 J
Ethene	UG/L	23	2.2	NA	50	3.5
Methane	UG/L	1,700	180	NA	8,600	200
Propane	UG/L	1.5	0.64 J	NA	1.0 U	1.0 U
Semivolatile Organic Compounds						
1,4-Dioxane	UG/L	1.3	NA	NA	4.5	NA
Dissolved Metals						
Iron, Dissolved	UG/L	200 U	250	NA	3,800	200 U
Miscellaneous Parameters						
Biochemical Oxygen Demand (BOD)	MG/L	2.8	2.0 U	NA	4.8	2.0 UJ
Chemical Oxygen Demand (COD)	MG/L	6.3 J	12	NA	NA	11
Chloride	MG/L	98 J+	120 J+	NA	14 J+	190 J+
Nitrate-Nitrite	MG/L	0.050 U	0.050 U	NA	0.050 U	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW- 5A	MW- 5B	MW- 6	MW- 7A	MW- 7B
Sample ID		MW- 5A	MW- 5B	MW- 6	MW- 7A	MW- 7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/24/24	04/22/24	04/23/24	04/25/24
Parameter	Units					
Miscellaneous Parameters						
Nitrate-Nitrogen	MG/L	0.10 UJ	0.10 UJ	NA	0.25 U	0.10 U
Nitrite-Nitrogen	MG/L	0.10 UJ	0.10 UJ	NA	0.25 U	0.10 U
Sulfate (as SO4)	MG/L	72 J+	220 J+	NA	220	250
Sulfide	MG/L	1.0 U	1.0 U	NA	1.0	0.80 J
Total Organic Carbon (TOC)	MG/L	0.71 J	3.1	NA	3.2	3.1
Per- and Polyfluoroalkyl Substances						
6:2 Fluorotelomer sulfonate (62FTS)	NG/L	4.7 U	NA	NA	4.6 UJ	NA
8:2 Fluorotelomer sulfonate (82FTS)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
N-Ethyl perfluorooctanesulfonamidoacetic acid (NETFOSAA)	NG/L	4.7 U	NA	NA	4.6 UJ	NA
N-Methyl perfluorooctanesulfonamidoacetic acid (NMEFOSAA)	NG/L	4.7 U	NA	NA	4.6 UJ	NA
Perfluoro-1-heptanesulfonate (PFHPS)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluorobutanesulfonic acid (PFBS)	NG/L	0.90 J	NA	NA	1.8 UJ	NA
Perfluorobutanoic acid (PFBA)	NG/L	8.6	NA	NA	9.6 J	NA
Perfluorodecane sulfonate (PFDS)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluorodecanoic acid (PFDA)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluorododecanoic acid (PFDoA)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	1.6 J	NA	NA	2.9 J	NA
Perfluorohexanesulfonic acid (PFHxS)	NG/L	1.9 U	NA	NA	0.52 J	NA
Perfluorohexanoic acid (PFHxA)	NG/L	3.5	NA	NA	6.0 J	NA
Perfluorononanoic acid (PFNA)	NG/L	1.9 U	NA	NA	0.56 NJ	NA
Perfluorooctane sulfonamide (FOSA)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluorooctanoic acid (PFOA)	NG/L	12	NA	NA	28 J	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW- 5A	MW- 5B	MW- 6	MW- 7A	MW- 7B
Sample ID		MW- 5A	MW- 5B	MW- 6	MW- 7A	MW- 7B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/24/24	04/22/24	04/23/24	04/25/24
Parameter	Units					
Per- and Polyfluoroalkyl Substances						
Perfluoropentanoic acid (PFPA)	NG/L	2.4	NA	NA	5.2 J	NA
Perfluorotetradecanoic acid (PFTeA)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluorotridecanoic acid (PFTriA)	NG/L	1.9 U	NA	NA	1.8 UJ	NA
Perfluoroundecanoic acid (PFUnA)	NG/L	1.9 U	NA	NA	1.8 UJ	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-10A	MW-10B	MW-12B	MW-13B	MW-14B
Sample ID		MW-10A	MW-10B	MW-12B	MW-13B	MW-14B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/24/24	04/23/24	04/24/24	04/24/24
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	10 U	5.0 U	2.0 U	1.0 U	1.0 U
1,1-Dichloroethane	UG/L	10 U	5.0 U	2.0 U	1.0 U	1.0 U
1,1-Dichloroethene	UG/L	10 UJ	5.0 UJ	2.0 U	1.0 U	1.0 U
1,2-Dichloroethene (cis)	UG/L	550	310	44	4.3	0.75 J
1,2-Dichloroethene (trans)	UG/L	7.1 J	5.0 U	2.0 U	1.0 U	1.0 U
Chloroethane	UG/L	10 U	5.0 U	2.0 U	1.0 U	1.0 U
Tetrachloroethene	UG/L	10 U	5.0 U	2.0 U	1.0 U	1.0 U
Trichloroethene	UG/L	5.9 J	5.0 U	2.0 U	1.0 U	1.0 U
Vinyl chloride	UG/L	150	130	91	11	1.9
Dissolved Gases						
Ethane	UG/L	4.9	0.79 J	0.70 J	NA	NA
Ethene	UG/L	30	18	5.8	NA	NA
Methane	UG/L	2,700	1,800	310	NA	NA
Propane	UG/L	1.0 U	2.5	0.87 J	NA	NA
Semivolatile Organic Compounds						
1,4-Dioxane	UG/L	2.9	NA	0.77 J	NA	NA
Dissolved Metals						
Iron, Dissolved	UG/L	890	180 J	200 U	NA	NA
Miscellaneous Parameters						
Biochemical Oxygen Demand (BOD)	MG/L	2.0 U	3.0 U	2.0 U	NA	NA
Chemical Oxygen Demand (COD)	MG/L	2.4 J	5.3 J	NA	NA	NA
Chloride	MG/L	140 J+	140 J+	210 J+	NA	NA
Nitrate-Nitrite	MG/L	0.050 U	0.050 U	0.050 UJ	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

Advanced Selection: amk-temp
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TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-10A	MW-10B	MW-12B	MW-13B	MW-14B
Sample ID		MW-10A	MW-10B	MW-12B	MW-13B	MW-14B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/24/24	04/23/24	04/24/24	04/24/24
Parameter	Units					
Miscellaneous Parameters						
Nitrate-Nitrogen	MG/L	0.10 UJ	0.10 UJ	0.25 U	NA	NA
Nitrite-Nitrogen	MG/L	0.10 UJ	0.10 UJ	0.050 UJ	NA	NA
Sulfate (as SO4)	MG/L	120 J+	220	220	NA	NA
Sulfide	MG/L	1.0 U	1.0 U	1.0 U	NA	NA
Total Organic Carbon (TOC)	MG/L	1.2	3.3	3.1	NA	NA
Per- and Polyfluoroalkyl Substances						
6:2 Fluorotelomer sulfonate (62FTS)	NG/L	5.0 U	NA	4.6 UJ	NA	NA
8:2 Fluorotelomer sulfonate (82FTS)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
N-Ethyl perfluorooctanesulfonamidoacetic acid (NETFOSAA)	NG/L	5.0 U	NA	4.6 UJ	NA	NA
N-Methyl perfluorooctanesulfonamidoacetic acid (NMEFOSAA)	NG/L	5.0 U	NA	4.6 UJ	NA	NA
Perfluoro-1-heptanesulfonate (PFHPS)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorobutanesulfonic acid (PFBS)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	4.0 J	NA	8.6 J	NA	NA
Perfluorodecane sulfonate (PFDS)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorodecanoic acid (PFDA)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorododecanoic acid (PFDoA)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	1.1 J	NA	0.77 J	NA	NA
Perfluorohexanesulfonic acid (PFHxS)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	2.7	NA	5.0 J	NA	NA
Perfluorononanoic acid (PFNA)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorooctane sulfonamide (FOSA)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorooctanoic acid (PFOA)	NG/L	5.2	NA	2.1 J	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-10A	MW-10B	MW-12B	MW-13B	MW-14B
Sample ID		MW-10A	MW-10B	MW-12B	MW-13B	MW-14B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/24/24	04/23/24	04/24/24	04/24/24
Parameter	Units					
Per- and Polyfluoroalkyl Substances						
Perfluoropentanoic acid (PFPA)	NG/L	1.2 J	NA	9.0 J	NA	NA
Perfluorotetradecanoic acid (PFTeA)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluorotridecanoic acid (PFTriA)	NG/L	2.0 U	NA	1.8 UJ	NA	NA
Perfluoroundecanoic acid (PFUnA)	NG/L	2.0 U	NA	1.8 UJ	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

Advanced Selection: amk-temp
C:\Users\ann.marie.kropovitch\OneDrive - AECOM\Desktop\HYDE PARK LOCAL\DB\EDMS.mde
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[LOGDATE] > #3/1/2024# AND [LOCID] <> 'FIELDQC'

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-15	MW-16A	MW-16B	MW-17A	MW-17A
Sample ID		MW-15	MW-16A	MW-16B	FD-20240423	MW-17A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/22/24	04/22/24	04/23/24	04/23/24
Parameter	Units				Field Duplicate (1-1)	
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,1-Dichloroethane	UG/L	1.6	1.0 U	1.0 U	11	11
1,1-Dichloroethene	UG/L	1.0 UJ	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichloroethene (cis)	UG/L	16	1.0 U	3.4	23	23
1,2-Dichloroethene (trans)	UG/L	0.56 J	1.0 U	1.0 U	2.0 U	2.0 U
Chloroethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Tetrachloroethene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Trichloroethene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Vinyl chloride	UG/L	20	17	6.0	70	69
Dissolved Gases						
Ethane	UG/L	8.1	1.1	0.82 J	11	11
Ethene	UG/L	20	82	2.3	22	22
Methane	UG/L	5,300	200	7,700	14,000	14,000
Propane	UG/L	0.49 J	1.0 U	1.0 U	0.47 J	1.0 U
Semivolatile Organic Compounds						
1,4-Dioxane	UG/L	NA	NA	NA	0.19 J	0.20 U
Dissolved Metals						
Iron, Dissolved	UG/L	200 U	880	230	690	680
Miscellaneous Parameters						
Biochemical Oxygen Demand (BOD)	MG/L	6.7	2.1	3.0	6.5	6.3
Chemical Oxygen Demand (COD)	MG/L	22	8.5 J	25	NA	NA
Chloride	MG/L	170 J+	59 J+	99 J+	23	23 J+
Nitrate-Nitrite	MG/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

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Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-15	MW-16A	MW-16B	MW-17A	MW-17A
Sample ID		MW-15	MW-16A	MW-16B	FD-20240423	MW-17A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/22/24	04/22/24	04/23/24	04/23/24
Parameter	Units				Field Duplicate (1-1)	
Miscellaneous Parameters						
Nitrate-Nitrogen	MG/L	0.10 UJ	0.25 U	0.25 U	0.10 U	0.10 U
Nitrite-Nitrogen	MG/L	0.10 UJ	0.25 U	0.25 U	0.10 U	0.10 U
Sulfate (as SO4)	MG/L	220	270	160 J+	49	49 J+
Sulfide	MG/L	4.0	1.0 U	4.2	1.0 U	1.0 U
Total Organic Carbon (TOC)	MG/L	3.2	4.6	5.5	2.0	2.0
Per- and Polyfluoroalkyl Substances						
6:2 Fluorotelomer sulfonate (62FTS)	NG/L	NA	NA	NA	4.6 UJ	4.5 UJ
8:2 Fluorotelomer sulfonate (82FTS)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
N-Ethyl perfluorooctanesulfonamidoacetic acid (NETFOSAA)	NG/L	NA	NA	NA	4.6 UJ	4.5 UJ
N-Methyl perfluorooctanesulfonamidoacetic acid (NMEFOSAA)	NG/L	NA	NA	NA	4.6 UJ	4.5 UJ
Perfluoro-1-heptanesulfonate (PFHPS)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluorobutanesulfonic acid (PFBS)	NG/L	NA	NA	NA	0.58 J	1.8 UJ
Perfluorobutanoic acid (PFBA)	NG/L	NA	NA	NA	5.2 J	5.4 J
Perfluorodecane sulfonate (PFDS)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluorodecanoic acid (PFDA)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluorododecanoic acid (PFDoA)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluoroheptanoic acid (PFHpA)	NG/L	NA	NA	NA	1.6 J	1.9 J
Perfluorohexanesulfonic acid (PFHxS)	NG/L	NA	NA	NA	2.3 J	2.2 J
Perfluorohexanoic acid (PFHxA)	NG/L	NA	NA	NA	2.4 J	2.3 J
Perfluorononanoic acid (PFNA)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluorooctane sulfonamide (FOSA)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluorooctanesulfonic acid (PFOS)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluorooctanoic acid (PFOA)	NG/L	NA	NA	NA	48 J	49 J

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-15	MW-16A	MW-16B	MW-17A	MW-17A
Sample ID		MW-15	MW-16A	MW-16B	FD-20240423	MW-17A
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/24/24	04/22/24	04/22/24	04/23/24	04/23/24
Parameter	Units				Field Duplicate (1-1)	
Per- and Polyfluoroalkyl Substances						
Perfluoropentanoic acid (PFPA)	NG/L	NA	NA	NA	1.4 J	1.8 UJ
Perfluorotetradecanoic acid (PFTeA)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluorotridecanoic acid (PFTriA)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ
Perfluoroundecanoic acid (PFUnA)	NG/L	NA	NA	NA	1.8 UJ	1.8 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

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TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-17B	MW-18A	MW-18B	MW-19B
Sample ID		MW-17B	MW-18A	MW-18B	MW-19B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/25/24	04/23/24	04/24/24	04/22/24
Parameter	**Units**				
Volatile Organic Compounds					
1,1,1-Trichloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	UG/L	7.7	4.2	1.0 U	1.0 U
1,1-Dichloroethene	UG/L	1.0 UJ	0.99 J	1.0 UJ	1.0 U
1,2-Dichloroethene (cis)	UG/L	5.9	39	29	21
1,2-Dichloroethene (trans)	UG/L	1.0 U	0.77 J	1.0 U	1.0 U
Chloroethane	UG/L	2.2	1.0 U	1.0 U	1.0 U
Tetrachloroethene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	UG/L	1.0 U	41	1.0 U	1.0 U
Vinyl chloride	UG/L	5.8	3.6	56	4.4
Dissolved Gases					
Ethane	UG/L	36	0.89 J	2.8	NA
Ethene	UG/L	11	0.49 J	14	NA
Methane	UG/L	27,000	2,800	22,000	NA
Propane	UG/L	1.0 U	1.0 U	1.0 U	NA
Semivolatile Organic Compounds					
1,4-Dioxane	UG/L	NA	0.20 U	NA	NA
Dissolved Metals					
Iron, Dissolved	UG/L	130 J	2,800	200 U	NA
Miscellaneous Parameters					
Biochemical Oxygen Demand (BOD)	MG/L	17 J	2.0 U	4.4	NA
Chemical Oxygen Demand (COD)	MG/L	22	NA	40	NA
Chloride	MG/L	120 J+	38 J+	120 J+	NA
Nitrate-Nitrite	MG/L	NA	0.050 U	0.050 U	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-17B	MW-18A	MW-18B	MW-19B
Sample ID		MW-17B	MW-18A	MW-18B	MW-19B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/25/24	04/23/24	04/24/24	04/22/24
Parameter	Units				
Miscellaneous Parameters					
Nitrate-Nitrogen	MG/L	0.10 U	0.25 U	0.10 UJ	NA
Nitrite-Nitrogen	MG/L	0.10 U	0.25 U	0.10 UJ	NA
Sulfate (as SO4)	MG/L	120 J+	130 J+	190	NA
Sulfide	MG/L	4.0	1.0 U	9.6	NA
Total Organic Carbon (TOC)	MG/L	3.9	0.96 J	4.4	NA
Per- and Polyfluoroalkyl Substances					
6:2 Fluorotelomer sulfonate (62FTS)	NG/L	NA	4.5 UJ	NA	NA
8:2 Fluorotelomer sulfonate (82FTS)	NG/L	NA	1.8 UJ	NA	NA
N-Ethyl perfluorooctanesulfonamidoacetic acid (NETFOSAA)	NG/L	NA	4.5 UJ	NA	NA
N-Methyl perfluorooctanesulfonamidoacetic acid (NMEFOSAA)	NG/L	NA	4.5 UJ	NA	NA
Perfluoro-1-heptanesulfonate (PFHPS)	NG/L	NA	1.8 UJ	NA	NA
Perfluorobutanesulfonic acid (PFBS)	NG/L	NA	1.8 UJ	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	NA	4.5 J	NA	NA
Perfluorodecane sulfonate (PFDS)	NG/L	NA	1.8 UJ	NA	NA
Perfluorodecanoic acid (PFDA)	NG/L	NA	1.8 UJ	NA	NA
Perfluorododecanoic acid (PFDoA)	NG/L	NA	1.8 UJ	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	NA	0.44 J	NA	NA
Perfluorohexanesulfonic acid (PFHxS)	NG/L	NA	1.8 UJ	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	NA	2.5 J	NA	NA
Perfluorononanoic acid (PFNA)	NG/L	NA	1.8 UJ	NA	NA
Perfluorooctane sulfonamide (FOSA)	NG/L	NA	1.8 UJ	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	NA	1.8 UJ	NA	NA
Perfluorooctanoic acid (PFOA)	NG/L	NA	2.0 J	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 1
VALIDATED GROUNDWATER SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		MW-17B	MW-18A	MW-18B	MW-19B
Sample ID		MW-17B	MW-18A	MW-18B	MW-19B
Matrix		Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-
Date Sampled		04/25/24	04/23/24	04/24/24	04/22/24
Parameter	Units				
Per- and Polyfluoroalkyl Substances					
Perfluoropentanoic acid (PFPA)	NG/L	NA	1.5 J	NA	NA
Perfluorotetradecanoic acid (PFTeA)	NG/L	NA	1.8 UJ	NA	NA
Perfluorotridecanoic acid (PFTriA)	NG/L	NA	1.8 UJ	NA	NA
Perfluoroundecanoic acid (PFUnA)	NG/L	NA	1.8 UJ	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

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[LOGDATE] > #3/1/2024# AND [LOCID] <> 'FIELDQC'

TABLE 2
VALIDATED FIELDQC SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID		TB-20240422	TB-20240423	RB-20240424	TB-20240424	TB-20240425
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/24	04/23/24	04/24/24	04/24/24	04/25/24
Parameter	Units	Trip Blank (1-1)	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	UG/L	1.0 U	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ
1,2-Dichloroethene (cis)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (trans)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dissolved Gases						
Ethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methane	UG/L	0.70 J	0.27 J	0.62 J	1.0 U	1.0 U
Propane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semivolatile Organic Compounds						
1,4-Dioxane	UG/L	NA	NA	0.20 U	NA	NA
Dissolved Metals						
Iron, Dissolved	UG/L	NA	NA	200 U	NA	NA
Miscellaneous Parameters						
Biochemical Oxygen Demand (BOD)	MG/L	NA	NA	2.0 U	NA	NA
Chemical Oxygen Demand (COD)	MG/L	NA	NA	10 U	NA	NA
Chloride	MG/L	NA	NA	22	NA	NA
Nitrate-Nitrite	MG/L	NA	NA	0.57	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 2
VALIDATED FIELDQC SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID		TB-20240422	TB-20240423	RB-20240424	TB-20240424	TB-20240425
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/24	04/23/24	04/24/24	04/24/24	04/25/24
Parameter	Units	Trip Blank (1-1)	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)
Miscellaneous Parameters						
Nitrate-Nitrogen	MG/L	NA	NA	0.67 J	NA	NA
Nitrite-Nitrogen	MG/L	NA	NA	0.15	NA	NA
Sulfate (as SO4)	MG/L	NA	NA	18	NA	NA
Sulfide	MG/L	NA	NA	1.0 U	NA	NA
Total Organic Carbon (TOC)	MG/L	NA	NA	1.0 U	NA	NA
Per- and Polyfluoroalkyl Substances						
6:2 Fluorotelomer sulfonate (62FTS)	NG/L	NA	NA	4.8 U	NA	NA
8:2 Fluorotelomer sulfonate (82FTS)	NG/L	NA	NA	1.9 U	NA	NA
N-Ethyl perfluorooctanesulfonamidoacetic acid (NETFOSAA)	NG/L	NA	NA	4.8 U	NA	NA
N-Methyl perfluorooctanesulfonamidoacetic acid (NMEFOSAA)	NG/L	NA	NA	4.8 U	NA	NA
Perfluoro-1-heptanesulfonate (PFHPS)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorobutanesulfonic acid (PFBS)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorobutanoic acid (PFBA)	NG/L	NA	NA	4.8 U	NA	NA
Perfluorodecane sulfonate (PFDS)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorodecanoic acid (PFDA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorododecanoic acid (PFDoA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluoroheptanoic acid (PFHpA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorohexanesulfonic acid (PFHxS)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorohexanoic acid (PFHxA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorononanoic acid (PFNA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorooctane sulfonamide (FOSA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorooctanesulfonic acid (PFOS)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorooctanoic acid (PFOA)	NG/L	NA	NA	1.9 U	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

TABLE 2
VALIDATED FIELDQC SAMPLE ANALYTICAL RESULTS
HYDE PARK FACILITY

Location ID		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID		TB-20240422	TB-20240423	RB-20240424	TB-20240424	TB-20240425
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/22/24	04/23/24	04/24/24	04/24/24	04/25/24
Parameter	Units	Trip Blank (1-1)	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)	Trip Blank (1-1)
Per- and Polyfluoroalkyl Substances						
Perfluoropentanoic acid (PFPA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorotetradecanoic acid (PFTeA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluorotridecanoic acid (PFTriA)	NG/L	NA	NA	1.9 U	NA	NA
Perfluoroundecanoic acid (PFUnA)	NG/L	NA	NA	1.9 U	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 6/13/24
Checked By: PRF 6/13/24

Detection Limits shown are PQL

Advanced Selection: AMK-TEMP2
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ATTACHMENT A

SUPPORT DOCUMENTATION

3.2/3.4

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP IPO
Req Due Date (mm/dd/yy): ________ **Rush TAT:** Yes ____ No X
BP/ARC Facility No: BP Hyde Park
Lab Work Order Number: ________

Lab Name: **Eurofins (Cleveland, OH)**	BP/ARC Facility Address: **3425 Hyde Park Blvd**	Consultant/Contractor: **AECOM**
Lab Address: **180 S Van Buren Ave, Barberton, OH 44203**	City, State, ZIP Code: **Niagara, NY 14305**	Consultant/Contractor Project No: **60481767.105.24.01H**
Lab PM: **Lab Contact: Opal Johnson**	Lead Regulatory Agency: **NYSDEC**	Address: **50 Lakefront Blvd Ste 111, Buffalo, NY 14202**
Lab Phone: **330-497-9396 / 330-497-0772 (fax)**	California Global ID No.:	Consultant/Contractor PM: **James Kaczor**
Lab Shipping Accnt:	Enfos Proposal No:	Phone: **716-923-1300**
Lab Bottle Order No:	Accounting Mode: Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To: James.Kaczor@aecom.com
Other Info: **PO # 1643548**	Stage: Activity:	Invoice To: BP/ARC ___ Contractor X
BP/ARC EBM:		
EBM Phone:		
EBM Email:		

Report Type & QC Level: Standard ____ Full Data Package ____

Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor		Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4		8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	Comments
	MW-17B	4/25/24	0915		X			14	2	1	6	1	4		3	1	1	3	3	1	1	1			
	MW-7B	4/25/24	0925		X			14	2	1	6	1	4		3	1	1	3	3	1	1	1			
	TB-20240425	4/25/24	—		X			4			4				2			2							

Comments — Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

240-203418 Chain of Custody

Sampler's Name: [illegible] S. Connelly	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: AECOM	[signature] / Aecom	4/25/24	1230	[signature] TAB	4-25-24	1230
Shipment Method: Dropoff at Eurofins Buffalo, NY Ship Date:	[signature]	4/25/24	1600	J. MOROSKO	04/26/24	1010
Shipment Tracking No:						

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP/ARC LaMP COC Rev. 6 01/01/2009

Eurofins – Cleveland Sample Receipt Form/Narrative Login # · 203418
Barberton Facility

Client BP Hyde Park Site Name

Cooler unpacked by J MOROSKO

Cooler Received on 04/26/24 Opened on 04/26/24

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 17 (CF T0.2 °C) Observed Cooler Temp. 3.2 °C Corrected Cooler Temp 3.4 °C

2	Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes No
	-Were the seals on the outside of the cooler(s) signed & dated?	Yes No NA
	-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes No
	-Were tamper/custody seals intact and uncompromised?	Yes No NA
3	Shippers' packing slip attached to the cooler(s)?	Yes No
4	Did custody papers accompany the sample(s)?	Yes No
5	Were the custody papers relinquished & signed in the appropriate place?	Yes No
6	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes No
7	Did all bottles arrive in good condition (Unbroken)?	Yes No
8	Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes No
9	For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	
10	Were correct bottle(s) used for the test(s) indicated?	Yes No
11	Sufficient quantity received to perform indicated analyses?	Yes No
12.	Are these work share samples and all listed on the COC?	Yes No
	If yes, Questions 13-17 have been checked at the originating laboratory	
13	Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA pH Strip Lot# HC439975
14	Were VOAs on the COC?	Yes No
15	Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes No NA
16	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered	Yes No JM 4/26
17	Was a LL Hg or Me Hg trip blank present?	Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by

Added bottles to login, but did not add BOD or Nitrate-nitrite test, per PM.

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation Date/Time VOAs Frozen

Job Narrative
240-203418-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/26/2024 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-611871 was outside the method criteria for the following analyte(s): 1,1-Dichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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

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

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

General Chemistry
Method 5210B: The glucose-glutamic acid standard (LCS) recovered outside the recovery limits specified in the method in batch 240-611041. The method holding time had expired, therefore the analysis was not repeated. The data was qualified and reported.

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

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 240-203418-1

SDG No.:

Lab Sample ID: CCVIS 240-611871/3 Calibration Date: 05/04/2024 11:04

Instrument ID: A3UX17 Calib Start Date: 02/05/2024 10:44

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/05/2024 13:50

Lab File ID: 182337.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3318	0.2397	0.1000	0.0181	0.0250	-27.7*	20.0
Chloromethane	Ave	0.3900	0.3848	0.1000	0.0247	0.0250	-1.3	20.0
Vinyl chloride	Ave	0.3084	0.2785	0.1000	0.0226	0.0250	-9.7	20.0
Butadiene	Ave	0.3657	0.3619		0.0247	0.0250	-1.0	20.0
Bromomethane	Lin1		0.0631	0.0500	0.0122	0.0250	-51.1*	20.0
Chloroethane	Ave	0.1886	0.1730	0.0500	0.0229	0.0250	-8.3	20.0
Trichlorofluoromethane	Ave	0.3873	0.3543	0.1000	0.0229	0.0250	-8.5	20.0
Dichlorofluoromethane	Ave	0.4780	0.4354		0.0228	0.0250	-8.9	20.0
Ethyl ether	Ave	0.2364	0.1890		0.0200	0.0250	-20.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1571	0.1178	0.0500	0.0188	0.0250	-25.0*	20.0
Acrolein	Ave	0.0109	0.0072		0.0829	0.125	-33.7*	20.0
1,1-Dichloroethene	Ave	0.1660	0.1294	0.1000	0.0195	0.0250	-22.1*	20.0
Acetone	Lin1		0.1049	0.0100	0.0469	0.0500	-6.2	50.0
Iodomethane	Ave	0.2325	0.1675		0.0180	0.0250	-27.9*	20.0
Carbon disulfide	Lin1		0.3581	0.1000	0.0176	0.0250	-29.8*	20.0
3-Chloro-1-propene	Ave	0.1062	0.0897		0.0211	0.0250	-15.6	20.0
Methyl acetate	Ave	0.2748	0.3031	0.0500	0.0552	0.0500	10.3	50.0
Methylene Chloride	Ave	0.1869	0.1706	0.1000	0.0228	0.0250	-8.7	50.0
2-Methyl-2-propanol	Ave	0.0331	0.0213		0.161	0.250	-35.7*	20.0
Methyl tert-butyl ether	Ave	0.5929	0.4811	0.1000	0.0203	0.0250	-18.8	20.0
trans-1,2-Dichloroethene	Ave	0.1761	0.1654	0.1000	0.0235	0.0250	-6.1	20.0
Acrylonitrile	Ave	0.1294	0.1377		0.266	0.250	6.4	20.0
Hexane	Lin1		0.0319		0.0151	0.0250	-39.5*	20.0
1,1-Dichloroethane	Ave	0.4227	0.3879	0.2000	0.0229	0.0250	-8.2	20.0
Vinyl acetate	Ave	0.5323	0.4130		0.0194	0.0250	-22.4*	20.0
2,2-Dichloropropane	Ave	0.3387	0.2920		0.0216	0.0250	-13.8	20.0
cis-1,2-Dichloroethene	Ave	0.1990	0.1933	0.1000	0.0243	0.0250	-2.9	20.0
2-Butanone (MEK)	Ave	0.1880	0.1686	0.0100	0.0448	0.0500	-10.3	50.0
Tetrahydrofuran	Ave	0.1125	0.1100		0.0489	0.0500	-2.2	20.0
Chlorobromomethane	Ave	0.0942	0.0906		0.0240	0.0250	-3.8	20.0
Chloroform	Ave	0.3434	0.3367	0.2000	0.0245	0.0250	-2.0	20.0
Cyclohexane	Ave	0.4633	0.3802	0.1000	0.0205	0.0250	-17.9	20.0
1,1,1-Trichloroethane	Ave	0.3384	0.3023	0.1000	0.0223	0.0250	-10.7	20.0
Carbon tetrachloride	Ave	0.3210	0.2610	0.1000	0.0203	0.0250	-18.7	20.0
1,1-Dichloropropene	Ave	0.2816	0.2348		0.0208	0.0250	-16.6	20.0
Benzene	Ave	0.7619	0.7427	0.5000	0.0244	0.0250	-2.5	20.0
Isobutyl alcohol	Ave	0.0149	0.0125		0.523	0.625	-16.4	20.0
1,2-Dichloroethane	Ave	0.3733	0.3212	0.1000	0.0215	0.0250	-14.0	20.0
n-Heptane	Lin1		0.0333		0.0189	0.0250	-24.3*	20.0
Trichloroethene	Lin1		0.2039	0.1500	0.0250	0.0250	0.1	20.0

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: Eurofins Cleveland Job No.: 240-203418-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 611033	Date: 04/26/2024 15:30										
						LCS Source: WCICLCS_00985					
300.0	LCS 240-611033/4	Chloride	50.3		mg/L	50.0	101	90-110			
300.0	LCS 240-611033/4	Sulfate	50.9		mg/L	50.0	102	90-110			
Batch ID: 611034	Date: 04/26/2024 15:30										
						LCS Source: WCICLCS_00985					
300.0	LCS 240-611034/4	Nitrite as N	2.47		mg/L	2.50	99	90-110			
300.0	LCS 240-611034/4	Nitrate as N	2.58		mg/L	2.50	103	90-110			
Batch ID: 611980	Date: 05/06/2024 10:01										
						LCS Source: COD LCS_00050					
410.4	LCS 240-611980/10	Chemical Oxygen Demand	39.8		mg/L	41.2	97	90-110			
Batch ID: 611098	Date: 04/29/2024 08:06										
						LCS Source: WCSULFIDELCS_02892					
4500 S2 F-2000	LCS 240-611098/2	Sulfide	22.0		mg/L	21.9	101	80-120			
Batch ID: 611041	Date: 04/26/2024 11:00										
						LCS Source: WCBODLCS_00234					
5210B-2001	LCS 240-611041/3	Biochemical Oxygen Demand	166		mg/L	198	84	85-115			*-
Batch ID: 611417	Date: 04/30/2024 04:09										
						LCS Source: TOC LCS_00009					
5310C-2000	LCS 240-611417/21	Total Organic Carbon	15.9		mg/L	16.3	98	85-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

Job Narrative
240-203359-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/24/2024 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

General Chemistry
Method 300_48HR: The following samples were diluted due to the nature of the sample matrix: MW-5A (240-203359-2), MW-15 (240-203359-3), MW-5B (240-203359-5), MW-10A (240-203359-6), MW-10B (240-203359-7) and MW-18B (240-203359-8). Elevated reporting limits (RLs) are provided.

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

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Opal	Carrier Tracking No(s):	COC No: 240-183719.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Opal.Johnson@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP New York		Job #: 240-203303-1
Address: 880 Riverside Parkway	Due Date Requested: 5/6/2024			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: BP Hyde Park	Project #: 24018856			
Site:	SSOW#:			

Analysis Requested

Preservation Codes.

Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oi BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_PFC PFAS, Standard List (21 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7A (240-203303-1)	4/23/24	09:15 Eastern		Water			X	2	BP LaMP
MW-17A (240-203303-2)	4/23/24	11:05 Eastern		Water			X	2	BP LaMP
FD-20240423 (240-203303-3)	4/23/24	Eastern		Water			X	2	BP LaMP
MW-12B (240-203303-4)	4/23/24	13:30 Eastern		Water			X	2	BP LaMP
MW-12B (240-203303-4MS)	4/23/24	13:30 Eastern	MS	Water			X	1	BP LaMP
MW-12B (240-203303-4MSD)	4/23/24	13:30 Eastern	MSD	Water			X	1	BP LaMP
MW-18A (240-203303-5)	4/23/24	13:55 Eastern		Water			X	2	BP LaMP

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[illegible]	4.26.24 1200		[illegible]	4/29/24 9 15	EETSAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 19.2

Ver: 06/08/2021

eurofins | Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Tracking # 7180 5081 2825

Job 240-203303 Field Sheet

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm. ID L-09 Corr Factor (+/-) N/A °C

Ice_____ Wet ✓ Gel_____ Other_____

Cooler Custody Seal: —

Cooler ID: —

Temp Observed 1.9.2 °C Corrected 1.9.2 °C

From Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☐	☒	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials FSH Date: 4/29/24

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
COC is complete w/o discrepancies	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☒	☐
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials FSH Date: 4/29/24

Notes NCM ice melted water only

Trizma Lot #(s)_____

Ammonium Acetate Lot #(s)_____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
NCM Filed?	☒	☐	☐
Samples received within hold time?	☐	☐	☒
Log Release checked in TALS?	☐	☐	☒

Initials FSH Date: 4/29/24

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP IPO
BP/ARC Facility No: BP Hyde Park
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:	
Lab Shipping Accnt:		Enfos Proposal No:	
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___
Other Info:	PO # 1643548	Stage:	Activity:
BP/ARC EBM:			
EBM Phone:			
EBM Email:			

Consultant/Contractor:	AECOM	
Consultant/Contractor Project No:	60481767.105.24.01H	
Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202	
Consultant/Contractor PM:	James Kaczor	
Phone:	716-923-1300	
Email EDD To:	James.Kaczor@aecom.com	
Invoice To:	BP/ARC ___	Contractor X

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4	Requested Analyses: 8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	Report Type & QC Level / Comments
	MW-7A	4/23/24	0915		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	MW-17A	4/23/24	1105		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	FD-20240423	4/23/24	—		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	MW-12B-MS/MSD	4/23/24	1330		X		60	14	3	18	3	12	9	3	3	9	6	3	3	3	4	4	PFAS / 1,4 Dioxane MS/ MSD same bottle (not enough bottle sets)
	MW-18A	4/23/24	1355		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	TB-20240423	4/23/24	—		X		4			4			2			2							

Standard ___
Full Data Package ___

240-203303 Chain of Custody

Sampler's Name:	T. Urban, D. VanHorter, S. Connelly	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation / Date / Time
Sampler's Company:	AECOM		4/23/24	1630	TAB 4/23/24 1630
Shipment Method:	Dropoff at Eurofins Buffalo, NY	Ship Date:			
Shipment Tracking No:					

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Temp 4.1 4.6 3.9 3.2 # ICE

Login Sample Receipt Checklist

Client: AECOM

Job Number: 240-203303-1

Login Number: 203303
List Number: 2
Creator: Soto-Hernandez, Flor N

List Source: Eurofins Sacramento
List Creation: 04/29/24 10:06 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	19.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Job Narrative
240-203303-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/23/2024 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 8 coolers at receipt time were 1.7°C, 2.8°C, 2.9°C, 3.2°C, 3.2°C, 3.9°C, 4.6°C and 4.8°C.

Receipt Exceptions
The following sample(s) was received at the laboratory outside the required temperature criteria:

Received cooler out of temperature; 19.2 C ,Coolers were delayed by FedEx. Only water in cooler indicates ice has melted.

The Following samples were in the cooler out of temperature:
Samples : 1-4 containers L & M
4 MS Container L
4 MSD container MSD
5 container L &M

GC/MS VOA
Method 8260D: The matrix spike/matrix spike duplicate (MS/MSD) for samples MW-7A (240-203303-1), MW-17A (240-203303-2), MW-18A (240-203303-5) and TB-20240423 (240-203303-6) was not reported, because the MS/MSD parent samples were not reported.

Method 8260D: The surrogate recovery for the continuing calibration verification (CCV) standard was outside the CCV control limit (20%), but it was within the sample recovery control limit, so no corrective action was needed.

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

GC/MS Semi VOA
Method 8270D_SIM_MS_ID: The breakdown of 4,4'-DDT in the tuning evaluation exceeded 20%. Breakdown is not a criteria of the method but rather an internal check performed by the laboratory to evaluate the peak shape of 1,4-Dioxane and 1,4-Dioxane-d8. No adverse performance was observed and QC recoveries were in control. The data have been reported.

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

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

PFAS
Method PFC_IDA: The following samples in preparation batch 320-758271 were observed to have floating particulates present in the sample bottle. MW-7A (240-203303-1), MW-17A (240-203303-2) and FD-20240423 (240-203303-3)

Method PFC_IDA: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the

established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: MW-7A (240-203303-1).

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

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

General Chemistry
Method 300_48HR: The following samples were diluted due to the nature of the sample matrix: MW-7A (240-203303-1), MW-17A (240-203303-2), FD-20240423 (240-203303-3), MW-12B (240-203303-4) and MW-18A (240-203303-5). Elevated reporting limits (RLs) are provided.

Method 300_48HR: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: FD-20240423 (240-203303-3).

Method 353.2_Pres: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 480-711015 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 5210B: The results increased with increasing dilutions for the following samples: FD-20240423 (240-203303-3). This indicates a potentially toxic substance is being diluted out. The concentration may be biased low.

Method 5210B: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: FD-20240423 (240-203303-3).

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

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Buffalo Job No.: 240-203303-1

SDG No.:

Matrix: Water Level: Low Lab File ID: U0000039080.d

Lab ID: 240-203303-4 MSD Client ID: MW-12B MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	2.00	3.74	148	25	20	40-140	F1 F2
1,4-Dioxane-d8	20.0	7.24	36			15-110	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM ID

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Buffalo Job No.: 240-203303-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 709247 Date: 04/25/2024 10:14											
300.0	240-203303-4	Nitrate as N	ND		mg/L						
300.0	240-203303-4 MS	Nitrate as N	26.4		mg/L	25.0	106	80-120			
Batch ID: 709300 Date: 04/24/2024 20:17											
353.2	240-203303-4	Nitrite as N	ND		mg/L						F1 F2
353.2	240-203303-4 MS	Nitrite as N	0.953		mg/L	1.00	95	90-110			
Batch ID: 711015 Date: 05/07/2024 11:45											
353.2	240-203303-4	Nitrate Nitrite as N	ND		mg/L						F1 F2
353.2	240-203303-4 MS	Nitrate Nitrite as N	3.03		mg/L	1.00	303	90-110			F1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Buffalo Job No.: 240-203303-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 709247 Date: 04/25/2024 10:32											
300.0	240-203303-4 MSD	Nitrate as N	23.2		mg/L	25.0	93	80-120	13	15	
Batch ID: 709300 Date: 04/24/2024 20:18											
353.2	240-203303-4 MSD	Nitrite as N	0.771		mg/L	1.00	77	90-110	21	20	F1 F2
Batch ID: 711015 Date: 05/07/2024 11:46											
353.2	240-203303-4 MSD	Nitrate Nitrite as N	0.0443	J	mg/L	1.00	4	90-110	194	20	F1 F2

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

Laboratory Management Program LaMP Chain of Custody Record

3.5/2.7

Page 1 of 1

BP/ARC Project Name: BP IPO
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No X

BP/ARC Facility No: BP Hyde Park
Lab Work Order Number:

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd	Consultant/Contractor:	AECOM
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305	Consultant/Contractor Project No:	60481767.105.24.01H
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC	Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:		Consultant/Contractor PM:	James Kaczor
Lab Shipping Accnt:		Enfos Proposal No:		Phone:	716-923-1300
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To:	James.Kaczor@aecom.com
Other Info:	PO # 1643548	Stage:	Activity:	Invoice To:	BP/ARC ___ Contractor X

BP/ARC EBM:
EBM Phone:
EBM Email:

Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor	Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4	8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane
	MW-16A	4/22/24	1352		X		14	2	1	6	1	4	3	1	1	3	3	1	1	1		
	MW-16B	4/22/24	1455		X		14	2	1	6	1	4	3	1	1	3	3	1	1	1		
	MW-19B	4/22/24	1440		X		3			3			3									
	MW-6	4/22/24	1605		X		3			3			3									
	TB-20240422	4/22/24	—		X		4			4			2			2						

240-203196 Chain of Custody

Report Type & QC Level
Standard ___
Full Data Package ___

Comments
Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name:		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	AECOM						
Shipment Method:	Dropoff at Eurofins Buffalo, NY Ship Date:		4/22/24	1705		4/22/24	1705
Shipment Tracking No:			4/23/24	1660		4-24-24	900

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: Si ϕ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

#1 ICE

BP/ARC LaMP COC Rev. 6 01/01/2009

Eurofins – Cleveland Sample Receipt Form/Narrative Login # 263194
Barberton Facility

Client LaMP Site Name

Cooler Received on 4-24-24 Opened on 4-24-24

Cooler unpacked by Danny Boyle

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 6 Foam Box Client Cooler Box Other

Packing material used ~~Bubble Wrap~~ Foam Plastic Bag None Other

COOLANT: ~~Wet Ice~~ Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 17 (CF 0.+2 °C) Observed Cooler Temp 2.5 °C Corrected Cooler Temp 2.7 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12 Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC439975
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by

Sample MW-16A - bottles marked - MW-17A
Sample MW-16B - bottles marked - MW-17B
Logged Per COC.

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired
Sample(s) were received in a broken container
Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory
Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation Date/Time VOAs Frozen

Job Narrative
240-203196-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/24/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C.

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): MW-16A (240-203196-1) and MW-16B (240-203196-2). The container labels list <SAMPLE_ID>, while the COC lists <SAMPLEID>. The client was contacted, and the lab was instructed to <EXPLANATION_REQUIRED>.

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

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

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

General Chemistry
Method 300.0_28D: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-16A (240-203196-1). Elevated reporting limits (RLs) are provided.

Method 300.0_28D: The following sample was diluted due to the nature of the sample matrix: MW-16B (240-203196-2). Elevated reporting limits (RLs) are provided.

Method 300_48HR: The following sample was diluted due to the nature of the sample matrix: MW-16B (240-203196-2). Elevated reporting limits (RLs) are provided.

Method 300_48HR: The following sample was diluted due to the abundance of non-target analytes: MW-16A (240-203196-1). Elevated reporting limits (RLs) are provided.

Method 353.2_Pres: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 480-711015 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Job Narrative
240-203359-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/24/2024 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

General Chemistry
Method 300_48HR: The following samples were diluted due to the nature of the sample matrix: MW-5A (240-203359-2), MW-15 (240-203359-3), MW-5B (240-203359-5), MW-10A (240-203359-6), MW-10B (240-203359-7) and MW-18B (240-203359-8). Elevated reporting limits (RLs) are provided.

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

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP IPO **Req Due Date (mm/dd/yy):** _____ **Rush TAT:** Yes ___ No X

BP/ARC Facility No: BP Hyde Park **Lab Work Order Number:** _____

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd	Consultant/Contractor:	AECOM
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305	Consultant/Contractor Project No:	60481767.105.24.01H
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC	Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:		Consultant/Contractor PM:	James Kaczor
Lab Shipping Accnt:		Enfos Proposal No:		Phone:	716-923-1300
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To:	James.Kaczor@aecom.com
Other Info:	PO # 1643548	Stage:	Activity:	Invoice To:	BP/ARC ___ Contractor X
BP/ARC EBM:					
EBM Phone:					
EBM Email:					

Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor		Total Number of Containers	Unpreserved	HNO3	HCl	NaOH/Zn-acetate	H2SO4		8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	
	MW-13B	4/24/24	0805		X			3			3				3										
	MW-5A	4/24/24	0835		X			18	6	1	6	1	4		3	1	1	3	2	1	1	1	2	2	
	MW-15	4/24/24	0915		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	MW-14B	4/24/24	1020		X			3			3				3										
	MW-5B	4/24/24	1155		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	MW-10A	4/24/24	1205		X			18	6	1	6	1	4		3	1	1	3	2	1	1	1	2	2	
	MW-10B	4/24/24	1335		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	MW-18B	4/24/24	1340		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	RB-20240424	4/24/24	1500		X			18	6	1	6	1	4		3	1	1	3	2	1	1	1	2	2	1,4-D...ume (limited volume)
	TB-20240424	4/24/24	—		X			4			4				2			2							

Report Type & QC Level: Standard ___ Full Data Package ___

Note: If sam... Sample" in ... and initial ar... No out ...ption

240-203421 Chain of Custody

Sampler's Name:	S. Connelly / T. Urban / D. VanMaster	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	AECOM	S. Connelly / AECOM	4/24/24	1620	[illegible] Cleveb	04/24	2420
Shipment Method:	Dropoff at Eurofins Buffalo, NY	Ship Date:	[illegible] Cleveb	4/25/24	1604	J. MOROSKO	04/26/24	1000
Shipment Tracking No:						Temp 2.1 3.8 3.6 4.0		

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D : # 1 of 1

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP/ARC LaMP COC Rev. 6 01/01/2009

Cooler Received on 04/26/24 Opened on 04/26/24 J MOROSKO

FedEx 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used. (Bubble) Wrap Foam Plastic Bag None Other

COOLANT· (Wet Ice) Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt [X] See Multiple Cooler Form

IR GUN # 17 (CF TO 2 °C) Observed Cooler Temp ______ °C Corrected Cooler Temp. ______ °C

2 Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes) No	
Were the seals on the outside of the cooler(s) signed & dated?	(Yes) No NA	
Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)	
-Were tamper/custody seals intact and uncompromised?	(Yes) No NA	
3 Shippers' packing slip attached to the cooler(s)?	(Yes) No	
4 Did custody papers accompany the sample(s)?	(Yes) No	
5 Were the custody papers relinquished & signed in the appropriate place?	(Yes) No	
6 Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes) No	
7 Did all bottles arrive in good condition (Unbroken)?	(Yes) No	
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No	
9 For each sample, does the COC specify preservatives (Y)/N), # of containers (Y)/N), and sample type of grab/comp(Y/(N))?		
10 Were correct bottle(s) used for the test(s) indicated?	(Yes) No	
11 Sufficient quantity received to perform indicated analyses?	(Yes) No	
12 Are these work share samples and all listed on the COC?	(Yes) No	
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA	pH Strip Lot# HC439975
14. Were VOAs on the COC?	(Yes) No	
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes (No) NA	
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered	(Yes) No	
17 Was a LL Hg or Me Hg trip blank present?	Yes (No)	

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM ______ Date ______ by ______ via Verbal Voice Mail Other

Concerning ______

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by·

~~Sent 8~~ -received samples that were suppose
JM TO stay in Buffalo.
4.26 - logged all bottles received, did not log BOD or
nitrate/nitrite tot, per pm.

19 SAMPLE CONDITION

Sample(s) ______ were received after the recommended holding time had expired

Sample(s) ______ were received in a broken container

Sample(s) ______ were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) ______ were further preserved in the laboratory

Time preserved ______ Preservative(s) added/Lot number(s) ______

5/17/2024
5:31:59 PM

Job Narrative
240-203421-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/26/2024 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.6°C, 1.7°C, 3.0°C and 3.4°C.

Receipt Exceptions
The following sample(s) was received at the laboratory outside the required temperature criteria:

Received cooler out of temperature ,19.2 C, cooler was delayed by FedEx.Only water in cooler indicates ice melted.

The following samples were in the cooler out of temperature:

Samples : 2,6 & 9 containers k &L

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-611871 was outside the method criteria for the following analyte(s): 1,1-Dichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-612132 was outside the method criteria for the following analyte(s): Trichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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

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

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

PFAS
Method PFC_IDA: The following samples was received in 500 mL bottle: RB-20240424 (240-203421-9). The samples was transferred into new 250 mL bottle. After transferring into a new container, the sample was fortified with IDA then extracted.

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

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

General Chemistry
Method 300: The following sample(s) was received with less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-5B (240-203421-5), MW-10A (240-203421-6), MW-10B (240-203421-7), MW-18B (240-203421-8) and RB-20240424 (240-203421-9).

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

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Cleveland Job No.: 240-203421-1

SDG No.:

Lab Sample ID: CCVIS 240-611871/3 Calibration Date: 05/04/2024 11:04

Instrument ID: A3UX17 Calib Start Date: 02/05/2024 10:44

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 02/05/2024 13:50

Lab File ID: 182337.D Conc. Units: ng/uL Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3318	0.2397	0.1000	0.0181	0.0250	-27.7*	20.0
Chloromethane	Ave	0.3900	0.3848	0.1000	0.0247	0.0250	-1.3	20.0
Vinyl chloride	Ave	0.3084	0.2785	0.1000	0.0226	0.0250	-9.7	20.0
Butadiene	Ave	0.3657	0.3619		0.0247	0.0250	-1.0	20.0
Bromomethane	Lin1		0.0631	0.0500	0.0122	0.0250	-51.1*	20.0
Chloroethane	Ave	0.1886	0.1730	0.0500	0.0229	0.0250	-8.3	20.0
Trichlorofluoromethane	Ave	0.3873	0.3543	0.1000	0.0229	0.0250	-8.5	20.0
Dichlorofluoromethane	Ave	0.4780	0.4354		0.0228	0.0250	-8.9	20.0
Ethyl ether	Ave	0.2364	0.1890		0.0200	0.0250	-20.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.1571	0.1178	0.0500	0.0188	0.0250	-25.0*	20.0
Acrolein	Ave	0.0109	0.0072		0.0829	0.125	-33.7*	20.0
1,1-Dichloroethene	Ave	0.1660	0.1294	0.1000	0.0195	0.0250	-22.1*	20.0
Acetone	Lin1		0.1049	0.0100	0.0469	0.0500	-6.2	50.0
Iodomethane	Ave	0.2325	0.1675		0.0180	0.0250	-27.9*	20.0
Carbon disulfide	Lin1		0.3581	0.1000	0.0176	0.0250	-29.8*	20.0
3-Chloro-1-propene	Ave	0.1062	0.0897		0.0211	0.0250	-15.6	20.0
Methyl acetate	Ave	0.2748	0.3031	0.0500	0.0552	0.0500	10.3	50.0
Methylene Chloride	Ave	0.1869	0.1706	0.1000	0.0228	0.0250	-8.7	50.0
2-Methyl-2-propanol	Ave	0.0331	0.0213		0.161	0.250	-35.7*	20.0
Methyl tert-butyl ether	Ave	0.5929	0.4811	0.1000	0.0203	0.0250	-18.8	20.0
trans-1,2-Dichloroethene	Ave	0.1761	0.1654	0.1000	0.0235	0.0250	-6.1	20.0
Acrylonitrile	Ave	0.1294	0.1377		0.266	0.250	6.4	20.0
Hexane	Lin1		0.0319		0.0151	0.0250	-39.5*	20.0
1,1-Dichloroethane	Ave	0.4227	0.3879	0.2000	0.0229	0.0250	-8.2	20.0
Vinyl acetate	Ave	0.5323	0.4130		0.0194	0.0250	-22.4*	20.0
2,2-Dichloropropane	Ave	0.3387	0.2920		0.0216	0.0250	-13.8	20.0
cis-1,2-Dichloroethene	Ave	0.1990	0.1933	0.1000	0.0243	0.0250	-2.9	20.0
2-Butanone (MEK)	Ave	0.1880	0.1686	0.0100	0.0448	0.0500	-10.3	50.0
Tetrahydrofuran	Ave	0.1125	0.1100		0.0489	0.0500	-2.2	20.0
Chlorobromomethane	Ave	0.0942	0.0906		0.0240	0.0250	-3.8	20.0
Chloroform	Ave	0.3434	0.3367	0.2000	0.0245	0.0250	-2.0	20.0
Cyclohexane	Ave	0.4633	0.3802	0.1000	0.0205	0.0250	-17.9	20.0
1,1,1-Trichloroethane	Ave	0.3384	0.3023	0.1000	0.0223	0.0250	-10.7	20.0
Carbon tetrachloride	Ave	0.3210	0.2610	0.1000	0.0203	0.0250	-18.7	20.0
1,1-Dichloropropene	Ave	0.2816	0.2348		0.0208	0.0250	-16.6	20.0
Benzene	Ave	0.7619	0.7427	0.5000	0.0244	0.0250	-2.5	20.0
Isobutyl alcohol	Ave	0.0149	0.0125		0.523	0.625	-16.4	20.0
1,2-Dichloroethane	Ave	0.3733	0.3212	0.1000	0.0215	0.0250	-14.0	20.0
n-Heptane	Lin1		0.0333		0.0189	0.0250	-24.3*	20.0
Trichloroethene	Lin1		0.2039	0.1500	0.0250	0.0250	0.1	20.0

Appendix D

Laboratory Analytical Data Reports

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ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ann Marie Kropovitch
AECOM
50 Lakefront Boulevard
Suite 111
Buffalo, New York 14202

Generated 5/15/2024 11:46:27 AM Revision 1

JOB DESCRIPTION

BP Hyde Park

JOB NUMBER

240-203196-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

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Revision 1

Authorized for release by
Opal Johnson, Project Manager II
Opal.Johnson@et.eurofinsus.com
(330)966-9279

Table of Contents

Definitions/Glossary

Client: AECOM
Job ID: 240-203196-1
Project/Site: BP Hyde Park

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
b	Result Detected in the Unseeded Control blank (USB).
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job Narrative
240-203196-1

Revision I

Revision I
The narrative revised to correct the receipt exception.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/24/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C.

Receipt Exceptions
The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): MW-16A (240-203196-1) and MW-16B (240-203196-2). Sample MW-16A bottles were marked as MW-17A. Sample MW-16B bottles were marked as MW-17B. Samples were logged per COC

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

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

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

General Chemistry
Method 300.0_28D: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-16A (240-203196-1). Elevated reporting limits (RLs) are provided.

Method 300.0_28D: The following sample was diluted due to the nature of the sample matrix: MW-16B (240-203196-2). Elevated reporting limits (RLs) are provided.

Method 300_48HR: The following sample was diluted due to the nature of the sample matrix: MW-16B (240-203196-2). Elevated reporting limits (RLs) are provided.

Method 300_48HR: The following sample was diluted due to the abundance of non-target analytes: MW-16A (240-203196-1). Elevated reporting limits (RLs) are provided.

Method 353.2_Pres: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 480-711015 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

Method Summary

Client: AECOM
Job ID: 240-203196-1
Project/Site: BP Hyde Park

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
RSK-175	Dissolved Gases (GC)	RSK	EET CLE
6010D	Metals (ICP)	SW846	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET BUF
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET BUF
353.2	Nitrogen, Nitrite	EPA	EET BUF
410.4	COD	EPA	EET CLE
4500 S2 F-2000	Sulfide, Total	SM	EET CLE
5310C-2000	Total Organic Carbon/Persulfate - Ultrav	SM	EET CLE
SM 5210B	BOD, 5-Day	SM	EET BUF
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
5030C	Purge and Trap	SW846	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: AECOM
Job ID: 240-203196-1
Project/Site: BP Hyde Park

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-203196-1	MW-16A	Water	04/22/24 13:52	04/24/24 09:00
240-203196-2	MW-16B	Water	04/22/24 14:55	04/24/24 09:00
240-203196-3	MW-19B	Water	04/22/24 14:40	04/24/24 09:00
240-203196-4	MW-6	Water	04/22/24 16:05	04/24/24 09:00
240-203196-5	TB-20240422	Water	04/22/24 00:00	04/24/24 09:00

Detection Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Client Sample ID: MW-16A — Lab Sample ID: 240-203196-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	17		1.0	0.45	ug/L	1		8260D	Total/NA
Methane	200		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	1.1		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	82		1.0	0.12	ug/L	1		RSK-175	Total/NA
Iron	880		200	83	ug/L	1		6010D	Dissolved
Chloride	59		2.5	1.4	mg/L	5		300.0	Total/NA
Nitrate as N	0.42		0.25	0.13	mg/L	5		300.0	Total/NA
Sulfate	270		10	1.7	mg/L	5		300.0	Total/NA
Nitrate Nitrite as N	0.35		0.050	0.020	mg/L	1		353.2	Total/NA
Chemical Oxygen Demand	8.5	J	10	1.8	mg/L	1		410.4	Total/NA
Total Organic Carbon	4.6		1.0	0.44	mg/L	1		5310C-2000	Total/NA
Biochemical Oxygen Demand	2.1	b	2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW-16B — Lab Sample ID: 240-203196-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.4		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	6.0		1.0	0.45	ug/L	1		8260D	Total/NA
Methane	7700		10	1.7	ug/L	10		RSK-175	Total/NA
Ethane	0.82	J	1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	2.3		1.0	0.12	ug/L	1		RSK-175	Total/NA
Iron	230		200	83	ug/L	1		6010D	Dissolved
Chloride	99		2.5	1.4	mg/L	5		300.0	Total/NA
Sulfate	160		10	1.7	mg/L	5		300.0	Total/NA
Chemical Oxygen Demand	25		10	1.8	mg/L	1		410.4	Total/NA
Sulfide	4.2		1.0	0.27	mg/L	1		4500 S2 F-2000	Total/NA
Total Organic Carbon	5.5		1.0	0.44	mg/L	1		5310C-2000	Total/NA
Biochemical Oxygen Demand	3.0	b	2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW-19B — Lab Sample ID: 240-203196-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	21		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	4.4		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 240-203196-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	71		2.0	0.90	ug/L	2		8260D	Total/NA

Client Sample ID: TB-20240422 — Lab Sample ID: 240-203196-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	0.70	J	1.0	0.17	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Client Sample ID: MW-16A
Date Collected: 04/22/24 13:52
Date Received: 04/24/24 09:00

Lab Sample ID: 240-203196-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 10:10	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 10:10	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 10:10	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 10:10	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/02/24 10:10	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 10:10	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 10:10	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 10:10	1
Vinyl chloride	**17**		1.0	0.45	ug/L			05/02/24 10:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*78 - 122*		*05/02/24 10:10*	*1*
Dibromofluoromethane (Surr)	*112*		*73 - 120*		*05/02/24 10:10*	*1*
4-Bromofluorobenzene (Surr)	*93*		*56 - 136*		*05/02/24 10:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*133*		*62 - 137*		*05/02/24 10:10*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**200**		1.0	0.17	ug/L			04/25/24 20:05	1
Ethane	**1.1**		1.0	0.29	ug/L			04/25/24 20:05	1
Ethylene	**82**		1.0	0.12	ug/L			04/25/24 20:05	1
Propane	ND		1.0	0.38	ug/L			04/25/24 20:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*97*		*60 - 140*		*04/25/24 20:05*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**880**		200	83	ug/L		04/25/24 14:00	04/26/24 17:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**59**		2.5	1.4	mg/L			04/23/24 20:28	5
Nitrate as N (EPA 300.0)	**0.42**		0.25	0.13	mg/L			04/23/24 20:28	5
Nitrite as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/23/24 20:28	5
Sulfate (EPA 300.0)	**270**		10	1.7	mg/L			04/23/24 20:28	5
Nitrate Nitrite as N (EPA 353.2)	**0.35**		0.050	0.020	mg/L			05/07/24 12:10	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/23/24 21:47	1
Chemical Oxygen Demand (EPA 410.4)	**8.5**	**J**	10	1.8	mg/L			04/30/24 13:46	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**4.6**		1.0	0.44	mg/L			05/01/24 17:58	1
Biochemical Oxygen Demand (SM 5210B)	**2.1**	**b**	2.0	2.0	mg/L			04/24/24 11:27	1

Client Sample ID: MW-16B

Date Collected: 04/22/24 14:55
Date Received: 04/24/24 09:00

Lab Sample ID: 240-203196-2

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 10:34	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 10:34	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 10:34	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 10:34	1
cis-1,2-Dichloroethene	**3.4**		1.0	0.46	ug/L			05/02/24 10:34	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 10:34	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 10:34	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 10:34	1
Vinyl chloride	**6.0**		1.0	0.45	ug/L			05/02/24 10:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*78 - 122*		*05/02/24 10:34*	*1*
Dibromofluoromethane (Surr)	*113*		*73 - 120*		*05/02/24 10:34*	*1*
4-Bromofluorobenzene (Surr)	*95*		*56 - 136*		*05/02/24 10:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*133*		*62 - 137*		*05/02/24 10:34*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**7700**		10	1.7	ug/L			04/26/24 14:43	10
Ethane	**0.82**	**J**	1.0	0.29	ug/L			04/25/24 20:22	1
Ethylene	**2.3**		1.0	0.12	ug/L			04/25/24 20:22	1
Propane	ND		1.0	0.38	ug/L			04/25/24 20:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*97*		*60 - 140*		*04/25/24 20:22*	*1*
1,1,1-Trifluoroethane	*100*		*60 - 140*		*04/26/24 14:43*	*10*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**230**		200	83	ug/L		04/25/24 14:00	04/26/24 17:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**99**		2.5	1.4	mg/L			04/23/24 20:46	5
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/23/24 20:46	5
Nitrite as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/23/24 20:46	5
Sulfate (EPA 300.0)	**160**		10	1.7	mg/L			04/23/24 20:46	5
Nitrate Nitrite as N (EPA 353.2)	ND	F1	0.050	0.020	mg/L			05/07/24 12:16	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/23/24 21:49	1
Chemical Oxygen Demand (EPA 410.4)	**25**		10	1.8	mg/L			04/30/24 13:46	1
Sulfide (SM 4500 S2 F-2000)	**4.2**		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**5.5**		1.0	0.44	mg/L			05/01/24 18:22	1
Biochemical Oxygen Demand (SM 5210B)	**3.0**	**b**	2.0	2.0	mg/L			04/24/24 11:27	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Client Sample ID: MW-19B
Date Collected: 04/22/24 14:40
Date Received: 04/24/24 09:00

Lab Sample ID: 240-203196-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 10:58	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 10:58	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 10:58	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 10:58	1
cis-1,2-Dichloroethene	**21**		1.0	0.46	ug/L			05/02/24 10:58	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 10:58	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 10:58	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 10:58	1
Vinyl chloride	**4.4**		1.0	0.45	ug/L			05/02/24 10:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*78 - 122*		*05/02/24 10:58*	*1*
Dibromofluoromethane (Surr)	*112*		*73 - 120*		*05/02/24 10:58*	*1*
4-Bromofluorobenzene (Surr)	*92*		*56 - 136*		*05/02/24 10:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*133*		*62 - 137*		*05/02/24 10:58*	*1*

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Client Sample ID: MW-6
Date Collected: 04/22/24 16:05
Date Received: 04/24/24 09:00

Lab Sample ID: 240-203196-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.0	0.96	ug/L			05/02/24 11:22	2
1,1-Dichloroethane	ND		2.0	0.94	ug/L			05/02/24 11:22	2
1,1-Dichloroethene	ND		2.0	0.98	ug/L			05/02/24 11:22	2
Chloroethane	ND		2.0	1.7	ug/L			05/02/24 11:22	2
cis-1,2-Dichloroethene	ND		2.0	0.92	ug/L			05/02/24 11:22	2
Tetrachloroethene	ND		2.0	0.88	ug/L			05/02/24 11:22	2
trans-1,2-Dichloroethene	ND		2.0	1.0	ug/L			05/02/24 11:22	2
Trichloroethene	ND		2.0	0.88	ug/L			05/02/24 11:22	2
Vinyl chloride	**71**		2.0	0.90	ug/L			05/02/24 11:22	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*78 - 122*		*05/02/24 11:22*	*2*
Dibromofluoromethane (Surr)	*114*		*73 - 120*		*05/02/24 11:22*	*2*
4-Bromofluorobenzene (Surr)	*95*		*56 - 136*		*05/02/24 11:22*	*2*
1,2-Dichloroethane-d4 (Surr)	*136*		*62 - 137*		*05/02/24 11:22*	*2*

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Client Sample ID: TB-20240422
Date Collected: 04/22/24 00:00
Date Received: 04/24/24 09:00

Lab Sample ID: 240-203196-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 08:58	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 08:58	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 08:58	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 08:58	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/02/24 08:58	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 08:58	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 08:58	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 08:58	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/02/24 08:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*78 - 122*		*05/02/24 08:58*	*1*
Dibromofluoromethane (Surr)	*114*		*73 - 120*		*05/02/24 08:58*	*1*
4-Bromofluorobenzene (Surr)	*93*		*56 - 136*		*05/02/24 08:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*134*		*62 - 137*		*05/02/24 08:58*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.70**	**J**	1.0	0.17	ug/L			04/25/24 20:39	1
Ethane	ND		1.0	0.29	ug/L			04/25/24 20:39	1
Ethylene	ND		1.0	0.12	ug/L			04/25/24 20:39	1
Propane	ND		1.0	0.38	ug/L			04/25/24 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*101*		*60 - 140*		*04/25/24 20:39*	*1*

Surrogate Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	DCA
Lab Sample ID	Client Sample ID	(78-122)	(73-120)	(56-136)	(62-137)
240-203196-1	MW-16A	105	112	93	133
240-203196-2	MW-16B	109	113	95	133
240-203196-3	MW-19B	105	112	92	133
240-203196-4	MW-6	107	114	95	136
240-203196-5	TB-20240422	106	114	93	134
LCS 240-611556/4	Lab Control Sample	113	102	101	120
MB 240-611556/7	Method Blank	108	109	92	128

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		TFE1
Lab Sample ID	Client Sample ID	(60-140)
240-203196-1	MW-16A	97
240-203196-2	MW-16B	97
240-203196-2	MW-16B	100
240-203196-5	TB-20240422	101
LCS 240-610836/4	Lab Control Sample	101
LCS 240-610962/4	Lab Control Sample	101
MB 240-610836/3	Method Blank	104
MB 240-610962/3	Method Blank	104

Surrogate Legend

TFE = 1,1,1-Trifluoroethane

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-611556/7
Matrix: Water
Analysis Batch: 611556

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 08:34	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 08:34	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 08:34	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 08:34	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/02/24 08:34	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 08:34	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 08:34	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 08:34	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/02/24 08:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*78 - 122*		*05/02/24 08:34*	*1*
Dibromofluoromethane (Surr)	*109*		*73 - 120*		*05/02/24 08:34*	*1*
4-Bromofluorobenzene (Surr)	*92*		*56 - 136*		*05/02/24 08:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*128*		*62 - 137*		*05/02/24 08:34*	*1*

Lab Sample ID: LCS 240-611556/4
Matrix: Water
Analysis Batch: 611556

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	23.7		ug/L		95	64 - 131
1,1-Dichloroethane	25.0	27.6		ug/L		110	72 - 127
1,1-Dichloroethene	25.0	23.2		ug/L		93	63 - 134
Chloroethane	12.5	9.23		ug/L		74	38 - 152
cis-1,2-Dichloroethene	25.0	22.7		ug/L		91	77 - 123
Tetrachloroethene	25.0	22.1		ug/L		88	76 - 123
trans-1,2-Dichloroethene	25.0	22.9		ug/L		92	75 - 124
Trichloroethene	25.0	22.7		ug/L		91	70 - 122
Vinyl chloride	12.5	8.12		ug/L		65	60 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*113*		*78 - 122*
Dibromofluoromethane (Surr)	*102*		*73 - 120*
4-Bromofluorobenzene (Surr)	*101*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*120*		*62 - 137*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 240-610836/3
Matrix: Water
Analysis Batch: 610836

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			04/25/24 14:08	1
Ethane	ND		1.0	0.29	ug/L			04/25/24 14:08	1
Ethylene	ND		1.0	0.12	ug/L			04/25/24 14:08	1
Propane	ND		1.0	0.38	ug/L			04/25/24 14:08	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: MB 240-610836/3
Matrix: Water
Analysis Batch: 610836

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,1-Trifluoroethane	104		60 - 140		04/25/24 14:08	1

Lab Sample ID: LCS 240-610836/4
Matrix: Water
Analysis Batch: 610836

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	297		ug/L		105	80 - 120
Ethane	537	540		ug/L		101	80 - 120
Ethylene	506	508		ug/L		100	80 - 120
Propane	794	782		ug/L		98	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,1-Trifluoroethane	101		60 - 140

Lab Sample ID: MB 240-610962/3
Matrix: Water
Analysis Batch: 610962

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			04/26/24 13:01	1
Ethane	ND		1.0	0.29	ug/L			04/26/24 13:01	1
Ethylene	ND		1.0	0.12	ug/L			04/26/24 13:01	1
Propane	ND		1.0	0.38	ug/L			04/26/24 13:01	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,1-Trifluoroethane	104		60 - 140		04/26/24 13:01	1

Lab Sample ID: LCS 240-610962/4
Matrix: Water
Analysis Batch: 610962

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	295		ug/L		104	80 - 120
Ethane	537	541		ug/L		101	80 - 120
Ethylene	506	510		ug/L		101	80 - 120
Propane	794	783		ug/L		99	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,1-Trifluoroethane	101		60 - 140

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-610810/1-A
Matrix: Water
Analysis Batch: 611057

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 610810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/25/24 14:00	04/26/24 15:11	1

Lab Sample ID: LCS 240-610810/2-A
Matrix: Water
Analysis Batch: 611057

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 610810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	9680		ug/L		97	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-709025/4
Matrix: Water
Analysis Batch: 709025

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.28	mg/L			04/23/24 15:58	1
Sulfate	ND		2.0	0.35	mg/L			04/23/24 15:58	1

Lab Sample ID: LCS 480-709025/5
Matrix: Water
Analysis Batch: 709025

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.1	49.1		mg/L		98	90 - 110
Sulfate	50.1	50.1		mg/L		100	90 - 110

Lab Sample ID: MB 480-709028/4
Matrix: Water
Analysis Batch: 709028

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.025	mg/L			04/23/24 15:58	1
Nitrite as N	ND		0.050	0.025	mg/L			04/23/24 15:58	1

Lab Sample ID: LCS 480-709028/5
Matrix: Water
Analysis Batch: 709028

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.01	5.21		mg/L		104	90 - 110

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-709093/27
Matrix: Water
Analysis Batch: 709093

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.050	0.020	mg/L			04/23/24 21:36	1

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: MB 480-709093/3
Matrix: Water
Analysis Batch: 709093

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.050	0.020	mg/L			04/23/24 21:03	1

Lab Sample ID: LCS 480-709093/28
Matrix: Water
Analysis Batch: 709093

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	1.50	1.53		mg/L		102	90 - 110

Lab Sample ID: LCS 480-709093/4
Matrix: Water
Analysis Batch: 709093

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	1.50	1.54		mg/L		103	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 480-711015/28
Matrix: Water
Analysis Batch: 711015

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/07/24 11:41	1

Lab Sample ID: MB 480-711015/52
Matrix: Water
Analysis Batch: 711015

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/07/24 12:14	1

Lab Sample ID: LCS 480-711015/29
Matrix: Water
Analysis Batch: 711015

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.50	1.50		mg/L		100	90 - 110

Lab Sample ID: LCS 480-711015/53
Matrix: Water
Analysis Batch: 711015

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.50	1.49		mg/L		99	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 240-203196-2 MS
Matrix: Water
Analysis Batch: 711015

Client Sample ID: MW-16B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	ND	F1	1.00	1.38	F1	mg/L		138	90 - 110

Lab Sample ID: 240-203196-2 DU
Matrix: Water
Analysis Batch: 711015

Client Sample ID: MW-16B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate Nitrite as N	ND	F1	ND		mg/L		NC	20

Method: 410.4 - COD

Lab Sample ID: MB 240-611359/9
Matrix: Water
Analysis Batch: 611359

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	1.8	mg/L			04/30/24 13:46	1

Lab Sample ID: LCS 240-611359/10
Matrix: Water
Analysis Batch: 611359

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	41.2	41.2		mg/L		100	90 - 110

Method: 4500 S2 F-2000 - Sulfide, Total

Lab Sample ID: MB 240-611098/1
Matrix: Water
Analysis Batch: 611098

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.27	mg/L			04/29/24 08:06	1

Lab Sample ID: LCS 240-611098/2
Matrix: Water
Analysis Batch: 611098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	21.9	22.0		mg/L		101	80 - 120

Method: 5310C-2000 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 240-611693/5
Matrix: Water
Analysis Batch: 611693

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.44	mg/L			05/01/24 15:58	1

Method: 5310C-2000 - Total Organic Carbon/Persulfate - Ultrav (Continued)

Lab Sample ID: LCS 240-611693/6
Matrix: Water
Analysis Batch: 611693

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			16.3	15.7		mg/L		97	85 - 115		

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 480-709239/1
Matrix: Water
Analysis Batch: 709239

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			04/24/24 11:27	1

Lab Sample ID: LCS 480-709239/2
Matrix: Water
Analysis Batch: 709239

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Biochemical Oxygen Demand			196	206		mg/L		105	85 - 115		

QC Association Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

GC/MS VOA

Analysis Batch: 611556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	8260D	
240-203196-2	MW-16B	Total/NA	Water	8260D	
240-203196-3	MW-19B	Total/NA	Water	8260D	
240-203196-4	MW-6	Total/NA	Water	8260D	
240-203196-5	TB-20240422	Total/NA	Water	8260D	
MB 240-611556/7	Method Blank	Total/NA	Water	8260D	
LCS 240-611556/4	Lab Control Sample	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 610836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	RSK-175	
240-203196-2	MW-16B	Total/NA	Water	RSK-175	
240-203196-5	TB-20240422	Total/NA	Water	RSK-175	
MB 240-610836/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-610836/4	Lab Control Sample	Total/NA	Water	RSK-175	

Analysis Batch: 610962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-2	MW-16B	Total/NA	Water	RSK-175	
MB 240-610962/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-610962/4	Lab Control Sample	Total/NA	Water	RSK-175	

Metals

Prep Batch: 610810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Dissolved	Water	3005A	
240-203196-2	MW-16B	Dissolved	Water	3005A	
MB 240-610810/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-610810/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 611057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Dissolved	Water	6010D	610810
240-203196-2	MW-16B	Dissolved	Water	6010D	610810
MB 240-610810/1-A	Method Blank	Total Recoverable	Water	6010D	610810
LCS 240-610810/2-A	Lab Control Sample	Total Recoverable	Water	6010D	610810

General Chemistry

Analysis Batch: 611098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	4500 S2 F-2000	
240-203196-2	MW-16B	Total/NA	Water	4500 S2 F-2000	
MB 240-611098/1	Method Blank	Total/NA	Water	4500 S2 F-2000	
LCS 240-611098/2	Lab Control Sample	Total/NA	Water	4500 S2 F-2000	

Analysis Batch: 611359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	410.4	

General Chemistry (Continued)

Analysis Batch: 611359 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-2	MW-16B	Total/NA	Water	410.4	
MB 240-611359/9	Method Blank	Total/NA	Water	410.4	
LCS 240-611359/10	Lab Control Sample	Total/NA	Water	410.4	

Analysis Batch: 611693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	5310C-2000	
240-203196-2	MW-16B	Total/NA	Water	5310C-2000	
MB 240-611693/5	Method Blank	Total/NA	Water	5310C-2000	
LCS 240-611693/6	Lab Control Sample	Total/NA	Water	5310C-2000	

Analysis Batch: 709025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	300.0	
240-203196-2	MW-16B	Total/NA	Water	300.0	
MB 480-709025/4	Method Blank	Total/NA	Water	300.0	
LCS 480-709025/5	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 709028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	300.0	
240-203196-2	MW-16B	Total/NA	Water	300.0	
MB 480-709028/4	Method Blank	Total/NA	Water	300.0	
LCS 480-709028/5	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 709093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	353.2	
240-203196-2	MW-16B	Total/NA	Water	353.2	
MB 480-709093/27	Method Blank	Total/NA	Water	353.2	
MB 480-709093/3	Method Blank	Total/NA	Water	353.2	
LCS 480-709093/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-709093/4	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 709239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	SM 5210B	
240-203196-2	MW-16B	Total/NA	Water	SM 5210B	
USB 480-709239/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 480-709239/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 711015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203196-1	MW-16A	Total/NA	Water	353.2	
240-203196-2	MW-16B	Total/NA	Water	353.2	
MB 480-711015/28	Method Blank	Total/NA	Water	353.2	
MB 480-711015/52	Method Blank	Total/NA	Water	353.2	
LCS 480-711015/29	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-711015/53	Lab Control Sample	Total/NA	Water	353.2	
240-203196-2 MS	MW-16B	Total/NA	Water	353.2	
240-203196-2 DU	MW-16B	Total/NA	Water	353.2	

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Client Sample ID: MW-16A

Lab Sample ID: 240-203196-1

Date Collected: 04/22/24 13:52

Matrix: Water

Date Received: 04/24/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611556	CDG	EET CLE	05/02/24 10:10
Total/NA	Analysis	RSK-175		1	610836	JBN	EET CLE	04/25/24 20:05
Dissolved	Prep	3005A			610810	BN	EET CLE	04/25/24 14:00
Dissolved	Analysis	6010D		1	611057	RKT	EET CLE	04/26/24 17:14
Total/NA	Analysis	300.0		5	709025	AF	EET BUF	04/23/24 20:28
Total/NA	Analysis	300.0		5	709028	AF	EET BUF	04/23/24 20:28
Total/NA	Analysis	353.2		1	709093	KB	EET BUF	04/23/24 21:47
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:10
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:46
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611693	QUY8	EET CLE	05/01/24 17:58
Total/NA	Analysis	SM 5210B		1	709239	CG	EET BUF	04/24/24 11:27

Client Sample ID: MW-16B

Lab Sample ID: 240-203196-2

Date Collected: 04/22/24 14:55

Matrix: Water

Date Received: 04/24/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611556	CDG	EET CLE	05/02/24 10:34
Total/NA	Analysis	RSK-175		1	610836	JBN	EET CLE	04/25/24 20:22
Total/NA	Analysis	RSK-175		10	610962	JBN	EET CLE	04/26/24 14:43
Dissolved	Prep	3005A			610810	BN	EET CLE	04/25/24 14:00
Dissolved	Analysis	6010D		1	611057	RKT	EET CLE	04/26/24 17:18
Total/NA	Analysis	300.0		5	709025	AF	EET BUF	04/23/24 20:46
Total/NA	Analysis	300.0		5	709028	AF	EET BUF	04/23/24 20:46
Total/NA	Analysis	353.2		1	709093	KB	EET BUF	04/23/24 21:49
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:16
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:46
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611693	QUY8	EET CLE	05/01/24 18:22
Total/NA	Analysis	SM 5210B		1	709239	CG	EET BUF	04/24/24 11:27

Client Sample ID: MW-19B

Lab Sample ID: 240-203196-3

Date Collected: 04/22/24 14:40

Matrix: Water

Date Received: 04/24/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611556	CDG	EET CLE	05/02/24 10:58

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203196-1

Client Sample ID: MW-6

Lab Sample ID: 240-203196-4

Date Collected: 04/22/24 16:05

Matrix: Water

Date Received: 04/24/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		2	611556	CDG	EET CLE	05/02/24 11:22

Client Sample ID: TB-20240422

Lab Sample ID: 240-203196-5

Date Collected: 04/22/24 00:00

Matrix: Water

Date Received: 04/24/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611556	CDG	EET CLE	05/02/24 08:58
Total/NA	Analysis	RSK-175		1	610836	JBN	EET CLE	04/25/24 20:39

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: AECOM
Job ID: 240-203196-1
Project/Site: BP Hyde Park

Laboratory: Eurofins Cleveland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10975	04-02-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
5310C-2000		Water	Total Organic Carbon
RSK-175		Water	Ethane
RSK-175		Water	Ethylene
RSK-175		Water	Methane
RSK-175		Water	Propane

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-23 *
Connecticut	State	PH-0807	03-31-25
Florida	NELAP	E87672	06-30-23 *
Georgia	State	10026 (NY)	03-31-25
Georgia	State Program	N/A	03-31-09 *
Illinois	NELAP	200003	09-30-24
Iowa	State	374	03-01-25
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	02-01-25
Kentucky (UST)	State	108092	04-01-24 *
Kentucky (WW)	State	KY90029	12-31-24
Louisiana	NELAP	02031	06-30-23 *
Louisiana (All)	NELAP	02031	06-30-23 *
Maine	State	NY00044	12-04-24
Maryland	State	294	06-30-24
Massachusetts	State	M-NY044	07-01-24
Michigan	State	9937	03-31-25
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-24
New Jersey	NELAP	NY455	06-30-24
New York	NELAP	10026	03-31-25
Pennsylvania	NELAP	68-00281	08-31-24
Rhode Island	State	LAO00378	12-30-24
Texas	NELAP	T104704412-18-10	07-31-23 *
Virginia	NELAP	460185	09-14-24
Washington	State	C784	02-10-25
Wisconsin	State	998310390	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Laboratory Management Program LaMP Chain of Custody Record

4.5/2.7

Page 1 of 1

BP/ARC Project Name: BP IPO | **Req Due Date (mm/dd/yy):** | **Rush TAT:** Yes ___ No X

BP/ARC Facility No: BP Hyde Park | **Lab Work Order Number:**

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd	Consultant/Contractor:	AECOM
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305	Consultant/Contractor Project No:	60481767.105.24.01H
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC	Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:		Consultant/Contractor PM:	James Kaczor
Lab Shipping Accnt:		Enfos Proposal No:		Phone:	716-923-1300
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To:	James.Kaczor@aecom.com
Other Info:	PO # 1643548	Stage:	Activity:	Invoice To:	BP/ARC ___ Contractor X

BP/ARC EBM:

EBM Phone:

EBM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4	Requested Analyses: 8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane
	MW-16A	4/22/24	1352		X		14	2	1	6	1	4	3	1	1	3	3	1	1	1		
	MW-16B	4/22/24	1455		X		14	2	1	6	1	4	3	1	1	3	3	1	1	1		
	MW-19B	4/22/24	1440		X		3			3			3									
	MW-6	4/22/24	1605		X		3			3			3									
	TB-20240422	4/22/24	—		X		4			4			2			2						

240-203196 Chain of Custody

Report Type & QC Level: Standard ___ Full Data Package ___

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name:		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	AECOM	[signature] / Aecom	4/22/24	1705	[signature] / ETA	4/22/24	1705
Shipment Method:	Dropoff at Eurofins Buffalo, NY	[signature] / Invoid	4/23/24	1660	[signature]	4/24/24	900
Shipment Tracking No:	Ship Date:						

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: Si ϕ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

#1 ICE

BP/ARC LaMP COC Rev. 6 01/01/2009

Eurofins – Cleveland Sample Receipt Form/Narrative Login # 263194
Barberton Facility

Client LaMP Site Name

Cooler Received on 4-24-24 Opened on 4-24-24

Cooler unpacked by: Danny Boyle

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 6 Foam Box Client Cooler Box Other

Packing material used Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 17 (CF 0.+2 °C) Observed Cooler Temp 2.5 °C Corrected Cooler Temp 2.7 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3 Shippers' packing slip attached to the cooler(s)?	Yes	No
4 Did custody papers accompany the sample(s)?	Yes	No
5 Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6 Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7 Did all bottles arrive in good condition (Unbroken)?	Yes	No
8 Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9 For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?		
10 Were correct bottle(s) used for the test(s) indicated?	Yes	No
11 Sufficient quantity received to perform indicated analyses?	Yes	No
12 Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory		
13 Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC439975
14 Were VOAs on the COC?	Yes	No
15 Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No NA
16 Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered	Yes	No
17 Was a LL Hg or Me Hg trip blank present?	Yes	No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18 CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by

Sample MW-16A - bottles marked - MW-17A
Sample MW-16B - bottles marked - MW-17B
Logged Per COC.

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired
Sample(s) were received in a broken container
Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory
Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation Date/Time VOAs Frozen

4/24/2024

Login Container Summary Report

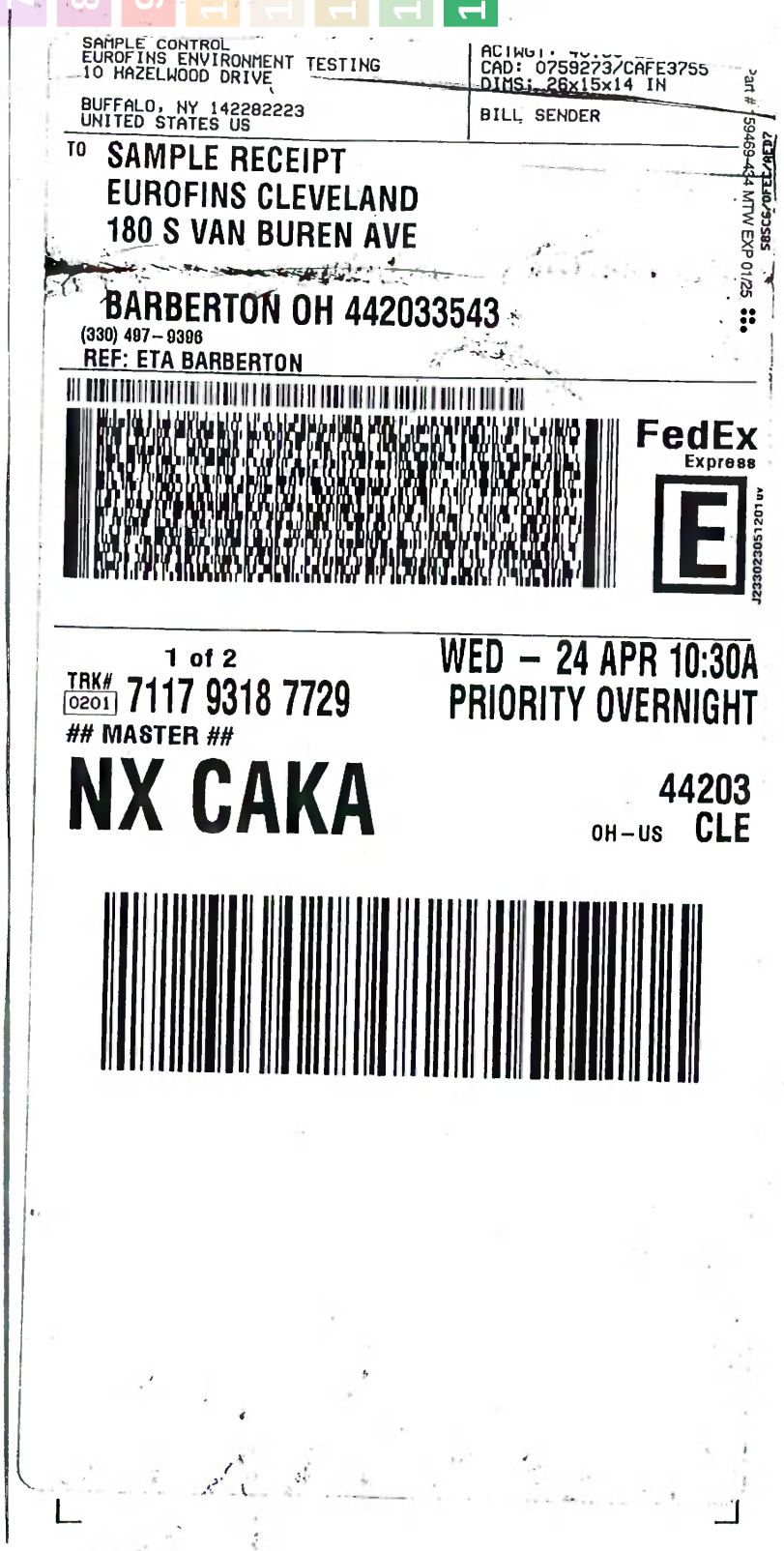
240-203196

5/15/2024 (Rev. 1)

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
MW-16A	240 203196-A-1	Plastic 1 liter - unpreserved				
MW 16A	240 203196-C-1	Voa Vial 40ml Hydrochloric Acid				
MW-16A	240-203196 D-1	Voa Vial 40ml - Hydrochloric Acid				
MW-16A	240-203196 E-1	Voa Vial 40ml - Hydrochloric Acid				
MW 16A	240-203196-F-1	Voa Vial 40ml - Hydrochloric Acid				
MW-16A	240-203196-G-1	Voa Vial 40ml Hydrochloric Acid				
MW 16A	240-203196-H-1	Voa Vial 40ml - Hydrochloric Acid				
MW-16A	240-203196 I 1	Voa Vial 40ml - with Sulfuric Acid				
MW 16A	240-203196-J-1	Voa Vial 40ml - with Sulfuric Acid				
MW-16A	240-203196-K 1	Voa Vial 40ml - with Sulfuric Acid				
MW 16A	240-203196-L-1	Plastic 60 mL - unpreserved				
MW-16A	240-203196-M-1	Plastic 250ml - with Sulfuric Acid	<9			
MW 16A	240-203196-N-1	Plastic 250ml - with Zinc Acetate & NaOH	>9			
MW-16A	240-203196-O-1	Plastic 500ml - with Nitric Acid	<2			
MW-16B	240-203196-A 2	Plastic 1 liter - unpreserved				
MW-16B	240-203196-C-2	Voa Vial 40ml - Hydrochloric Acid				
MW-16B	240-203196-D-2	Voa Vial 40ml - Hydrochloric Acid				
MW 16B	240 203196-E-2	Voa Vial 40ml - Hydrochloric Acid				
MW-16B	240-203196-F-2	Voa Vial 40ml - Hydrochloric Acid				
MW 16B	240-203196-G-2	Voa Vial 40ml Hydrochloric Acid				
MW-16B	240-203196-H-2	Voa Vial 40ml - Hydrochloric Acid				
MW-16B	240-203196-I-2	Voa Vial 40ml - with Sulfuric Acid				
MW-16B	240-203196-J-2	Voa Vial 40ml - with Sulfuric Acid				
MW 16B	240-203196-K 2	Voa Vial 40ml - with Sulfuric Acid				
MW-16B	240-203196-L-2	Plastic 60 mL - unpreserved				
MW-16B	240 203196 M-2	Plastic 250ml - with Sulfuric Acid	<9			
MW-16B	240-203196-N-2	Plastic 250ml - with Zinc Acetate & NaOH	>9			
MW-16B	240-203196-O-2	Plastic 500ml with Nitric Acid	<2			
MW 19B	240-203196-A-3	Voa Vial 40ml - Hydrochloric Acid				
MW 19B	240-203196-B-3	Voa Vial 40ml - Hydrochloric Acid				
MW-19B	240-203196-C-3	Voa Vial 40ml - Hydrochloric Acid				
MW-6	240-203196-A-4	Voa Vial 40ml - Hydrochloric Acid				
MW-6	240-203196-B-4	Voa Vial 40ml Hydrochloric Acid				
MW-6	240-203196-C-4	Voa Vial 40ml - Hydrochloric Acid				
TB-20240422	240-203196 A-5	Voa Vial 40ml - Hydrochloric Acid				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
TB-20240422	240-203196-B-5	Voa Vial 40ml - Hydrochloric Acid				
TB-20240422	240-203196-C-5	Voa Vial 40ml - Hydrochloric Acid				
TB-20240422	240-203196-D-5	Voa Vial 40ml - Hydrochloric Acid				



SAMPLE CONTROL
EUROFINS ENVIRONMENT TESTING
10 HAZELWOOD DRIVE

BUFFALO, NY 142282223
UNITED STATES US

ACTWGT: 40.00 LB
CAD: 0759273/CAFE3755
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIPT
EUROFINS CLEVELAND
180 S VAN BUREN AVE

BARBERTON OH 442033543
(330) 497-9396
REF: ETA BARBERTON

Part # 159469-434 MTW EXP 01/25

FedEx Express

1 of 2

TRK# 0201 7117 9318 7729

MASTER

WED - 24 APR 10:30A
PRIORITY OVERNIGHT

NX CAKA

44203
OH-US CLE

240-203196 Waybill

Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1

BP/ARC Project Name: BP IPO
BP/ARC Facility No: BP Hyde Park
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:	
Lab Shipping Accnt:		Enfos Proposal No:	
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___
Other Info:	PO # 1643548	Stage:	Activity:
BP/ARC EBM:			
EBM Phone:			
EBM Email:			

Consultant/Contractor:	AECOM
Consultant/Contractor Project No:	60481767.105.24.01H
Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202
Consultant/Contractor PM:	James Kaczor
Phone:	716-923-1300
Email EDD To:	James.Kaczor@aecom.com
Invoice To:	BP/ARC ___ Contractor X

Report Type & QC Level
Standard ___
Full Data Package ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Water / Liquid	Air / Vapor		No. Containers / Preservative: Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4		Requested Analyses: 8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	Comments
	MW-16A	4/22/24	1352		X			14	2	1	6	1	4		3	1	1	3	3	1	1	1			
	MW-16B	4/22/24	1455		X			14	2	1	6	1	4		3	1	1	3	3	1	1	1			
	MW-19B	4/22/24	1440		X			3			3				3										
	MW-6	4/22/24	1605		X			3			3				3										
	TB-20240422	4/22/24	—		X			4			4				2			2							

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

240-203196 Chain of Custody

Sampler's Name:		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: AECOM		[signature] / Aecom	4/22/24	1705	[signature] / ETA	4/22/24	1705
Shipment Method: Dropoff at Eurofins Buffalo, NY	Ship Date:						
Shipment Tracking No:							

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 5.0 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

#1 ICE

BP/ARC LaMP COC Rev. 6 01/01/2009

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ann Marie Kropovitch
AECOM
50 Lakefront Boulevard
Suite 111
Buffalo, New York 14202

Generated 5/7/2024 10:23:01 PM

JOB DESCRIPTION

BP Hyde Park

JOB NUMBER

240-203303-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

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Authorized for release by
Opal Johnson, Project Manager II
Opal.Johnson@et.eurofinsus.com
(330)966-9279

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
240-203303-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/23/2024 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 8 coolers at receipt time were 1.7°C, 2.8°C, 2.9°C, 3.2°C, 3.2°C, 3.9°C, 4.6°C and 4.8°C.

Receipt Exceptions
The following sample(s) was received at the laboratory outside the required temperature criteria:

Received cooler out of temperature; 19.2 C ,Coolers were delayed by FedEx. Only water in cooler indicates ice has melted.

The Following samples were in the cooler out of temperature:
Samples : 1-4 containers L & M
4 MS Container L
4 MSD container MSD
5 container L &M

GC/MS VOA
Method 8260D: The matrix spike/matrix spike duplicate (MS/MSD) for samples MW-7A (240-203303-1), MW-17A (240-203303-2), MW-18A (240-203303-5) and TB-20240423 (240-203303-6) was not reported, because the MS/MSD parent samples were not reported.

Method 8260D: The surrogate recovery for the continuing calibration verification (CCV) standard was outside the CCV control limit (20%), but it was within the sample recovery control limit, so no corrective action was needed.

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

GC/MS Semi VOA
Method 8270D_SIM_MS_ID: The breakdown of 4,4'-DDT in the tuning evaluation exceeded 20%. Breakdown is not a criteria of the method but rather an internal check performed by the laboratory to evaluate the peak shape of 1,4-Dioxane and 1,4-Dioxane-d8. No adverse performance was observed and QC recoveries were in control. The data have been reported.

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

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

PFAS
Method PFC_IDA: The following samples in preparation batch 320-758271 were observed to have floating particulates present in the sample bottle. MW-7A (240-203303-1), MW-17A (240-203303-2) and FD-20240423 (240-203303-3)

Method PFC_IDA: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: MW-7A (240-203303-1).

Job ID: 240-203303-1 (Continued) Eurofins Cleveland

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

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

General Chemistry
Method 300_48HR: The following samples were diluted due to the nature of the sample matrix: MW-7A (240-203303-1), MW-17A (240-203303-2), FD-20240423 (240-203303-3), MW-12B (240-203303-4) and MW-18A (240-203303-5). Elevated reporting limits (RLs) are provided.

Method 300_48HR: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: FD-20240423 (240-203303-3).

Method 353.2_Pres: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 480-711015 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 5210B: The results increased with increasing dilutions for the following samples: FD-20240423 (240-203303-3). This indicates a potentially toxic substance is being diluted out. The concentration may be biased low.

Method 5210B: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: FD-20240423 (240-203303-3).

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

Method Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
8270D SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET BUF
RSK-175	Dissolved Gases (GC)	RSK	EET CLE
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
6010D	Metals (ICP)	SW846	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET BUF
300.0	Anions, Ion Chromatography	EPA	EET CLE
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET BUF
353.2	Nitrogen, Nitrite	EPA	EET BUF
4500 S2 F-2000	Sulfide, Total	SM	EET CLE
5310C-2000	Total Organic Carbon/Persulfate - Ultrav	SM	EET CLE
SM 5210B	BOD, 5-Day	SM	EET BUF
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC
5030C	Purge and Trap	SW846	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-203303-1	MW-7A	Water	04/23/24 09:15	04/23/24 16:30
240-203303-2	MW-17A	Water	04/23/24 11:05	04/23/24 16:30
240-203303-3	FD-20240423	Water	04/23/24 00:00	04/23/24 16:30
240-203303-4	MW-12B	Water	04/23/24 13:30	04/23/24 16:30
240-203303-5	MW-18A	Water	04/23/24 13:55	04/23/24 16:30
240-203303-6	TB-20240423	Water	04/23/24 00:00	04/23/24 16:30

Detection Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Client Sample ID: MW-7A — Lab Sample ID: 240-203303-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	43		20	9.4	ug/L	20		8260D	Total/NA
cis-1,2-Dichloroethene	740		20	9.2	ug/L	20		8260D	Total/NA
Trichloroethene	210		20	8.8	ug/L	20		8260D	Total/NA
Vinyl chloride	170		20	9.0	ug/L	20		8260D	Total/NA
1,4-Dioxane	4.5		0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
Methane	8600		10	1.7	ug/L	10		RSK-175	Total/NA
Ethane	43		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	50		1.0	0.12	ug/L	1		RSK-175	Total/NA
Perfluorobutanoic acid (PFBA)	9.6		4.6	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	5.2		1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.0		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.9		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	28		1.8	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.56	J I	1.8	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.52	J	1.8	0.52	ng/L	1		537 (modified)	Total/NA
Iron	3800		200	83	ug/L	1		6010D	Dissolved
Chloride	14		5.0	0.64	mg/L	5		300.0	Total/NA
Sulfate	220		5.0	1.7	mg/L	5		300.0	Total/NA
Nitrite as N	0.020	J	0.050	0.020	mg/L	1		353.2	Total/NA
Sulfide	1.0		1.0	0.27	mg/L	1		4500 S2 F-2000	Total/NA
Total Organic Carbon	3.2		1.0	0.44	mg/L	1		5310C-2000	Total/NA
Biochemical Oxygen Demand	4.8		2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW-17A — Lab Sample ID: 240-203303-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	11		2.0	0.94	ug/L	2		8260D	Total/NA
cis-1,2-Dichloroethene	23		2.0	0.92	ug/L	2		8260D	Total/NA
Vinyl chloride	69		2.0	0.90	ug/L	2		8260D	Total/NA
Methane	14000		10	1.7	ug/L	10		RSK-175	Total/NA
Ethane	11		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	22		1.0	0.12	ug/L	1		RSK-175	Total/NA
Perfluorobutanoic acid (PFBA)	5.4		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.3		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.9		1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	49		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.2		1.8	0.51	ng/L	1		537 (modified)	Total/NA
Iron	680		200	83	ug/L	1		6010D	Dissolved
Chloride	23		5.0	0.64	mg/L	5		300.0	Total/NA
Nitrate as N	0.11		0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	49		5.0	1.7	mg/L	5		300.0	Total/NA
Total Organic Carbon	2.0		1.0	0.44	mg/L	1		5310C-2000	Total/NA
Biochemical Oxygen Demand	6.3		2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: FD-20240423 — Lab Sample ID: 240-203303-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	11		2.0	0.94	ug/L	2		8260D	Total/NA
cis-1,2-Dichloroethene	23		2.0	0.92	ug/L	2		8260D	Total/NA
Vinyl chloride	70		2.0	0.90	ug/L	2		8260D	Total/NA
1,4-Dioxane	0.19	J	0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
Methane	14000		10	1.7	ug/L	10		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample ID: FD-20240423 (Continued) — Lab Sample ID: 240-203303-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethane	11		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	22		1.0	0.12	ug/L	1		RSK-175	Total/NA
Propane	0.47	J	1.0	0.38	ug/L	1		RSK-175	Total/NA
Perfluorobutanoic acid (PFBA)	5.2		4.6	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.4	J	1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.4		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	48		1.8	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.58	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.3		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Iron	690		200	83	ug/L	1		6010D	Dissolved
Chloride	23		5.0	0.64	mg/L	5		300.0	Total/NA
Sulfate	49		5.0	1.7	mg/L	5		300.0	Total/NA
Total Organic Carbon	2.0		1.0	0.44	mg/L	1		5310C-2000	Total/NA
Biochemical Oxygen Demand	6.5	H	2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW-12B — Lab Sample ID: 240-203303-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	44		2.0	0.92	ug/L	2		8260D	Total/NA
Vinyl chloride	91		2.0	0.90	ug/L	2		8260D	Total/NA
1,4-Dioxane	0.77	F1 F2	0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
Methane	310		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	0.70	J	1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	5.8		1.0	0.12	ug/L	1		RSK-175	Total/NA
Propane	0.87	J	1.0	0.38	ug/L	1		RSK-175	Total/NA
Perfluorobutanoic acid (PFBA)	8.6		4.6	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	9.0		1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	5.0		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.77	J	1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.1		1.8	0.77	ng/L	1		537 (modified)	Total/NA
Chloride	210		5.0	0.64	mg/L	5		300.0	Total/NA
Sulfate	220		5.0	1.7	mg/L	5		300.0	Total/NA
Total Organic Carbon	3.1		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: MW-18A — Lab Sample ID: 240-203303-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	4.2		1.0	0.47	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.99	J	1.0	0.49	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	39		1.0	0.46	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.77	J	1.0	0.51	ug/L	1		8260D	Total/NA
Trichloroethene	41		1.0	0.44	ug/L	1		8260D	Total/NA
Vinyl chloride	3.6		1.0	0.45	ug/L	1		8260D	Total/NA
Methane	2800		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	0.89	J	1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	0.49	J	1.0	0.12	ug/L	1		RSK-175	Total/NA
Perfluorobutanoic acid (PFBA)	4.5		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.5	J	1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.5		1.8	0.53	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.44	J	1.8	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	2.0		1.8	0.77	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-18A (Continued) — Lab Sample ID: 240-203303-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	2800		200	83	ug/L	1		6010D	Dissolved
Chloride	38		5.0	0.64	mg/L	5		300.0	Total/NA
Sulfate	130		5.0	1.7	mg/L	5		300.0	Total/NA
Total Organic Carbon	0.96	J	1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: TB-20240423 — Lab Sample ID: 240-203303-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	0.27	J	1.0	0.17	ug/L	1		RSK-175	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-7A
Date Collected: 04/23/24 09:15
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		20	9.6	ug/L			05/02/24 14:59	20
1,1-Dichloroethane	**43**		20	9.4	ug/L			05/02/24 14:59	20
1,1-Dichloroethene	ND		20	9.8	ug/L			05/02/24 14:59	20
Chloroethane	ND		20	17	ug/L			05/02/24 14:59	20
cis-1,2-Dichloroethene	**740**		20	9.2	ug/L			05/02/24 14:59	20
Tetrachloroethene	ND		20	8.8	ug/L			05/02/24 14:59	20
trans-1,2-Dichloroethene	ND		20	10	ug/L			05/02/24 14:59	20
Trichloroethene	**210**		20	8.8	ug/L			05/02/24 14:59	20
Vinyl chloride	**170**		20	9.0	ug/L			05/02/24 14:59	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*78 - 122*		*05/02/24 14:59*	*20*
Dibromofluoromethane (Surr)	*114*		*73 - 120*		*05/02/24 14:59*	*20*
4-Bromofluorobenzene (Surr)	*93*		*56 - 136*		*05/02/24 14:59*	*20*
1,2-Dichloroethane-d4 (Surr)	*135*		*62 - 137*		*05/02/24 14:59*	*20*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**4.5**		0.20	0.10	ug/L		04/30/24 07:01	05/02/24 07:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*32*		*15 - 110*	*04/30/24 07:01*	*05/02/24 07:57*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**8600**		10	1.7	ug/L			04/29/24 16:04	10
Ethane	**43**		1.0	0.29	ug/L			04/26/24 15:00	1
Ethylene	**50**		1.0	0.12	ug/L			04/26/24 15:00	1
Propane	ND		1.0	0.38	ug/L			04/26/24 15:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*94*		*60 - 140*		*04/26/24 15:00*	*1*
1,1,1-Trifluoroethane	*100*		*60 - 140*		*04/29/24 16:04*	*10*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**9.6**		4.6	2.2	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluoropentanoic acid (PFPeA)	**5.2**		1.8	0.45	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorohexanoic acid (PFHxA)	**6.0**		1.8	0.53	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluoroheptanoic acid (PFHpA)	**2.9**		1.8	0.23	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorooctanoic acid (PFOA)	**28**		1.8	0.78	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorononanoic acid (PFNA)	**0.56**	**J I**	1.8	0.25	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.29	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.51	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.67	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorohexanesulfonic acid (PFHxS)	**0.52**	**J**	1.8	0.52	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		04/30/24 04:44	05/04/24 06:58	1

Client Sample ID: MW-7A

Date Collected: 04/23/24 09:15
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-1

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.50	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		04/30/24 04:44	05/04/24 06:58	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.90	ng/L		04/30/24 04:44	05/04/24 06:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.6	1.1	ng/L		04/30/24 04:44	05/04/24 06:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.6	1.2	ng/L		04/30/24 04:44	05/04/24 06:58	1
6:2 FTS	ND		4.6	2.3	ng/L		04/30/24 04:44	05/04/24 06:58	1
8:2 FTS	ND		1.8	0.42	ng/L		04/30/24 04:44	05/04/24 06:58	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*73*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C5-PFPeA	*88*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C2 PFHxA	*94*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C4 PFHpA	*97*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C4 PFOA	*105*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C5 PFNA	*96*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C2 PFDA	*106*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C2 PFUnA	*104*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C2 PFDoA	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C2 PFTeDA	*103*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C3 PFBS	*97*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
18O2 PFHxS	*98*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C4 PFOS	*105*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
13C8 FOSA	*112*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
d3-NMeFOSAA	*88*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
d5-NEtFOSAA	*95*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
M2-6:2 FTS	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*
M2-8:2 FTS	*105*		*25 - 150*	*04/30/24 04:44*	*05/04/24 06:58*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**3800**		200	83	ug/L		04/26/24 14:00	04/30/24 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**14**		5.0	0.64	mg/L			04/26/24 13:11	5
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/25/24 08:26	5
Nitrite as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/25/24 08:26	5
Sulfate (EPA 300.0)	**220**		5.0	1.7	mg/L			04/26/24 13:11	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 11:47	1
Nitrite as N (EPA 353.2)	**0.020**	**J**	0.050	0.020	mg/L			04/24/24 20:20	1
Sulfide (SM 4500 S2 F-2000)	**1.0**		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**3.2**		1.0	0.44	mg/L			04/29/24 15:30	1
Biochemical Oxygen Demand (SM 5210B)	**4.8**		2.0	2.0	mg/L			04/25/24 08:08	1

Client Sample ID: MW-17A

Date Collected: 04/23/24 11:05
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-2

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.0	0.96	ug/L			05/02/24 15:24	2
1,1-Dichloroethane	**11**		2.0	0.94	ug/L			05/02/24 15:24	2
1,1-Dichloroethene	ND		2.0	0.98	ug/L			05/02/24 15:24	2
Chloroethane	ND		2.0	1.7	ug/L			05/02/24 15:24	2
cis-1,2-Dichloroethene	**23**		2.0	0.92	ug/L			05/02/24 15:24	2
Tetrachloroethene	ND		2.0	0.88	ug/L			05/02/24 15:24	2
trans-1,2-Dichloroethene	ND		2.0	1.0	ug/L			05/02/24 15:24	2
Trichloroethene	ND		2.0	0.88	ug/L			05/02/24 15:24	2
Vinyl chloride	**69**		2.0	0.90	ug/L			05/02/24 15:24	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*78 - 122*		*05/02/24 15:24*	*2*
Dibromofluoromethane (Surr)	*114*		*73 - 120*		*05/02/24 15:24*	*2*
4-Bromofluorobenzene (Surr)	*92*		*56 - 136*		*05/02/24 15:24*	*2*
1,2-Dichloroethane-d4 (Surr)	*135*		*62 - 137*		*05/02/24 15:24*	*2*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		04/30/24 07:01	05/02/24 08:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*31*		*15 - 110*	*04/30/24 07:01*	*05/02/24 08:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**14000**		10	1.7	ug/L			04/29/24 16:55	10
Ethane	**11**		1.0	0.29	ug/L			04/26/24 15:16	1
Ethylene	**22**		1.0	0.12	ug/L			04/26/24 15:16	1
Propane	ND		1.0	0.38	ug/L			04/26/24 15:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*95*		*60 - 140*		*04/26/24 15:16*	*1*
1,1,1-Trifluoroethane	*100*		*60 - 140*		*04/29/24 16:55*	*10*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.4**		4.5	2.2	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.44	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorohexanoic acid (PFHxA)	**2.3**		1.8	0.52	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluoroheptanoic acid (PFHpA)	**1.9**		1.8	0.23	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorooctanoic acid (PFOA)	**49**		1.8	0.77	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.99	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.66	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorohexanesulfonic acid (PFHxS)	**2.2**		1.8	0.51	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		04/30/24 04:44	05/04/24 07:08	1

Client Sample ID: MW-17A

Date Collected: 04/23/24 11:05
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-2

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		04/30/24 04:44	05/04/24 07:08	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.88	ng/L		04/30/24 04:44	05/04/24 07:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5	1.1	ng/L		04/30/24 04:44	05/04/24 07:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5	1.2	ng/L		04/30/24 04:44	05/04/24 07:08	1
6:2 FTS	ND		4.5	2.3	ng/L		04/30/24 04:44	05/04/24 07:08	1
8:2 FTS	ND		1.8	0.41	ng/L		04/30/24 04:44	05/04/24 07:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*70*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C5-PFPeA	*81*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C2 PFHxA	*85*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C4 PFHpA	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C4 PFOA	*99*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C5 PFNA	*90*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C2 PFDA	*99*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C2 PFUnA	*111*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C2 PFDoA	*90*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C2 PFTeDA	*97*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C3 PFBS	*92*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
18O2 PFHxS	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C4 PFOS	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
13C8 FOSA	*102*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
d3-NMeFOSAA	*83*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
d5-NEtFOSAA	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
M2-6:2 FTS	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*
M2-8:2 FTS	*99*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:08*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**680**		200	83	ug/L		04/26/24 14:00	04/30/24 16:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**23**		5.0	0.64	mg/L			04/26/24 12:50	5
Nitrate as N (EPA 300.0)	**0.11**		0.10	0.050	mg/L			04/25/24 08:44	2
Nitrite as N (EPA 300.0)	ND		0.10	0.050	mg/L			04/25/24 08:44	2
Sulfate (EPA 300.0)	**49**		5.0	1.7	mg/L			04/26/24 12:50	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 11:49	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/24/24 20:21	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**2.0**		1.0	0.44	mg/L			04/29/24 15:54	1
Biochemical Oxygen Demand (SM 5210B)	**6.3**		2.0	2.0	mg/L			04/25/24 08:08	1

Client Sample ID: FD-20240423

Date Collected: 04/23/24 00:00
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-3

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.0	0.96	ug/L			05/02/24 21:29	2
1,1-Dichloroethane	**11**		2.0	0.94	ug/L			05/02/24 21:29	2
1,1-Dichloroethene	ND		2.0	0.98	ug/L			05/02/24 21:29	2
Chloroethane	ND		2.0	1.7	ug/L			05/02/24 21:29	2
cis-1,2-Dichloroethene	**23**		2.0	0.92	ug/L			05/02/24 21:29	2
Tetrachloroethene	ND		2.0	0.88	ug/L			05/02/24 21:29	2
trans-1,2-Dichloroethene	ND		2.0	1.0	ug/L			05/02/24 21:29	2
Trichloroethene	ND		2.0	0.88	ug/L			05/02/24 21:29	2
Vinyl chloride	**70**		2.0	0.90	ug/L			05/02/24 21:29	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*78 - 122*		*05/02/24 21:29*	*2*
Dibromofluoromethane (Surr)	*112*		*73 - 120*		*05/02/24 21:29*	*2*
4-Bromofluorobenzene (Surr)	*95*		*56 - 136*		*05/02/24 21:29*	*2*
1,2-Dichloroethane-d4 (Surr)	*134*		*62 - 137*		*05/02/24 21:29*	*2*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.19**	**J**	0.20	0.10	ug/L		04/30/24 07:01	05/02/24 08:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*28*		*15 - 110*	*04/30/24 07:01*	*05/02/24 08:40*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**14000**		10	1.7	ug/L			04/29/24 17:11	10
Ethane	**11**		1.0	0.29	ug/L			04/26/24 15:50	1
Ethylene	**22**		1.0	0.12	ug/L			04/26/24 15:50	1
Propane	**0.47**	**J**	1.0	0.38	ug/L			04/26/24 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*97*		*60 - 140*		*04/26/24 15:50*	*1*
1,1,1-Trifluoroethane	*97*		*60 - 140*		*04/29/24 17:11*	*10*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**5.2**		4.6	2.2	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluoropentanoic acid (PFPeA)	**1.4**	**J**	1.8	0.45	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorohexanoic acid (PFHxA)	**2.4**		1.8	0.53	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluoroheptanoic acid (PFHpA)	**1.6**	**J**	1.8	0.23	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorooctanoic acid (PFOA)	**48**		1.8	0.78	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.25	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.51	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.67	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorobutanesulfonic acid (PFBS)	**0.58**	**J**	1.8	0.18	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorohexanesulfonic acid (PFHxS)	**2.3**		1.8	0.52	ng/L		04/30/24 04:44	05/04/24 07:18	1

Client Sample ID: FD-20240423
Date Collected: 04/23/24 00:00
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-3
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.50	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		04/30/24 04:44	05/04/24 07:18	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.90	ng/L		04/30/24 04:44	05/04/24 07:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.6	1.1	ng/L		04/30/24 04:44	05/04/24 07:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.6	1.2	ng/L		04/30/24 04:44	05/04/24 07:18	1
6:2 FTS	ND		4.6	2.3	ng/L		04/30/24 04:44	05/04/24 07:18	1
8:2 FTS	ND		1.8	0.42	ng/L		04/30/24 04:44	05/04/24 07:18	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*69*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C5-PFPeA	*79*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C2 PFHxA	*85*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C4 PFHpA	*90*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C4 PFOA	*101*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C5 PFNA	*90*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C2 PFDA	*98*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C2 PFUnA	*102*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C2 PFDoA	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C2 PFTeDA	*94*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C3 PFBS	*88*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
18O2 PFHxS	*87*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C4 PFOS	*95*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
13C8 FOSA	*105*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
d3-NMeFOSAA	*81*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
d5-NEtFOSAA	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
M2-6:2 FTS	*92*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*
M2-8:2 FTS	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:18*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**690**		200	83	ug/L		04/26/24 14:00	04/30/24 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**23**		5.0	0.64	mg/L			04/26/24 12:28	5
Nitrate as N (EPA 300.0)	ND	H	0.10	0.050	mg/L			04/25/24 09:02	2
Nitrite as N (EPA 300.0)	ND	H	0.10	0.050	mg/L			04/25/24 09:02	2
Sulfate (EPA 300.0)	**49**		5.0	1.7	mg/L			04/26/24 12:28	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 11:50	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/24/24 20:22	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**2.0**		1.0	0.44	mg/L			04/29/24 17:06	1
Biochemical Oxygen Demand (SM 5210B)	**6.5**	**H**	2.0	2.0	mg/L			04/25/24 08:08	1

Client Sample ID: MW-12B

Date Collected: 04/23/24 13:30
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-4

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.0	0.96	ug/L			05/03/24 22:05	2
1,1-Dichloroethane	ND		2.0	0.94	ug/L			05/03/24 22:05	2
1,1-Dichloroethene	ND		2.0	0.98	ug/L			05/03/24 22:05	2
Chloroethane	ND		2.0	1.7	ug/L			05/03/24 22:05	2
cis-1,2-Dichloroethene	**44**		2.0	0.92	ug/L			05/03/24 22:05	2
Tetrachloroethene	ND		2.0	0.88	ug/L			05/03/24 22:05	2
trans-1,2-Dichloroethene	ND		2.0	1.0	ug/L			05/03/24 22:05	2
Trichloroethene	ND		2.0	0.88	ug/L			05/03/24 22:05	2
Vinyl chloride	**91**		2.0	0.90	ug/L			05/03/24 22:05	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*78 - 122*		*05/03/24 22:05*	*2*
Dibromofluoromethane (Surr)	*98*		*73 - 120*		*05/03/24 22:05*	*2*
4-Bromofluorobenzene (Surr)	*89*		*56 - 136*		*05/03/24 22:05*	*2*
1,2-Dichloroethane-d4 (Surr)	*104*		*62 - 137*		*05/03/24 22:05*	*2*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.77**	**F1 F2**	0.20	0.10	ug/L		04/30/24 07:01	05/02/24 06:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*31*		*15 - 110*	*04/30/24 07:01*	*05/02/24 06:09*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**310**		1.0	0.17	ug/L			04/26/24 16:07	1
Ethane	**0.70**	**J**	1.0	0.29	ug/L			04/26/24 16:07	1
Ethylene	**5.8**		1.0	0.12	ug/L			04/26/24 16:07	1
Propane	**0.87**	**J**	1.0	0.38	ug/L			04/26/24 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*98*		*60 - 140*		*04/26/24 16:07*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**8.6**		4.6	2.2	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluoropentanoic acid (PFPeA)	**9.0**		1.8	0.45	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorohexanoic acid (PFHxA)	**5.0**		1.8	0.53	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluoroheptanoic acid (PFHpA)	**0.77**	**J**	1.8	0.23	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorooctanoic acid (PFOA)	**2.1**		1.8	0.77	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.25	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.66	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.52	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		04/30/24 04:44	05/04/24 07:38	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		04/30/24 04:44	05/04/24 07:38	1

Client Sample ID: MW-12B
Date Collected: 04/23/24 13:30
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-4
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.89	ng/L		04/30/24 04:44	05/04/24 07:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.6	1.1	ng/L		04/30/24 04:44	05/04/24 07:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.6	1.2	ng/L		04/30/24 04:44	05/04/24 07:38	1
6:2 FTS	ND		4.6	2.3	ng/L		04/30/24 04:44	05/04/24 07:38	1
8:2 FTS	ND		1.8	0.42	ng/L		04/30/24 04:44	05/04/24 07:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*76*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C5-PFPeA	*89*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C2 PFHxA	*101*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C4 PFHpA	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C4 PFOA	*108*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C5 PFNA	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C2 PFDA	*105*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C2 PFUnA	*113*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C2 PFDoA	*96*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C2 PFTeDA	*104*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C3 PFBS	*99*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
18O2 PFHxS	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C4 PFOS	*101*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
13C8 FOSA	*107*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
d3-NMeFOSAA	*86*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
d5-NEtFOSAA	*96*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
M2-6:2 FTS	*95*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*
M2-8:2 FTS	*90*		*25 - 150*	*04/30/24 04:44*	*05/04/24 07:38*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/26/24 14:00	04/30/24 15:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**210**		5.0	0.64	mg/L			04/26/24 11:23	5
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/25/24 09:56	5
Nitrite as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/25/24 09:56	5
Sulfate (EPA 300.0)	**220**		5.0	1.7	mg/L			04/26/24 11:23	5
Nitrate Nitrite as N (EPA 353.2)	ND	F1 F2	0.050	0.020	mg/L			05/07/24 11:43	1
Nitrite as N (EPA 353.2)	ND	F1 F2	0.050	0.020	mg/L			04/24/24 20:16	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**3.1**		1.0	0.44	mg/L			05/01/24 16:46	1
Biochemical Oxygen Demand (SM 5210B)	ND		2.0	2.0	mg/L			04/25/24 08:08	1

Client Sample ID: MW-18A

Date Collected: 04/23/24 13:55
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-5

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 16:36	1
1,1-Dichloroethane	**4.2**		1.0	0.47	ug/L			05/02/24 16:36	1
1,1-Dichloroethene	**0.99**	**J**	1.0	0.49	ug/L			05/02/24 16:36	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 16:36	1
cis-1,2-Dichloroethene	**39**		1.0	0.46	ug/L			05/02/24 16:36	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 16:36	1
trans-1,2-Dichloroethene	**0.77**	**J**	1.0	0.51	ug/L			05/02/24 16:36	1
Trichloroethene	**41**		1.0	0.44	ug/L			05/02/24 16:36	1
Vinyl chloride	**3.6**		1.0	0.45	ug/L			05/02/24 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*78 - 122*		*05/02/24 16:36*	*1*
Dibromofluoromethane (Surr)	*116*		*73 - 120*		*05/02/24 16:36*	*1*
4-Bromofluorobenzene (Surr)	*93*		*56 - 136*		*05/02/24 16:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*136*		*62 - 137*		*05/02/24 16:36*	*1*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		04/30/24 07:01	05/02/24 09:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*37*		*15 - 110*	*04/30/24 07:01*	*05/02/24 09:03*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**2800**		1.0	0.17	ug/L			04/26/24 16:58	1
Ethane	**0.89**	**J**	1.0	0.29	ug/L			04/26/24 16:58	1
Ethylene	**0.49**	**J**	1.0	0.12	ug/L			04/26/24 16:58	1
Propane	ND		1.0	0.38	ug/L			04/26/24 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*98*		*60 - 140*		*04/26/24 16:58*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.5**		4.5	2.2	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluoropentanoic acid (PFPeA)	**1.5**	**J**	1.8	0.44	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorohexanoic acid (PFHxA)	**2.5**		1.8	0.53	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluoroheptanoic acid (PFHpA)	**0.44**	**J**	1.8	0.23	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorooctanoic acid (PFOA)	**2.0**		1.8	0.77	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.66	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.52	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.8	0.17	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		04/30/24 04:44	05/04/24 08:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		04/30/24 04:44	05/04/24 08:09	1

Client Sample ID: MW-18A

Date Collected: 04/23/24 13:55
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-5

Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.89	ng/L		04/30/24 04:44	05/04/24 08:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5	1.1	ng/L		04/30/24 04:44	05/04/24 08:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5	1.2	ng/L		04/30/24 04:44	05/04/24 08:09	1
6:2 FTS	ND		4.5	2.3	ng/L		04/30/24 04:44	05/04/24 08:09	1
8:2 FTS	ND		1.8	0.42	ng/L		04/30/24 04:44	05/04/24 08:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*85*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C5-PFPeA	*95*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C2 PFHxA	*98*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C4 PFHpA	*102*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C4 PFOA	*109*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C5 PFNA	*99*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C2 PFDA	*110*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C2 PFUnA	*109*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C2 PFDoA	*102*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C2 PFTeDA	*107*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C3 PFBS	*105*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
18O2 PFHxS	*102*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C4 PFOS	*108*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
13C8 FOSA	*114*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
d3-NMeFOSAA	*89*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
d5-NEtFOSAA	*104*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
M2-6:2 FTS	*93*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*
M2-8:2 FTS	*102*		*25 - 150*	*04/30/24 04:44*	*05/04/24 08:09*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**2800**		200	83	ug/L		04/26/24 14:00	04/30/24 16:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**38**		5.0	0.64	mg/L			04/26/24 11:01	5
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/25/24 09:20	5
Nitrite as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/25/24 09:20	5
Sulfate (EPA 300.0)	**130**		5.0	1.7	mg/L			04/26/24 11:01	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 11:52	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/24/24 20:24	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**0.96**	**J**	1.0	0.44	mg/L			04/29/24 19:31	1
Biochemical Oxygen Demand (SM 5210B)	ND		2.0	2.0	mg/L			04/25/24 08:08	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Client Sample ID: TB-20240423

Date Collected: 04/23/24 00:00
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-6

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 09:46	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 09:46	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 09:46	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 09:46	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/02/24 09:46	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 09:46	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 09:46	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 09:46	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/02/24 09:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*78 - 122*		*05/02/24 09:46*	*1*
Dibromofluoromethane (Surr)	*111*		*73 - 120*		*05/02/24 09:46*	*1*
4-Bromofluorobenzene (Surr)	*95*		*56 - 136*		*05/02/24 09:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*135*		*62 - 137*		*05/02/24 09:46*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.27**	**J**	1.0	0.17	ug/L			04/26/24 17:15	1
Ethane	ND		1.0	0.29	ug/L			04/26/24 17:15	1
Ethylene	ND		1.0	0.12	ug/L			04/26/24 17:15	1
Propane	ND		1.0	0.38	ug/L			04/26/24 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*102*		*60 - 140*		*04/26/24 17:15*	*1*

Surrogate Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	DCA
Lab Sample ID	Client Sample ID	(78-122)	(73-120)	(56-136)	(62-137)
240-203303-1	MW-7A	109	114	93	135
240-203303-2	MW-17A	105	114	92	135
240-203303-3	FD-20240423	106	112	95	134
240-203303-4	MW-12B	96	98	89	104
240-203303-4 MS	MW-12B	103	101	106	100
240-203303-4 MSD	MW-12B	103	103	105	103
240-203303-5	MW-18A	108	116	93	136
240-203303-6	TB-20240423	108	111	95	135
LCS 240-611556/4	Lab Control Sample	113	102	101	120
LCS 240-611556/5	Lab Control Sample	107	105	101	123
LCS 240-611687/5	Lab Control Sample	115	105	103	124
LCS 240-611861/4	Lab Control Sample	100	99	102	99
MB 240-611556/7	Method Blank	108	109	92	128
MB 240-611687/8	Method Blank	103	109	91	131
MB 240-611861/6	Method Blank	98	96	89	102

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		TFE1
Lab Sample ID	Client Sample ID	(60-140)
240-203303-1	MW-7A	94
240-203303-1	MW-7A	100
240-203303-1 MS	MW-7A	99
240-203303-1 MSD	MW-7A	100
240-203303-2	MW-17A	95
240-203303-2	MW-17A	100
240-203303-3	FD-20240423	97
240-203303-3	FD-20240423	97
240-203303-4	MW-12B	98
240-203303-4 MS	MW-12B	98
240-203303-4 MSD	MW-12B	98
240-203303-5	MW-18A	98
240-203303-6	TB-20240423	102
LCS 240-610962/4	Lab Control Sample	101
LCS 240-611215/4	Lab Control Sample	101
MB 240-610962/3	Method Blank	104
MB 240-611215/3	Method Blank	101

Surrogate Legend

TFE = 1,1,1-Trifluoroethane

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-611556/7
Matrix: Water
Analysis Batch: 611556

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 08:34	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 08:34	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 08:34	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 08:34	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/02/24 08:34	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 08:34	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 08:34	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 08:34	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/02/24 08:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*78 - 122*		*05/02/24 08:34*	*1*
Dibromofluoromethane (Surr)	*109*		*73 - 120*		*05/02/24 08:34*	*1*
4-Bromofluorobenzene (Surr)	*92*		*56 - 136*		*05/02/24 08:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*128*		*62 - 137*		*05/02/24 08:34*	*1*

Lab Sample ID: LCS 240-611556/4
Matrix: Water
Analysis Batch: 611556

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	23.7		ug/L		95	64 - 131
1,1-Dichloroethane	25.0	27.6		ug/L		110	72 - 127
1,1-Dichloroethene	25.0	23.2		ug/L		93	63 - 134
Chloroethane	12.5	9.23		ug/L		74	38 - 152
cis-1,2-Dichloroethene	25.0	22.7		ug/L		91	77 - 123
Tetrachloroethene	25.0	22.1		ug/L		88	76 - 123
trans-1,2-Dichloroethene	25.0	22.9		ug/L		92	75 - 124
Trichloroethene	25.0	22.7		ug/L		91	70 - 122
Vinyl chloride	12.5	8.12		ug/L		65	60 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*113*		*78 - 122*
Dibromofluoromethane (Surr)	*102*		*73 - 120*
4-Bromofluorobenzene (Surr)	*101*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*120*		*62 - 137*

Lab Sample ID: LCS 240-611556/5
Matrix: Water
Analysis Batch: 611556

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*78 - 122*
Dibromofluoromethane (Surr)	*105*		*73 - 120*
4-Bromofluorobenzene (Surr)	*101*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*123*		*62 - 137*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-611687/8
Matrix: Water
Analysis Batch: 611687

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/02/24 21:05	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/02/24 21:05	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/02/24 21:05	1
Chloroethane	ND		1.0	0.83	ug/L			05/02/24 21:05	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/02/24 21:05	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/02/24 21:05	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/02/24 21:05	1
Trichloroethene	ND		1.0	0.44	ug/L			05/02/24 21:05	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/02/24 21:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*78 - 122*		*05/02/24 21:05*	*1*
Dibromofluoromethane (Surr)	*109*		*73 - 120*		*05/02/24 21:05*	*1*
4-Bromofluorobenzene (Surr)	*91*		*56 - 136*		*05/02/24 21:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*131*		*62 - 137*		*05/02/24 21:05*	*1*

Lab Sample ID: LCS 240-611687/5
Matrix: Water
Analysis Batch: 611687

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	25.4		ug/L		102	64 - 131
1,1-Dichloroethane	25.0	28.1		ug/L		112	72 - 127
1,1-Dichloroethene	25.0	25.1		ug/L		100	63 - 134
Chloroethane	12.5	9.51		ug/L		76	38 - 152
cis-1,2-Dichloroethene	25.0	23.2		ug/L		93	77 - 123
Tetrachloroethene	25.0	24.9		ug/L		100	76 - 123
trans-1,2-Dichloroethene	25.0	23.8		ug/L		95	75 - 124
Trichloroethene	25.0	23.3		ug/L		93	70 - 122
Vinyl chloride	12.5	8.13		ug/L		65	60 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*115*		*78 - 122*
Dibromofluoromethane (Surr)	*105*		*73 - 120*
4-Bromofluorobenzene (Surr)	*103*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*124*		*62 - 137*

Lab Sample ID: MB 240-611861/6
Matrix: Water
Analysis Batch: 611861

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/03/24 20:01	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/03/24 20:01	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/03/24 20:01	1
Chloroethane	ND		1.0	0.83	ug/L			05/03/24 20:01	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/03/24 20:01	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/03/24 20:01	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-611861/6
Matrix: Water
Analysis Batch: 611861

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/03/24 20:01	1
Trichloroethene	ND		1.0	0.44	ug/L			05/03/24 20:01	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/03/24 20:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*78 - 122*		*05/03/24 20:01*	*1*
Dibromofluoromethane (Surr)	*96*		*73 - 120*		*05/03/24 20:01*	*1*
4-Bromofluorobenzene (Surr)	*89*		*56 - 136*		*05/03/24 20:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*62 - 137*		*05/03/24 20:01*	*1*

Lab Sample ID: LCS 240-611861/4
Matrix: Water
Analysis Batch: 611861

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	27.0		ug/L		108	64 - 131
1,1-Dichloroethane	25.0	26.1		ug/L		104	72 - 127
1,1-Dichloroethene	25.0	27.0		ug/L		108	63 - 134
Chloroethane	12.5	11.2		ug/L		89	38 - 152
cis-1,2-Dichloroethene	25.0	25.6		ug/L		102	77 - 123
Tetrachloroethene	25.0	25.9		ug/L		104	76 - 123
trans-1,2-Dichloroethene	25.0	26.3		ug/L		105	75 - 124
Trichloroethene	25.0	25.3		ug/L		101	70 - 122
Vinyl chloride	12.5	11.4		ug/L		91	60 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*78 - 122*
Dibromofluoromethane (Surr)	*99*		*73 - 120*
4-Bromofluorobenzene (Surr)	*102*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*99*		*62 - 137*

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 611861

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	ND		50.0	52.1		ug/L		104	60 - 130
1,1-Dichloroethane	ND		50.0	52.4		ug/L		105	68 - 125
1,1-Dichloroethene	ND		50.0	52.1		ug/L		104	56 - 135
Chloroethane	ND		25.0	23.9		ug/L		96	10 - 199
cis-1,2-Dichloroethene	44		50.0	93.1		ug/L		98	66 - 128
Tetrachloroethene	ND		50.0	49.4		ug/L		99	62 - 131
trans-1,2-Dichloroethene	ND		50.0	52.0		ug/L		104	56 - 136
Trichloroethene	ND		50.0	49.0		ug/L		98	61 - 124
Vinyl chloride	91		25.0	105		ug/L		57	43 - 157

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*78 - 122*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 611861

Client Sample ID: MW-12B
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	*101*		*73 - 120*
4-Bromofluorobenzene (Surr)	*106*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*100*		*62 - 137*

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 611861

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		50.0	52.8		ug/L		106	60 - 130	1	17
1,1-Dichloroethane	ND		50.0	53.8		ug/L		108	68 - 125	3	13
1,1-Dichloroethene	ND		50.0	52.7		ug/L		105	56 - 135	1	26
Chloroethane	ND		25.0	23.3		ug/L		93	10 - 199	3	30
cis-1,2-Dichloroethene	44		50.0	93.3		ug/L		99	66 - 128	0	14
Tetrachloroethene	ND		50.0	49.9		ug/L		100	62 - 131	1	20
trans-1,2-Dichloroethene	ND		50.0	52.5		ug/L		105	56 - 136	1	15
Trichloroethene	ND		50.0	48.6		ug/L		97	61 - 124	1	15
Vinyl chloride	91		25.0	101		ug/L		43	43 - 157	3	24

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	*103*		*78 - 122*
Dibromofluoromethane (Surr)	*103*		*73 - 120*
4-Bromofluorobenzene (Surr)	*105*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*103*		*62 - 137*

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 480-709949/1-A
Matrix: Water
Analysis Batch: 710133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 709949

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		04/30/24 07:01	05/02/24 04:42	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	*42*		*15 - 110*	*04/30/24 07:01*	*05/02/24 04:42*	*1*

Lab Sample ID: LCS 480-709949/2-A
Matrix: Water
Analysis Batch: 710133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 709949

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane			2.00	2.19		ug/L		109	40 - 140		

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8	*57*		*15 - 110*

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) (Continued)

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 710133

Client Sample ID: MW-12B
Prep Type: Total/NA
Prep Batch: 709949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	0.77	F1 F2	2.00	2.91		ug/L		107	40 - 140

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Dioxane-d8	*34*		*15 - 110*

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 710133

Client Sample ID: MW-12B
Prep Type: Total/NA
Prep Batch: 709949

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	0.77	F1 F2	2.00	3.74	F1 F2	ug/L		148	40 - 140	25	20

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Dioxane-d8	*36*		*15 - 110*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 240-610962/3
Matrix: Water
Analysis Batch: 610962

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			04/26/24 13:01	1
Ethane	ND		1.0	0.29	ug/L			04/26/24 13:01	1
Ethylene	ND		1.0	0.12	ug/L			04/26/24 13:01	1
Propane	ND		1.0	0.38	ug/L			04/26/24 13:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*104*		*60 - 140*		*04/26/24 13:01*	*1*

Lab Sample ID: LCS 240-610962/4
Matrix: Water
Analysis Batch: 610962

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane			284	295		ug/L		104	80 - 120
Ethane			537	541		ug/L		101	80 - 120
Ethylene			506	510		ug/L		101	80 - 120
Propane			794	783		ug/L		99	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,1,1-Trifluoroethane	*101*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 610962

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	310		284	631		ug/L		112	50 - 150
Ethane	0.70	J	537	565		ug/L		105	50 - 150
Ethylene	5.8		506	536		ug/L		105	50 - 150
Propane	0.87	J	794	835		ug/L		105	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,1,1-Trifluoroethane	*98*		*60 - 140*

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 610962

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	310		284	630		ug/L		111	50 - 150	0	30
Ethane	0.70	J	537	569		ug/L		106	50 - 150	1	30
Ethylene	5.8		506	537		ug/L		105	50 - 150	0	30
Propane	0.87	J	794	837		ug/L		105	50 - 150	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,1,1-Trifluoroethane	*98*		*60 - 140*

Lab Sample ID: MB 240-611215/3
Matrix: Water
Analysis Batch: 611215

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			04/29/24 15:30	1
Ethane	ND		1.0	0.29	ug/L			04/29/24 15:30	1
Ethylene	ND		1.0	0.12	ug/L			04/29/24 15:30	1
Propane	ND		1.0	0.38	ug/L			04/29/24 15:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*101*		*60 - 140*		*04/29/24 15:30*	*1*

Lab Sample ID: LCS 240-611215/4
Matrix: Water
Analysis Batch: 611215

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	294		ug/L		103	80 - 120
Ethane	537	538		ug/L		100	80 - 120
Ethylene	506	507		ug/L		100	80 - 120
Propane	794	772		ug/L		97	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,1,1-Trifluoroethane	*101*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: 240-203303-1 MS
Matrix: Water
Analysis Batch: 611215

Client Sample ID: MW-7A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	8600		2840	11700		ug/L		108	50 - 150
Ethane	41		5370	5660		ug/L		105	50 - 150
Ethylene	49		5060	5330		ug/L		104	50 - 150
Propane	ND		7940	8250		ug/L		104	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,1,1-Trifluoroethane	*99*		*60 - 140*

Lab Sample ID: 240-203303-1 MSD
Matrix: Water
Analysis Batch: 611215

Client Sample ID: MW-7A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	8600		2840	11800		ug/L		111	50 - 150	1	30
Ethane	41		5370	5700		ug/L		105	50 - 150	1	30
Ethylene	49		5060	5360		ug/L		105	50 - 150	1	30
Propane	ND		7940	8310		ug/L		105	50 - 150	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,1,1-Trifluoroethane	*100*		*60 - 140*

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-758271/1-A
Matrix: Water
Analysis Batch: 759837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 758271

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0	2.4	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.19	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		04/30/24 04:44	05/04/24 04:15	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.98	ng/L		04/30/24 04:44	05/04/24 04:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0	1.2	ng/L		04/30/24 04:44	05/04/24 04:15	1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-758271/1-A
Matrix: Water
Analysis Batch: 759837

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 758271

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0	1.3	ng/L		04/30/24 04:44	05/04/24 04:15	1
6:2 FTS	ND		5.0	2.5	ng/L		04/30/24 04:44	05/04/24 04:15	1
8:2 FTS	ND		2.0	0.46	ng/L		04/30/24 04:44	05/04/24 04:15	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*81*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C5-PFPeA	*91*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C2 PFHxA	*92*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C4 PFHpA	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C4 PFOA	*104*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C5 PFNA	*100*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C2 PFDA	*107*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C2 PFUnA	*117*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C2 PFDoA	*107*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C2 PFTeDA	*111*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C3 PFBS	*103*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
18O2 PFHxS	*106*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C4 PFOS	*110*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
13C8 FOSA	*106*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
d3-NMeFOSAA	*87*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
d5-NEtFOSAA	*96*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
M2-6:2 FTS	*89*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*
M2-8:2 FTS	*94*		*25 - 150*	*04/30/24 04:44*	*05/04/24 04:15*	*1*

Lab Sample ID: LCS 320-758271/2-A
Matrix: Water
Analysis Batch: 759837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 758271

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	39.6		ng/L		99	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	40.2		ng/L		100	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	42.6		ng/L		107	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	38.3		ng/L		96	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	45.0		ng/L		112	70 - 130
Perfluorononanoic acid (PFNA)	40.0	48.8		ng/L		122	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	42.2		ng/L		105	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	38.6		ng/L		96	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	42.1		ng/L		105	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	39.9		ng/L		100	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	42.5		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	35.0		ng/L		98	67 - 127
Perfluorohexanesulfonic acid (PFHxS)	36.5	35.7		ng/L		98	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	41.9		ng/L		110	76 - 136

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-758271/2-A
Matrix: Water
Analysis Batch: 759837

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 758271

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	37.2	34.8		ng/L		94	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	38.8		ng/L		101	71 - 131
Perfluorooctanesulfonamide (FOSA)	40.0	40.6		ng/L		102	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	41.8		ng/L		104	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.7		ng/L		107	76 - 136
6:2 FTS	38.1	37.9		ng/L		100	59 - 175
8:2 FTS	38.4	40.1		ng/L		104	75 - 135

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*82*		*25 - 150*
13C5-PFPeA	*91*		*25 - 150*
13C2 PFHxA	*87*		*25 - 150*
13C4 PFHpA	*102*		*25 - 150*
13C4 PFOA	*102*		*25 - 150*
13C5 PFNA	*94*		*25 - 150*
13C2 PFDA	*105*		*25 - 150*
13C2 PFUnA	*110*		*25 - 150*
13C2 PFDoA	*102*		*25 - 150*
13C2 PFTeDA	*108*		*25 - 150*
13C3 PFBS	*100*		*25 - 150*
18O2 PFHxS	*106*		*25 - 150*
13C4 PFOS	*105*		*25 - 150*
13C8 FOSA	*101*		*25 - 150*
d3-NMeFOSAA	*78*		*25 - 150*
d5-NEtFOSAA	*85*		*25 - 150*
M2-6:2 FTS	*93*		*25 - 150*
M2-8:2 FTS	*90*		*25 - 150*

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 759837

Client Sample ID: MW-12B
Prep Type: Total/NA
Prep Batch: 758271

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	8.6		37.8	45.1		ng/L		96	76 - 136
Perfluoropentanoic acid (PFPeA)	9.0		37.8	45.0		ng/L		95	71 - 131
Perfluorohexanoic acid (PFHxA)	5.0		37.8	41.2		ng/L		96	73 - 133
Perfluoroheptanoic acid (PFHpA)	0.77	J	37.8	36.4		ng/L		94	72 - 132
Perfluorooctanoic acid (PFOA)	2.1		37.8	45.5		ng/L		115	70 - 130
Perfluorononanoic acid (PFNA)	ND		37.8	44.7		ng/L		118	75 - 135
Perfluorodecanoic acid (PFDA)	ND		37.8	40.9		ng/L		108	76 - 136
Perfluoroundecanoic acid (PFUnA)	ND		37.8	39.9		ng/L		106	68 - 128
Perfluorododecanoic acid (PFDoA)	ND		37.8	38.1		ng/L		101	71 - 131
Perfluorotridecanoic acid (PFTriA)	ND		37.8	38.1		ng/L		101	71 - 131

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 759837

Client Sample ID: MW-12B
Prep Type: Total/NA
Prep Batch: 758271

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTeA)	ND		37.8	39.4		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	ND		33.6	32.6		ng/L		94	67 - 127
Perfluorohexanesulfonic acid (PFHxS)	ND		34.5	35.0		ng/L		102	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	ND		36.1	40.6		ng/L		113	76 - 136
Perfluorooctanesulfonic acid (PFOS)	ND		35.2	34.6		ng/L		99	70 - 130
Perfluorodecanesulfonic acid (PFDS)	ND		36.4	35.8		ng/L		98	71 - 131
Perfluorooctanesulfonamide (FOSA)	ND		37.8	38.5		ng/L		102	73 - 133
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		37.8	38.5		ng/L		102	76 - 136
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		37.8	38.6		ng/L		102	76 - 136
6:2 FTS	ND		36.0	36.6		ng/L		102	59 - 175
8:2 FTS	ND		36.3	36.0		ng/L		99	75 - 135

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C4 PFBA	*71*		*25 - 150*
13C5-PFPeA	*83*		*25 - 150*
13C2 PFHxA	*93*		*25 - 150*
13C4 PFHpA	*99*		*25 - 150*
13C4 PFOA	*100*		*25 - 150*
13C5 PFNA	*97*		*25 - 150*
13C2 PFDA	*103*		*25 - 150*
13C2 PFUnA	*101*		*25 - 150*
13C2 PFDoA	*103*		*25 - 150*
13C2 PFTeDA	*110*		*25 - 150*
13C3 PFBS	*99*		*25 - 150*
18O2 PFHxS	*100*		*25 - 150*
13C4 PFOS	*98*		*25 - 150*
13C8 FOSA	*101*		*25 - 150*
d3-NMeFOSAA	*80*		*25 - 150*
d5-NEtFOSAA	*93*		*25 - 150*
M2-6:2 FTS	*93*		*25 - 150*
M2-8:2 FTS	*94*		*25 - 150*

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 759837

Client Sample ID: MW-12B
Prep Type: Total/NA
Prep Batch: 758271

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	8.6		39.0	43.4		ng/L		89	76 - 136	4	30
Perfluoropentanoic acid (PFPeA)	9.0		39.0	46.4		ng/L		96	71 - 131	3	30
Perfluorohexanoic acid (PFHxA)	5.0		39.0	40.7		ng/L		92	73 - 133	1	30
Perfluoroheptanoic acid (PFHpA)	0.77	J	39.0	37.2		ng/L		93	72 - 132	2	30
Perfluorooctanoic acid (PFOA)	2.1		39.0	44.8		ng/L		110	70 - 130	1	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 759837

Client Sample ID: MW-12B
Prep Type: Total/NA
Prep Batch: 758271

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorononanoic acid (PFNA)	ND		39.0	45.4		ng/L		117	75 - 135	2	30
Perfluorodecanoic acid (PFDA)	ND		39.0	41.7		ng/L		107	76 - 136	2	30
Perfluoroundecanoic acid (PFUnA)	ND		39.0	40.5		ng/L		104	68 - 128	2	30
Perfluorododecanoic acid (PFDoA)	ND		39.0	40.4		ng/L		104	71 - 131	6	30
Perfluorotridecanoic acid (PFTriA)	ND		39.0	37.4		ng/L		96	71 - 131	2	30
Perfluorotetradecanoic acid (PFTeA)	ND		39.0	40.7		ng/L		104	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	ND		34.6	34.7		ng/L		97	67 - 127	6	30
Perfluorohexanesulfonic acid (PFHxS)	ND		35.5	36.7		ng/L		103	59 - 119	5	30
Perfluoroheptanesulfonic acid (PFHpS)	ND		37.2	40.0		ng/L		108	76 - 136	2	30
Perfluorooctanesulfonic acid (PFOS)	ND		36.2	34.9		ng/L		96	70 - 130	1	30
Perfluorodecanesulfonic acid (PFDS)	ND		37.6	36.0		ng/L		96	71 - 131	1	30
Perfluorooctanesulfonamide (FOSA)	ND		39.0	39.3		ng/L		101	73 - 133	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		39.0	41.2		ng/L		106	76 - 136	7	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		39.0	41.8		ng/L		107	76 - 136	8	30
6:2 FTS	ND		37.1	34.9		ng/L		94	59 - 175	5	30
8:2 FTS	ND		37.4	37.4		ng/L		100	75 - 135	4	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*70*		*25 - 150*
13C5-PFPeA	*85*		*25 - 150*
13C2 PFHxA	*94*		*25 - 150*
13C4 PFHpA	*100*		*25 - 150*
13C4 PFOA	*101*		*25 - 150*
13C5 PFNA	*95*		*25 - 150*
13C2 PFDA	*102*		*25 - 150*
13C2 PFUnA	*104*		*25 - 150*
13C2 PFDoA	*103*		*25 - 150*
13C2 PFTeDA	*104*		*25 - 150*
13C3 PFBS	*97*		*25 - 150*
18O2 PFHxS	*99*		*25 - 150*
13C4 PFOS	*101*		*25 - 150*
13C8 FOSA	*100*		*25 - 150*
d3-NMeFOSAA	*80*		*25 - 150*
d5-NEtFOSAA	*92*		*25 - 150*
M2-6:2 FTS	*94*		*25 - 150*
M2-8:2 FTS	*91*		*25 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-610974/1-A
Matrix: Water
Analysis Batch: 611397

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 610974

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/26/24 14:00	04/30/24 15:31	1

Lab Sample ID: LCS 240-610974/2-A
Matrix: Water
Analysis Batch: 611397

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 610974

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	10000		ug/L		100	80 - 120

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 611397

Client Sample ID: MW-12B
Prep Type: Dissolved
Prep Batch: 610974

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	ND		10000	10400		ug/L		104	75 - 125

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 611397

Client Sample ID: MW-12B
Prep Type: Dissolved
Prep Batch: 610974

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	ND		10000	10600		ug/L		106	75 - 125	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-610887/3
Matrix: Water
Analysis Batch: 610887

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/26/24 05:35	1
Sulfate	ND		1.0	0.35	mg/L			04/26/24 05:35	1

Lab Sample ID: LCS 240-610887/4
Matrix: Water
Analysis Batch: 610887

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.4		mg/L		101	90 - 110
Sulfate	50.0	51.7		mg/L		103	90 - 110

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 610887

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	210		250	453		mg/L		99	80 - 120
Sulfate	220		250	469		mg/L		101	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 610887

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	210		250	453		mg/L		99	80 - 120	0	15
Sulfate	220		250	470		mg/L		102	80 - 120	0	15

Lab Sample ID: MB 480-709247/4
Matrix: Water
Analysis Batch: 709247

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.025	mg/L			04/25/24 07:50	1
Nitrite as N	ND		0.050	0.025	mg/L			04/25/24 07:50	1

Lab Sample ID: LCS 480-709247/5
Matrix: Water
Analysis Batch: 709247

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.01	5.21		mg/L		104	90 - 110

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 709247

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	ND		25.0	26.4		mg/L		106	80 - 120

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 709247

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	ND		25.0	23.2		mg/L		93	80 - 120	13	15

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-709300/3
Matrix: Water
Analysis Batch: 709300

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.050	0.020	mg/L			04/24/24 20:13	1

Lab Sample ID: LCS 480-709300/4
Matrix: Water
Analysis Batch: 709300

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	1.50	1.57		mg/L		105	90 - 110

Method: 353.2 - Nitrogen, Nitrite (Continued)

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 709300

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrite as N	ND	F1 F2	1.00	0.953		mg/L		95	90 - 110		

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 709300

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	ND	F1 F2	1.00	0.771	F1 F2	mg/L		77	90 - 110	21	20

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 480-711015/28
Matrix: Water
Analysis Batch: 711015

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/07/24 11:41	1

Lab Sample ID: MB 480-711015/4
Matrix: Water
Analysis Batch: 711015

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/07/24 11:08	1

Lab Sample ID: LCS 480-711015/29
Matrix: Water
Analysis Batch: 711015

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N			1.50	1.50		mg/L		100	90 - 110		

Lab Sample ID: LCS 480-711015/5
Matrix: Water
Analysis Batch: 711015

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N			1.50	1.52		mg/L		101	90 - 110		

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 711015

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrate Nitrite as N	ND	F1 F2	1.00	3.03	F1	mg/L		303	90 - 110		

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 711015

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	ND	F1 F2	1.00	0.0443	J F1 F2	mg/L		4	90 - 110	194	20

Method: 4500 S2 F-2000 - Sulfide, Total

Lab Sample ID: MB 240-611098/1
Matrix: Water
Analysis Batch: 611098

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.27	mg/L			04/29/24 08:06	1

Lab Sample ID: LCS 240-611098/2
Matrix: Water
Analysis Batch: 611098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	21.9	22.0		mg/L		101	80 - 120

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 611098

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	ND		21.9	20.8		mg/L		95	67 - 126

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 611098

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	ND		21.9	21.0		mg/L		96	67 - 126	1	10

Method: 5310C-2000 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 240-611307/5
Matrix: Water
Analysis Batch: 611307

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.44	mg/L			04/29/24 12:40	1

Lab Sample ID: LCS 240-611307/21
Matrix: Water
Analysis Batch: 611307

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	16.3	14.4		mg/L		89	85 - 115

Method: 5310C-2000 - Total Organic Carbon/Persulfate - Ultrav (Continued)

Lab Sample ID: LCS 240-611307/6
Matrix: Water
Analysis Batch: 611307

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			16.3	14.7		mg/L		91	85 - 115		

Lab Sample ID: MB 240-611693/5
Matrix: Water
Analysis Batch: 611693

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.44	mg/L			05/01/24 15:58	1

Lab Sample ID: LCS 240-611693/6
Matrix: Water
Analysis Batch: 611693

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			16.3	15.7		mg/L		97	85 - 115		

Lab Sample ID: 240-203303-4 MS
Matrix: Water
Analysis Batch: 611693

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon	3.1		10.0	12.9		mg/L		98	65 - 134		

Lab Sample ID: 240-203303-4 MSD
Matrix: Water
Analysis Batch: 611693

Client Sample ID: MW-12B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	3.1		10.0	13.0		mg/L		99	65 - 134	1	10

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 480-709395/1
Matrix: Water
Analysis Batch: 709395

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			04/25/24 08:08	1

Lab Sample ID: LCS 480-709395/2
Matrix: Water
Analysis Batch: 709395

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Biochemical Oxygen Demand			197	199		mg/L		101	85 - 115		

QC Association Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

GC/MS VOA

Analysis Batch: 611556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	8260D	
240-203303-2	MW-17A	Total/NA	Water	8260D	
240-203303-5	MW-18A	Total/NA	Water	8260D	
240-203303-6	TB-20240423	Total/NA	Water	8260D	
MB 240-611556/7	Method Blank	Total/NA	Water	8260D	
LCS 240-611556/4	Lab Control Sample	Total/NA	Water	8260D	
LCS 240-611556/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 611687

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-3	FD-20240423	Total/NA	Water	8260D	
MB 240-611687/8	Method Blank	Total/NA	Water	8260D	
LCS 240-611687/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 611861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-4	MW-12B	Total/NA	Water	8260D	
MB 240-611861/6	Method Blank	Total/NA	Water	8260D	
LCS 240-611861/4	Lab Control Sample	Total/NA	Water	8260D	
240-203303-4 MS	MW-12B	Total/NA	Water	8260D	
240-203303-4 MSD	MW-12B	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 709949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	3510C	
240-203303-2	MW-17A	Total/NA	Water	3510C	
240-203303-3	FD-20240423	Total/NA	Water	3510C	
240-203303-4	MW-12B	Total/NA	Water	3510C	
240-203303-5	MW-18A	Total/NA	Water	3510C	
MB 480-709949/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-709949/2-A	Lab Control Sample	Total/NA	Water	3510C	
240-203303-4 MS	MW-12B	Total/NA	Water	3510C	
240-203303-4 MSD	MW-12B	Total/NA	Water	3510C	

Analysis Batch: 710133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	8270D SIM ID	709949
240-203303-2	MW-17A	Total/NA	Water	8270D SIM ID	709949
240-203303-3	FD-20240423	Total/NA	Water	8270D SIM ID	709949
240-203303-4	MW-12B	Total/NA	Water	8270D SIM ID	709949
240-203303-5	MW-18A	Total/NA	Water	8270D SIM ID	709949
MB 480-709949/1-A	Method Blank	Total/NA	Water	8270D SIM ID	709949
LCS 480-709949/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	709949
240-203303-4 MS	MW-12B	Total/NA	Water	8270D SIM ID	709949
240-203303-4 MSD	MW-12B	Total/NA	Water	8270D SIM ID	709949

GC VOA

Analysis Batch: 610962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	RSK-175	
240-203303-2	MW-17A	Total/NA	Water	RSK-175	
240-203303-3	FD-20240423	Total/NA	Water	RSK-175	
240-203303-4	MW-12B	Total/NA	Water	RSK-175	
240-203303-5	MW-18A	Total/NA	Water	RSK-175	
240-203303-6	TB-20240423	Total/NA	Water	RSK-175	
MB 240-610962/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-610962/4	Lab Control Sample	Total/NA	Water	RSK-175	
240-203303-4 MS	MW-12B	Total/NA	Water	RSK-175	
240-203303-4 MSD	MW-12B	Total/NA	Water	RSK-175	

Analysis Batch: 611215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	RSK-175	
240-203303-2	MW-17A	Total/NA	Water	RSK-175	
240-203303-3	FD-20240423	Total/NA	Water	RSK-175	
MB 240-611215/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-611215/4	Lab Control Sample	Total/NA	Water	RSK-175	
240-203303-1 MS	MW-7A	Total/NA	Water	RSK-175	
240-203303-1 MSD	MW-7A	Total/NA	Water	RSK-175	

LCMS

Prep Batch: 758271

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	3535	
240-203303-2	MW-17A	Total/NA	Water	3535	
240-203303-3	FD-20240423	Total/NA	Water	3535	
240-203303-4	MW-12B	Total/NA	Water	3535	
240-203303-5	MW-18A	Total/NA	Water	3535	
MB 320-758271/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-758271/2-A	Lab Control Sample	Total/NA	Water	3535	
240-203303-4 MS	MW-12B	Total/NA	Water	3535	
240-203303-4 MSD	MW-12B	Total/NA	Water	3535	

Analysis Batch: 759837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	537 (modified)	758271
240-203303-2	MW-17A	Total/NA	Water	537 (modified)	758271
240-203303-3	FD-20240423	Total/NA	Water	537 (modified)	758271
240-203303-4	MW-12B	Total/NA	Water	537 (modified)	758271
240-203303-5	MW-18A	Total/NA	Water	537 (modified)	758271
MB 320-758271/1-A	Method Blank	Total/NA	Water	537 (modified)	758271
LCS 320-758271/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	758271
240-203303-4 MS	MW-12B	Total/NA	Water	537 (modified)	758271
240-203303-4 MSD	MW-12B	Total/NA	Water	537 (modified)	758271

Metals

Prep Batch: 610974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 610974 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-2	MW-17A	Dissolved	Water	3005A	
240-203303-3	FD-20240423	Dissolved	Water	3005A	
240-203303-4	MW-12B	Dissolved	Water	3005A	
240-203303-5	MW-18A	Dissolved	Water	3005A	
MB 240-610974/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-610974/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-203303-4 MS	MW-12B	Dissolved	Water	3005A	
240-203303-4 MSD	MW-12B	Dissolved	Water	3005A	

Analysis Batch: 611397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Dissolved	Water	6010D	610974
240-203303-2	MW-17A	Dissolved	Water	6010D	610974
240-203303-3	FD-20240423	Dissolved	Water	6010D	610974
240-203303-4	MW-12B	Dissolved	Water	6010D	610974
240-203303-5	MW-18A	Dissolved	Water	6010D	610974
MB 240-610974/1-A	Method Blank	Total Recoverable	Water	6010D	610974
LCS 240-610974/2-A	Lab Control Sample	Total Recoverable	Water	6010D	610974
240-203303-4 MS	MW-12B	Dissolved	Water	6010D	610974
240-203303-4 MSD	MW-12B	Dissolved	Water	6010D	610974

General Chemistry

Analysis Batch: 610887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	300.0	
240-203303-2	MW-17A	Total/NA	Water	300.0	
240-203303-3	FD-20240423	Total/NA	Water	300.0	
240-203303-4	MW-12B	Total/NA	Water	300.0	
240-203303-5	MW-18A	Total/NA	Water	300.0	
MB 240-610887/3	Method Blank	Total/NA	Water	300.0	
LCS 240-610887/4	Lab Control Sample	Total/NA	Water	300.0	
240-203303-4 MS	MW-12B	Total/NA	Water	300.0	
240-203303-4 MSD	MW-12B	Total/NA	Water	300.0	

Analysis Batch: 611098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	4500 S2 F-2000	
240-203303-2	MW-17A	Total/NA	Water	4500 S2 F-2000	
240-203303-3	FD-20240423	Total/NA	Water	4500 S2 F-2000	
240-203303-4	MW-12B	Total/NA	Water	4500 S2 F-2000	
240-203303-5	MW-18A	Total/NA	Water	4500 S2 F-2000	
MB 240-611098/1	Method Blank	Total/NA	Water	4500 S2 F-2000	
LCS 240-611098/2	Lab Control Sample	Total/NA	Water	4500 S2 F-2000	
240-203303-4 MS	MW-12B	Total/NA	Water	4500 S2 F-2000	
240-203303-4 MSD	MW-12B	Total/NA	Water	4500 S2 F-2000	

Analysis Batch: 611307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	5310C-2000	
240-203303-2	MW-17A	Total/NA	Water	5310C-2000	

General Chemistry (Continued)

Analysis Batch: 611307 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-3	FD-20240423	Total/NA	Water	5310C-2000	
240-203303-5	MW-18A	Total/NA	Water	5310C-2000	
MB 240-611307/5	Method Blank	Total/NA	Water	5310C-2000	
LCS 240-611307/21	Lab Control Sample	Total/NA	Water	5310C-2000	
LCS 240-611307/6	Lab Control Sample	Total/NA	Water	5310C-2000	

Analysis Batch: 611693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-4	MW-12B	Total/NA	Water	5310C-2000	
MB 240-611693/5	Method Blank	Total/NA	Water	5310C-2000	
LCS 240-611693/6	Lab Control Sample	Total/NA	Water	5310C-2000	
240-203303-4 MS	MW-12B	Total/NA	Water	5310C-2000	
240-203303-4 MSD	MW-12B	Total/NA	Water	5310C-2000	

Analysis Batch: 709247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	300.0	
240-203303-2	MW-17A	Total/NA	Water	300.0	
240-203303-3	FD-20240423	Total/NA	Water	300.0	
240-203303-4	MW-12B	Total/NA	Water	300.0	
240-203303-5	MW-18A	Total/NA	Water	300.0	
MB 480-709247/4	Method Blank	Total/NA	Water	300.0	
LCS 480-709247/5	Lab Control Sample	Total/NA	Water	300.0	
240-203303-4 MS	MW-12B	Total/NA	Water	300.0	
240-203303-4 MSD	MW-12B	Total/NA	Water	300.0	

Analysis Batch: 709300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	353.2	
240-203303-2	MW-17A	Total/NA	Water	353.2	
240-203303-3	FD-20240423	Total/NA	Water	353.2	
240-203303-4	MW-12B	Total/NA	Water	353.2	
240-203303-5	MW-18A	Total/NA	Water	353.2	
MB 480-709300/3	Method Blank	Total/NA	Water	353.2	
LCS 480-709300/4	Lab Control Sample	Total/NA	Water	353.2	
240-203303-4 MS	MW-12B	Total/NA	Water	353.2	
240-203303-4 MSD	MW-12B	Total/NA	Water	353.2	

Analysis Batch: 709395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	SM 5210B	
240-203303-2	MW-17A	Total/NA	Water	SM 5210B	
240-203303-3	FD-20240423	Total/NA	Water	SM 5210B	
240-203303-4	MW-12B	Total/NA	Water	SM 5210B	
240-203303-5	MW-18A	Total/NA	Water	SM 5210B	
USB 480-709395/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 480-709395/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 711015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-1	MW-7A	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 711015 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203303-2	MW-17A	Total/NA	Water	353.2	
240-203303-3	FD-20240423	Total/NA	Water	353.2	
240-203303-4	MW-12B	Total/NA	Water	353.2	
240-203303-5	MW-18A	Total/NA	Water	353.2	
MB 480-711015/28	Method Blank	Total/NA	Water	353.2	
MB 480-711015/4	Method Blank	Total/NA	Water	353.2	
LCS 480-711015/29	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-711015/5	Lab Control Sample	Total/NA	Water	353.2	
240-203303-4 MS	MW-12B	Total/NA	Water	353.2	
240-203303-4 MSD	MW-12B	Total/NA	Water	353.2	

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Client Sample ID: MW-7A

Date Collected: 04/23/24 09:15
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		20	611556	CDG	EET CLE	05/02/24 14:59
Total/NA	Prep	3510C			709949	SMP	EET BUF	04/30/24 07:01
Total/NA	Analysis	8270D SIM ID		1	710133	JMM	EET BUF	05/02/24 07:57
Total/NA	Analysis	RSK-175		1	610962	JBN	EET CLE	04/26/24 15:00
Total/NA	Analysis	RSK-175		10	611215	JBN	EET CLE	04/29/24 16:04
Total/NA	Prep	3535			758271	GAT	EET SAC	04/30/24 04:44
Total/NA	Analysis	537 (modified)		1	759837	C1P	EET SAC	05/04/24 06:58
Dissolved	Prep	3005A			610974	S4FJ	EET CLE	04/26/24 14:00
Dissolved	Analysis	6010D		1	611397	KLC	EET CLE	04/30/24 16:04
Total/NA	Analysis	300.0		5	709247	AF	EET BUF	04/25/24 08:26
Total/NA	Analysis	300.0		5	610887	JWW	EET CLE	04/26/24 13:11
Total/NA	Analysis	353.2		1	709300	KB	EET BUF	04/24/24 20:20
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 11:47
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611307	QUY8	EET CLE	04/29/24 15:30
Total/NA	Analysis	SM 5210B		1	709395	CG	EET BUF	04/25/24 08:08

Client Sample ID: MW-17A

Date Collected: 04/23/24 11:05
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		2	611556	CDG	EET CLE	05/02/24 15:24
Total/NA	Prep	3510C			709949	SMP	EET BUF	04/30/24 07:01
Total/NA	Analysis	8270D SIM ID		1	710133	JMM	EET BUF	05/02/24 08:19
Total/NA	Analysis	RSK-175		1	610962	JBN	EET CLE	04/26/24 15:16
Total/NA	Analysis	RSK-175		10	611215	JBN	EET CLE	04/29/24 16:55
Total/NA	Prep	3535			758271	GAT	EET SAC	04/30/24 04:44
Total/NA	Analysis	537 (modified)		1	759837	C1P	EET SAC	05/04/24 07:08
Dissolved	Prep	3005A			610974	S4FJ	EET CLE	04/26/24 14:00
Dissolved	Analysis	6010D		1	611397	KLC	EET CLE	04/30/24 16:08
Total/NA	Analysis	300.0		2	709247	AF	EET BUF	04/25/24 08:44
Total/NA	Analysis	300.0		5	610887	JWW	EET CLE	04/26/24 12:50
Total/NA	Analysis	353.2		1	709300	KB	EET BUF	04/24/24 20:21
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 11:49
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611307	QUY8	EET CLE	04/29/24 15:54
Total/NA	Analysis	SM 5210B		1	709395	CG	EET BUF	04/25/24 08:08

Client Sample ID: FD-20240423

Lab Sample ID: 240-203303-3

Date Collected: 04/23/24 00:00

Matrix: Water

Date Received: 04/23/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		2	611687	CDG	EET CLE	05/02/24 21:29
Total/NA	Prep	3510C			709949	SMP	EET BUF	04/30/24 07:01
Total/NA	Analysis	8270D SIM ID		1	710133	JMM	EET BUF	05/02/24 08:40
Total/NA	Analysis	RSK-175		1	610962	JBN	EET CLE	04/26/24 15:50
Total/NA	Analysis	RSK-175		10	611215	JBN	EET CLE	04/29/24 17:11
Total/NA	Prep	3535			758271	GAT	EET SAC	04/30/24 04:44
Total/NA	Analysis	537 (modified)		1	759837	C1P	EET SAC	05/04/24 07:18
Dissolved	Prep	3005A			610974	S4FJ	EET CLE	04/26/24 14:00
Dissolved	Analysis	6010D		1	611397	KLC	EET CLE	04/30/24 16:13
Total/NA	Analysis	300.0		2	709247	AF	EET BUF	04/25/24 09:02
Total/NA	Analysis	300.0		5	610887	JWW	EET CLE	04/26/24 12:28
Total/NA	Analysis	353.2		1	709300	KB	EET BUF	04/24/24 20:22
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 11:50
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611307	QUY8	EET CLE	04/29/24 17:06
Total/NA	Analysis	SM 5210B		1	709395	CG	EET BUF	04/25/24 08:08

Client Sample ID: MW-12B

Lab Sample ID: 240-203303-4

Date Collected: 04/23/24 13:30

Matrix: Water

Date Received: 04/23/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		2	611861	TJL2	EET CLE	05/03/24 22:05
Total/NA	Prep	3510C			709949	SMP	EET BUF	04/30/24 07:01
Total/NA	Analysis	8270D SIM ID		1	710133	JMM	EET BUF	05/02/24 06:09
Total/NA	Analysis	RSK-175		1	610962	JBN	EET CLE	04/26/24 16:07
Total/NA	Prep	3535			758271	GAT	EET SAC	04/30/24 04:44
Total/NA	Analysis	537 (modified)		1	759837	C1P	EET SAC	05/04/24 07:38
Dissolved	Prep	3005A			610974	S4FJ	EET CLE	04/26/24 14:00
Dissolved	Analysis	6010D		1	611397	KLC	EET CLE	04/30/24 15:39
Total/NA	Analysis	300.0		5	709247	AF	EET BUF	04/25/24 09:56
Total/NA	Analysis	300.0		5	610887	JWW	EET CLE	04/26/24 11:23
Total/NA	Analysis	353.2		1	709300	KB	EET BUF	04/24/24 20:16
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 11:43
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611693	QUY8	EET CLE	05/01/24 16:46
Total/NA	Analysis	SM 5210B		1	709395	CG	EET BUF	04/25/24 08:08

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Client Sample ID: MW-18A

Date Collected: 04/23/24 13:55
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611556	CDG	EET CLE	05/02/24 16:36
Total/NA	Prep	3510C			709949	SMP	EET BUF	04/30/24 07:01
Total/NA	Analysis	8270D SIM ID		1	710133	JMM	EET BUF	05/02/24 09:03
Total/NA	Analysis	RSK-175		1	610962	JBN	EET CLE	04/26/24 16:58
Total/NA	Prep	3535			758271	GAT	EET SAC	04/30/24 04:44
Total/NA	Analysis	537 (modified)		1	759837	C1P	EET SAC	05/04/24 08:09
Dissolved	Prep	3005A			610974	S4FJ	EET CLE	04/26/24 14:00
Dissolved	Analysis	6010D		1	611397	KLC	EET CLE	04/30/24 16:17
Total/NA	Analysis	300.0		5	709247	AF	EET BUF	04/25/24 09:20
Total/NA	Analysis	300.0		5	610887	JWW	EET CLE	04/26/24 11:01
Total/NA	Analysis	353.2		1	709300	KB	EET BUF	04/24/24 20:24
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 11:52
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611307	QUY8	EET CLE	04/29/24 19:31
Total/NA	Analysis	SM 5210B		1	709395	CG	EET BUF	04/25/24 08:08

Client Sample ID: TB-20240423

Date Collected: 04/23/24 00:00
Date Received: 04/23/24 16:30

Lab Sample ID: 240-203303-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611556	CDG	EET CLE	05/02/24 09:46
Total/NA	Analysis	RSK-175		1	610962	JBN	EET CLE	04/26/24 17:15

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Laboratory: Eurofins Cleveland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10975	04-02-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chloride
300.0		Water	Sulfate
5310C-2000		Water	Total Organic Carbon
RSK-175		Water	Ethane
RSK-175		Water	Ethylene
RSK-175		Water	Methane
RSK-175		Water	Propane

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-23 *
Connecticut	State	PH-0807	03-31-25
Florida	NELAP	E87672	06-30-23 *
Georgia	State	10026 (NY)	03-31-25
Georgia	State Program	N/A	03-31-09 *
Illinois	NELAP	200003	09-30-24
Iowa	State	374	03-01-25
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	02-01-25
Kentucky (UST)	State	108092	04-01-24 *
Kentucky (WW)	State	KY90029	12-31-24
Louisiana	NELAP	02031	06-30-23 *
Louisiana (All)	NELAP	02031	06-30-23 *
Maine	State	NY00044	12-04-24
Maryland	State	294	06-30-24
Massachusetts	State	M-NY044	07-01-24
Michigan	State	9937	03-31-25
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-24
New Jersey	NELAP	NY455	06-30-24
New York	NELAP	10026	03-31-25
Pennsylvania	NELAP	68-00281	08-31-24
Rhode Island	State	LAO00378	12-30-24
Texas	NELAP	T104704412-18-10	07-31-23 *
Virginia	NELAP	460185	09-14-24
Washington	State	C784	02-10-25
Wisconsin	State	998310390	08-31-24

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-27

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Laboratory: Eurofins Sacramento (Continued)

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468	01-20-27
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-31-26
Colorado	State	CA00044	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-25
Hawaii	State	Eurofins Sacramento	01-29-25
Illinois	NELAP	200060	03-31-25
Kansas	NELAP	E-10375	10-31-24
Louisiana	NELAP	01944	06-30-24
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-26
Michigan	State	9947	01-29-25
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-19-25
New Jersey	NELAP	CA005	07-02-24
New York	NELAP	11666	04-01-25
Ohio	State	41252	01-29-25
Oregon	NELAP	4040	01-29-25
Texas	NELAP	T104704399-23-17	05-31-24
US Fish & Wildlife	US Federal Programs	A22139	04-30-25
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-28-25
Virginia	NELAP	460278	03-14-25
Washington	State	C581	05-05-24
West Virginia (DW)	State	9930C	01-31-25
Wisconsin	State	998204680	08-31-24
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1

BP/ARC Project Name: BP IPO
BP/ARC Facility No: BP Hyde Park
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd	Consultant/Contractor:	AECOM
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305	Consultant/Contractor Project No:	60481767.105.24.01H
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC	Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:		Consultant/Contractor PM:	James Kaczor
Lab Shipping Accnt:		Enfos Proposal No:		Phone:	716-923-1300
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To:	James.Kaczor@aecom.com
Other Info:	PO # 1643548	Stage:	Activity:	Invoice To:	BP/ARC ___ Contractor X

BP/ARC EBM:
EBM Phone:
EBM Email:

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	HNO3	HCl	NaOH/Zn-acetate	H2SO4	Requested Analyses: 8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	Comments
	MW-7A	4/23/24	0915		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	MW-17A	4/23/24	1105		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	FD-20240423	4/23/24	—		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	MW-12B-MS/MSD	4/23/24	1350		X		50	14	3	18	3	12	9	3	3	9	6	3	3	3	4	4	PFAS 1,4-Dioxane MS/MSD in same bottle (not enough bottle sets)
	MW-18A	4/23/24	1355		X		18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	TB-20240423	4/23/24	—		X		4			4			2			2							

240-203303 Chain of Custody

Sampler's Name:	T. Urban, D. VanHorter, S. Connelly	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	AECOM	[signature] / Accom	4/23/24	1630	[signature] TAB	4/23/24	1630
Shipment Method:	Dropoff at Eurofins Buffalo, NY	[signature] / Fedex	04/24/24	1600	[signature]	4/25/24	925
Shipment Tracking No:	Ship Date:						

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Temp 4.8 4.6 3.9 3.2 # ICE

BP/ARC LaMP COC Rev. 6 01/01/2009

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # : 203303**
Barberton Facility

Client BP IPD Site Name _____ Cooler unpacked by: Rachelle Haidet

Cooler Received on 4 25 24 Opened on 4 25 24

FedEx. 1st Grd (Exp) UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC ~~Foam Box~~ Client Cooler ~~Box~~ Other _____

Packing material used: ~~Bubble Wrap~~ Foam (Plastic Bag) None Other _____

COOLANT: (Wet Ice) ~~Blue Ice~~ Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 17 (CF +0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2	Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes) No
	Were the seals on the outside of the cooler(s) signed & dated?	(Yes) No NA
	-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes (No)
	-Were tamper/custody seals intact and uncompromised?	(Yes) No NA
3	Shippers' packing slip attached to the cooler(s)?	(Yes) No
4.	Did custody papers accompany the sample(s)?	(Yes) No
5	Were the custody papers relinquished & signed in the appropriate place?	(Yes) No
6.	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes (No)
7	Did all bottles arrive in good condition (Unbroken)?	(Yes) No
8	Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes) No
9	For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?	(Yes) No
10	Were correct bottle(s) used for the test(s) indicated?	(Yes) No
11	Sufficient quantity received to perform indicated analyses?	(Yes) No
12.	Are these work share samples and all listed on the COC?	Yes (No)
	If yes, Questions 13-17 have been checked at the originating laboratory	
13	Were all preserved sample(s) at the correct pH upon receipt?	(Yes) No NA pH Strip Lot# HC439975
14	Were VOAs on the COC?	(Yes) No
15	Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes (No) NA
16	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 0041301	(Yes) No
17	Was a LL Hg or Me Hg trip blank present? _____	Yes (No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by

_____

_____

_____

_____

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation Date/Time VOAs Frozen _____

Login #: 203303

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC) Client Box Other	IR GUN #: 17	27	2.9	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: 17	2.6	2.8	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: 17	1.5	1.7	(Wet Ice) Blue Ice Dry Ice Water None
(EC) Client Box Other	IR GUN #: 17	30	32	(Wet Ice) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

4/25/2024

Login Container Summary Report

240-203303

5/7/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
MW-7A	240-203303-A-1	Plastic 1 liter - unpreserved				
MW-7A	240-203303 B-1	Voa Vial 40ml - Hydrochloric Acid				
MW-7A	240-203303-C-1	Voa Vial 40ml - Hydrochloric Acid				
MW 7A	240-203303 D-1	Voa Vial 40ml - Hydrochloric Acid				
MW-7A	240-203303-E-1	Voa Vial 40ml - HCL/rubber septa				
MW 7A	240-203303 F-1	Voa Vial 40ml - HCL/rubber septa				
MW-7A	240-203303-G-1	Voa Vial 40ml - HCL/rubber septa				
MW 7A	240-203303 H 1	Voa Vial 40ml - with Sulfuric Acid				
MW-7A	240-203303-I-1	Voa Vial 40ml - with Sulfuric Acid				
MW 7A	240-203303-J 1	Voa Vial 40ml - with Sulfuric Acid				
MW-7A	240-203303-K-1	Plastic 60 mL - unpreserved				
MW-7A	240-203303-L-1	Plastic 250ml - unpreserved				
MW-7A	240-203303-M 1	Plastic 250ml - unpreserved				
MW-7A	240-203303-N-1	Plastic 250ml - with Sulfuric Acid	<2			
MW 7A	240-203303-O-1	Plastic 500ml - with Zn Acetate and NaOH	>9			
MW-7A	240-203303-P-1	Plastic 500ml with Nitric Acid	<2			
MW 7A	240-203303-Q-1	Amber Glass 1 liter - unpreserved				
MW-7A	240 203303 R 1	Amber Glass 1 liter - unpreserved				
MW 17A	240-203303-A-2	Plastic 1 liter unpreserved				
MW-17A	240-203303-B-2	Voa Vial 40ml - Hydrochloric Acid				
MW-17A	240-203303-C-2	Voa Vial 40ml - Hydrochloric Acid				
MW-17A	240-203303-D-2	Voa Vial 40ml - Hydrochloric Acid				
MW-17A	240-203303 E-2	Voa Vial 40ml - HCL/rubber septa				
MW-17A	240-203303-F-2	Voa Vial 40ml - HCL/rubber septa				
MW 17A	240-203303-G-2	Voa Vial 40ml - HCL/rubber septa				
MW-17A	240-203303-H-2	Voa Vial 40ml - with Sulfuric Acid				
MW-17A	240-203303-I-2	Voa Vial 40ml - with Sulfuric Acid				
MW-17A	240-203303-J-2	Voa Vial 40ml - with Sulfuric Acid				
MW-17A	240-203303-K-2	Plastic 60 mL - unpreserved				
MW 17A	240-203303 L-2	Plastic 250ml unpreserved				
MW-17A	240-203303-M-2	Plastic 250ml - unpreserved				
MW 17A	240-203303 N-2	Plastic 250ml - with Sulfuric Acid	<2			
MW 17A	240-203303-O-2	Plastic 500ml with Zn Acetate and NaOH	>9			
MW 17A	240-203303-P-2	Plastic 500ml - with Nitric Acid	<2			
MW 17A	240-203303-Q-2	Amber Glass 1 liter unpreserved				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
MW-17A	240-203303 R-2	Amber Glass 1 liter - unpreserved				
FD-20240423	240-203303-A-3	Plastic 1 liter - unpreserved				
FD-20240423	240-203303-B-3	Voa Vial 40ml - Hydrochloric Acid				
FD-20240423	240-203303-C-3	Voa Vial 40ml - Hydrochloric Acid				
FD-20240423	240 203303-D-3	Voa Vial 40ml - Hydrochloric Acid				
FD-20240423	240-203303-E-3	Voa Vial 40ml - HCL/rubber septa				
FD-20240423	240-203303 F-3	Voa Vial 40ml HCL/rubber septa				
FD-20240423	240-203303-G-3	Voa Vial 40ml - HCL/rubber septa				
FD-20240423	240 203303-H-3	Voa Vial 40ml - with Sulfuric Acid				
FD-20240423	240-203303-I-3	Voa Vial 40ml - with Sulfuric Acid				
FD-20240423	240-203303-J-3	Voa Vial 40ml - with Sulfuric Acid				
FD-20240423	240-203303-K-3	Plastic 60 mL - unpreserved				
FD-20240423	240-203303-L-3	Plastic 250ml unpreserved				
FD-20240423	240-203303-M-3	Plastic 250ml - unpreserved				
FD-20240423	240-203303-N-3	Plastic 250ml - with Sulfuric Acid	<2			
FD-20240423	240-203303-O-3	Plastic 500ml - with Zn Acetate and NaOH	>9			
FD-20240423	240-203303-P-3	Plastic 500ml - with Nitric Acid	<2			
FD-20240423	240-203303-Q-3	Amber Glass 1 liter - unpreserved				
FD-20240423	240-203303-R-3	Amber Glass 1 liter - unpreserved				
MW-12B	240-203303-A-4	Plastic 1 liter unpreserved				
MW-12B	240-203303-A-4 MS	Plastic 1 liter - unpreserved				
MW-12B	240-203303-A-4 MSD	Plastic 1 liter - unpreserved				
MW-12B	240-203303-B-4	Voa Vial 40ml Hydrochloric Acid				
MW-12B	240-203303 B-4 MS	Voa Vial 40ml - Hydrochloric Acid				
MW 12B	240-203303-B-4 MSD	Voa Vial 40ml Hydrochloric Acid				
MW-12B	240-203303-C-4	Voa Vial 40ml - Hydrochloric Acid				
MW-12B	240-203303-C-4 MS	Voa Vial 40ml - Hydrochloric Acid				
MW 12B	240-203303-C-4 MSD	Voa Vial 40ml - Hydrochloric Acid				
MW-12B	240 203303 D-4	Voa Vial 40ml - Hydrochloric Acid				
MW-12B	240-203303-D-4 MS	Voa Vial 40ml - Hydrochloric Acid				
MW-12B	240-203303-D-4 MSD	Voa Vial 40ml - Hydrochloric Acid				
MW-12B	240-203303-E-4	Voa Vial 40ml - HCL/rubber septa				
MW 12B	240-203303-E-4 MS	Voa Vial 40ml - HCL/rubber septa				
MW-12B	240-203303-E-4 MSD	Voa Vial 40ml - HCL/rubber septa				
MW-12B	240 203303 F-4	Voa Vial 40ml - HCL/rubber septa				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
MW-12B	240-203303-F-4 MS	Voa Vial 40ml - HCL/rubber septa				
MW 12B	240-203303-F-4 MSD	Voa Vial 40ml - HCL/rubber septa				
MW-12B	240-203303-G-4	Voa Vial 40ml - HCL/rubber septa				
MW-12B	240-203303-G-4 MS	Voa Vial 40ml - HCL/rubber septa				
MW-12B	240-203303-G-4 MSD	Voa Vial 40ml - HCL/rubber septa				
MW-12B	240-203303 H-4	Voa Vial 40ml - with Sulfuric Acid				
MW-12B	240 203303-H-4 MS	Voa Vial 40ml - with Sulfuric Acid				
MW-12B	240-203303-H-4 MSD	Voa Vial 40ml - with Sulfuric Acid				
MW 12B	240-203303-I-4	Voa Vial 40ml - with Sulfuric Acid				
MW-12B	240-203303-I-4 MS	Voa Vial 40ml - with Sulfuric Acid				
MW 12B	240-203303-I-4 MSD	Voa Vial 40ml - with Sulfuric Acid				
MW-12B	240-203303-J-4	Voa Vial 40ml - with Sulfuric Acid				
MW-12B	240-203303-J-4 MS	Voa Vial 40ml - with Sulfuric Acid				
MW-12B	240-203303-J-4 MSD	Voa Vial 40ml - with Sulfuric Acid				
MW-12B	240-203303-K-4	Plastic 60 mL - unpreserved				
MW 12B	240 203303-K-4 MS	Plastic 60 mL - unpreserved				
MW-12B	240-203303-K-4 MSD	Plastic 60 mL unpreserved				
MW-12B	240-203303-L-4	Plastic 250ml - unpreserved				
MW-12B	240-203303 L-4 MS	Plastic 250ml - unpreserved				
MW-12B	240-203303-L-4 MSD	Plastic 250ml - with Sulfuric Acid	<2			
MW 12B	240-203303-M-4	Plastic 250ml - unpreserved				
MW-12B	240-203303-M-4 MS	Plastic 250ml - unpreserved				
MW-12B	240-203303-M-4 MSD	Plastic 500ml - with Zn Acetate and NaOH	>9			
MW-12B	240 203303 N-4	Plastic 250ml - with Sulfuric Acid	<2			
MW-12B	240-203303-N-4 MS	Plastic 250ml with Sulfuric Acid	<2			
MW-12B	240-203303-N-4 MSD	Plastic 500ml with Nitric Acid	<2			
MW-12B	240-203303-O-4	Plastic 500ml - with Zn Acetate and NaOH	>9			
MW 12B	240 203303-O-4 MS	Plastic 500ml - with Zn Acetate and NaOH	>9			
MW-12B	240-203303 P-4	Plastic 500ml - with Nitric Acid	<2			
MW-12B	240-203303-P-4 MS	Plastic 500ml with Nitric Acid	<2			
MW-12B	240-203303-Q-4	Amber Glass 1 liter - unpreserved				
MW-12B	240-203303-Q-4 MS	Amber Glass 1 liter - unpreserved				
MW-12B	240 203303-R-4	Amber Glass 1 liter unpreserved				
MW 12B	240-203303 R-4 MS	Amber Glass 1 liter - unpreserved				

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
MW-18A	240-203303-A-5	Plastic 1 liter - unpreserved				
MW-18A	240-203303 B-5	Voa Vial 40ml - Hydrochloric Acid				
MW-18A	240-203303-C-5	Voa Vial 40ml - Hydrochloric Acid				
MW-18A	240 203303 D-5	Voa Vial 40ml - Hydrochloric Acid				
MW-18A	240-203303-E-5	Voa Vial 40ml - HCL/rubber septa				
MW-18A	240-203303-F-5	Voa Vial 40ml - HCL/rubber septa				
MW-18A	240-203303-G-5	Voa Vial 40ml - HCL/rubber septa				
MW 18A	240-203303-H-5	Voa Vial 40ml - with Sulfuric Acid				
MW-18A	240-203303-I-5	Voa Vial 40ml - with Sulfuric Acid				
MW-18A	240-203303-J-5	Voa Vial 40ml - with Sulfuric Acid				
MW-18A	240-203303-K-5	Plastic 60 mL - unpreserved				
MW 18A	240-203303-L-5	Plastic 250ml - unpreserved				
MW-18A	240-203303-M-5	Plastic 250ml - unpreserved				
MW-18A	240-203303-N-5	Plastic 250ml - with Sulfuric Acid	<2			
MW-18A	240-203303-O-5	Plastic 500ml - with Zn Acetate and NaOH	>9			
MW-18A	240 203303-P-5	Plastic 500ml - with Nitric Acid	<2			
MW-18A	240-203303-Q-5	Amber Glass 1 liter - unpreserved				
MW-18A	240-203303-R-5	Amber Glass 1 liter - unpreserved				
TB-20240423	240-203303-A-6					
TB-20240423	240-203303 B-6					

Do not lift using this tag.

SAMPLE CONTROL
EUROFINS ENVIRONMENT TESTING
10 HAZELWOOD DRIVE

BUFFALO, NY 142282223
UNITED STATES US

ACTWGT: 42.40 LB
CAD: 0759273/CAFE3755
DIMS: 26x15x14 IN

BILL RECIPIENT

TO SAMPLE RECEIPT
EUROFINS CLEVELAND
180 S VAN BUREN AVE

BARBERTON OH 442033543
(330) 497-9396
REF: TA BARBERTON
PO: BP

FedEx Express

1 of 4

TRK# 0201 7117 9318 8666

THU - 25 APR 10:30
PRIORITY OVERNIGH

MASTER

NX CAKA

4420
OH-US C

240-203303 Waybill

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Opal	Carrier Tracking No(s):	COC No: 240-183719.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Opal.Johnson@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP New York		Job #: 240-203303-1
Address: 880 Riverside Parkway	Due Date Requested: 5/6/2024			Preservation Codes.
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: BP Hyde Park	Project #: 24018856			
Site:	SSOW#:			Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_PFC PFAS, Standard List (21 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-7A (240-203303-1)	4/23/24	09:15 Eastern		Water			X	2	BP LaMP
MW-17A (240-203303-2)	4/23/24	11:05 Eastern		Water			X	2	BP LaMP
FD-20240423 (240-203303-3)	4/23/24	Eastern		Water			X	2	BP LaMP
MW-12B (240-203303-4)	4/23/24	13:30 Eastern		Water			X	2	BP LaMP
MW-12B (240-203303-4MS)	4/23/24	13:30 Eastern	MS	Water			X	1	BP LaMP
MW-12B (240-203303-4MSD)	4/23/24	13:30 Eastern	MSD	Water			X	1	BP LaMP
MW-18A (240-203303-5)	4/23/24	13:55 Eastern		Water			X	2	BP LaMP

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	4-26-24 1200	[illegible]	[signature]	4/29/24 9 15	FEDEX
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 19.2

Ver: 06/08/2021

eurofins | Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Tracking # 7180 5081 2825

Job 240-203303 Field Sheet

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm. ID L-09 Corr Factor (+/-) N/A °C

Ice_____ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: —

Cooler ID: —

Temp Observed 19.2 °C Corrected 19.2 °C

From Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☐	☒	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials FSH Date: 4/29/24

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
COC is complete w/o discrepancies	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☒	☐
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials FSH Date: 4/29/24

Notes NCM ice melted water only

Trizma Lot #(s) _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
NCM Filed?	☒	☐	☐
Samples received within hold time?	☐	☐	☒
Log Release checked in TALS?	☐	☐	☒

Initials FSH Date: 4/29/24

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP IPO
BP/ARC Facility No: BP Hyde Park
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:	
Lab Shipping Accnt:		Enfos Proposal No:	
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___
Other Info:	PO # 1643548	Stage:	Activity:
BP/ARC EBM:			
EBM Phone:			
EBM Email:			

Consultant/Contractor:	AECOM	
Consultant/Contractor Project No:	60481767.105.24.01H	
Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202	
Consultant/Contractor PM:	James Kaczor	
Phone:	716-923-1300	
Email EDD To:	James.Kaczor@aecom.com	
Invoice To:	BP/ARC ___	Contractor X

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4	Requested Analyses: 8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	Report Type & QC Level
	MW-7A	4/23/24	0915		X			18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	Standard ___
	MW-17A	4/23/24	1105		X			18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	Full Data Package ___
	FD-20240423	4/23/24	—		X			18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	
	MW-123-MS/MSD	4/23/24	1330		X			50	14	3	18	3	12	9	3	3	9	6	3	3	3	4	4	PFAS 1,4 Dioxane MS/ in same bottle (not eno
	MW-18A	4/23/24	1355		X			18	6	1	6	1	4	3	1	1	3	2	1	1	1	2	2	bottle sets)
	TB-20240423	4/23/24	—		X			4			4			2			2							

Comments
Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

240-203303 Chain of Custody

Sampler's Name:	T. Urban D. VanHorter S. Connelly	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation / Date / Time
Sampler's Company:	AECOM				
Shipment Method:	Dropoff at Eurofins Buffalo, NY	Ship Date:	4/23/24	1630	TAB 4/23/24 1630
Shipment Tracking No:					

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Temp 4.1 4.6 3.9 3.2 # ICE

Login Sample Receipt Checklist

Client: AECOM

Job Number: 240-203303-1

Login Number: 203303
List Number: 2
Creator: Soto-Hernandez, Flor N

List Source: Eurofins Sacramento
List Creation: 04/29/24 10:06 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	19.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Isotope Dilution Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(15-110)
240-203303-1	MW-7A	32
240-203303-2	MW-17A	31
240-203303-3	FD-20240423	28
240-203303-4	MW-12B	31
240-203303-4 MS	MW-12B	34
240-203303-4 MSD	MW-12B	36
240-203303-5	MW-18A	37
LCS 480-709949/2-A	Lab Control Sample	57
MB 480-709949/1-A	Method Blank	42

Surrogate Legend

DXE = 1,4-Dioxane-d8

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	PFHxA	C4PFHA	PFOA	PFNA	PFDA	PFUnA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
240-203303-1	MW-7A	73	88	94	97	105	96	106	104
240-203303-2	MW-17A	70	81	85	91	99	90	99	111
240-203303-3	FD-20240423	69	79	85	90	101	90	98	102
240-203303-4	MW-12B	76	89	101	100	108	100	105	113
240-203303-4 MS	MW-12B	71	83	93	99	100	97	103	101
240-203303-4 MSD	MW-12B	70	85	94	100	101	95	102	104
240-203303-5	MW-18A	85	95	98	102	109	99	110	109
LCS 320-758271/2-A	Lab Control Sample	82	91	87	102	102	94	105	110
MB 320-758271/1-A	Method Blank	81	91	92	100	104	100	107	117

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFDoA	PFTDA	C3PFBS	PFHxS	PFOS	PFOSA	d3NMFOS	d5NEFOS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
240-203303-1	MW-7A	100	103	97	98	105	112	88	95
240-203303-2	MW-17A	90	97	92	91	100	102	83	91
240-203303-3	FD-20240423	91	94	88	87	95	105	81	91
240-203303-4	MW-12B	96	104	99	100	101	107	86	96
240-203303-4 MS	MW-12B	103	110	99	100	98	101	80	93
240-203303-4 MSD	MW-12B	103	104	97	99	101	100	80	92
240-203303-5	MW-18A	102	107	105	102	108	114	89	104
LCS 320-758271/2-A	Lab Control Sample	102	108	100	106	105	101	78	85
MB 320-758271/1-A	Method Blank	107	111	103	106	110	106	87	96

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		M262FTS	M282FTS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)
240-203303-1	MW-7A	100	105
240-203303-2	MW-17A	91	99
240-203303-3	FD-20240423	92	91
240-203303-4	MW-12B	95	90
240-203303-4 MS	MW-12B	93	94
240-203303-4 MSD	MW-12B	94	91
240-203303-5	MW-18A	93	102

Isotope Dilution Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203303-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)								
LCS 320-758271/2-A	Lab Control Sample	93	90								
MB 320-758271/1-A	Method Blank	89	94								

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5-PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ann Marie Kropovitch
AECOM
50 Lakefront Boulevard
Suite 111
Buffalo, New York 14202

Generated 5/7/2024 9:28:07 PM

JOB DESCRIPTION

BP Hyde Park

JOB NUMBER

240-203359-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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Authorization

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Authorized for release by
Opal Johnson, Project Manager II
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(330)966-9279

Table of Contents

Definitions/Glossary

Client: AECOM
Job ID: 240-203359-1
Project/Site: BP Hyde Park

Qualifiers

General Chemistry

Qualifier	Qualifier Description
b	Result Detected in the Unseeded Control blank (USB).
F1	MS and/or MSD recovery exceeds control limits.

Glossary

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

Job ID: 240-203359-1 — Eurofins Cleveland

Job Narrative
240-203359-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/24/2024 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

General Chemistry
Method 300_48HR: The following samples were diluted due to the nature of the sample matrix: MW-5A (240-203359-2), MW-15 (240-203359-3), MW-5B (240-203359-5), MW-10A (240-203359-6), MW-10B (240-203359-7) and MW-18B (240-203359-8). Elevated reporting limits (RLs) are provided.

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

Method Summary

Client: AECOM
Job ID: 240-203359-1
Project/Site: BP Hyde Park

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET BUF
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET BUF
353.2	Nitrogen, Nitrite	EPA	EET BUF
SM 5210B	BOD, 5-Day	SM	EET BUF

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: AECOM
Job ID: 240-203359-1
Project/Site: BP Hyde Park

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-203359-2	MW-5A	Water	04/24/24 08:35	04/24/24 16:20
240-203359-3	MW-15	Water	04/24/24 09:15	04/24/24 16:20
240-203359-5	MW-5B	Water	04/24/24 11:55	04/24/24 16:20
240-203359-6	MW-10A	Water	04/24/24 12:05	04/24/24 16:20
240-203359-7	MW-10B	Water	04/24/24 13:35	04/24/24 16:20
240-203359-8	MW-18B	Water	04/24/24 13:40	04/24/24 16:20
240-203359-9	RB-20240424	Water	04/24/24 15:00	04/24/24 16:20

Detection Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-5A — Lab Sample ID: 240-203359-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Biochemical Oxygen Demand	2.8		2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW-15 — Lab Sample ID: 240-203359-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Biochemical Oxygen Demand	6.7		2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: MW-5B — Lab Sample ID: 240-203359-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrite as N	0.75		0.25	0.13	mg/L	5		300.0	Total/NA

Client Sample ID: MW-10A — Lab Sample ID: 240-203359-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrite as N	0.74		0.25	0.13	mg/L	5		300.0	Total/NA

Client Sample ID: MW-10B — Lab Sample ID: 240-203359-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrite as N	0.81		0.25	0.13	mg/L	5		300.0	Total/NA

Client Sample ID: MW-18B — Lab Sample ID: 240-203359-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrite as N	0.65		0.25	0.13	mg/L	5		300.0	Total/NA
Biochemical Oxygen Demand	4.4	b	2.0	2.0	mg/L	1		SM 5210B	Total/NA

Client Sample ID: RB-20240424 — Lab Sample ID: 240-203359-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.52		0.050	0.025	mg/L	1		300.0	Total/NA
Nitrite as N	0.15		0.050	0.025	mg/L	1		300.0	Total/NA
Nitrate Nitrite as N	0.57		0.050	0.020	mg/L	1		353.2	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-5A
Date Collected: 04/24/24 08:35
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (EPA 300.0)	ND		0.10	0.050	mg/L			04/26/24 01:36	2
Nitrite as N (EPA 300.0)	ND		0.10	0.050	mg/L			04/26/24 01:36	2
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 12:20	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/25/24 23:05	1
Biochemical Oxygen Demand (SM 5210B)	**2.8**		2.0	2.0	mg/L			04/25/24 16:09	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-15
Date Collected: 04/24/24 09:15
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-3
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/26/24 01:50	5
Nitrite as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/26/24 01:50	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 12:22	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/25/24 23:03	1
Biochemical Oxygen Demand (SM 5210B)	**6.7**		2.0	2.0	mg/L			04/25/24 16:09	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-5B
Date Collected: 04/24/24 11:55
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-5
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/26/24 02:05	5
Nitrite as N (EPA 300.0)	**0.75**		0.25	0.13	mg/L			04/26/24 02:05	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 12:23	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/25/24 23:10	1
Biochemical Oxygen Demand (SM 5210B)	ND		2.0	2.0	mg/L			04/26/24 11:35	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-10A
Date Collected: 04/24/24 12:05
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-6
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/26/24 02:20	5
Nitrite as N (EPA 300.0)	**0.74**		0.25	0.13	mg/L			04/26/24 02:20	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 12:25	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/25/24 23:08	1
Biochemical Oxygen Demand (SM 5210B)	ND		2.0	2.0	mg/L			04/26/24 11:35	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-10B
Date Collected: 04/24/24 13:35
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-7
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/26/24 02:35	5
Nitrite as N (EPA 300.0)	**0.81**		0.25	0.13	mg/L			04/26/24 02:35	5
Nitrate Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			05/07/24 12:26	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/25/24 23:06	1
Biochemical Oxygen Demand (SM 5210B)	ND		3.0	3.0	mg/L			04/26/24 11:35	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-18B
Date Collected: 04/24/24 13:40
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-8
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (EPA 300.0)	ND		0.25	0.13	mg/L			04/26/24 02:49	5
Nitrite as N (EPA 300.0)	**0.65**		0.25	0.13	mg/L			04/26/24 02:49	5
Nitrate Nitrite as N (EPA 353.2)	ND	F1	0.050	0.020	mg/L			05/07/24 12:30	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/25/24 23:09	1
Biochemical Oxygen Demand (SM 5210B)	**4.4**	**b**	2.0	2.0	mg/L			04/26/24 11:35	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: RB-20240424
Date Collected: 04/24/24 15:00
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-9
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N (EPA 300.0)	**0.52**		0.050	0.025	mg/L			04/26/24 03:04	1
Nitrite as N (EPA 300.0)	**0.15**		0.050	0.025	mg/L			04/26/24 03:04	1
Nitrate Nitrite as N (EPA 353.2)	**0.57**		0.050	0.020	mg/L			05/07/24 12:33	1
Nitrite as N (EPA 353.2)	ND		0.050	0.020	mg/L			04/25/24 23:12	1
Biochemical Oxygen Demand (SM 5210B)	ND		2.0	2.0	mg/L			04/26/24 11:35	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-709431/28
Matrix: Water
Analysis Batch: 709431

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.050	0.025	mg/L			04/25/24 22:09	1
Nitrite as N	ND		0.050	0.025	mg/L			04/25/24 22:09	1

Lab Sample ID: LCS 480-709431/29
Matrix: Water
Analysis Batch: 709431

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.01	4.85		mg/L		97	90 - 110

Lab Sample ID: 240-203359-9 MS
Matrix: Water
Analysis Batch: 709431

Client Sample ID: RB-20240424
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.52		5.01	5.39		mg/L		97	80 - 120

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 480-709497/27
Matrix: Water
Analysis Batch: 709497

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.050	0.020	mg/L			04/25/24 22:10	1

Lab Sample ID: MB 480-709497/51
Matrix: Water
Analysis Batch: 709497

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.050	0.020	mg/L			04/25/24 22:43	1

Lab Sample ID: LCS 480-709497/28
Matrix: Water
Analysis Batch: 709497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	1.50	1.58		mg/L		105	90 - 110

Lab Sample ID: LCS 480-709497/52
Matrix: Water
Analysis Batch: 709497

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	1.50	1.59		mg/L		106	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 480-711015/28
Matrix: Water
Analysis Batch: 711015

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/07/24 11:41	1

Lab Sample ID: MB 480-711015/52
Matrix: Water
Analysis Batch: 711015

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.050	0.020	mg/L			05/07/24 12:14	1

Lab Sample ID: LCS 480-711015/29
Matrix: Water
Analysis Batch: 711015

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.50	1.50		mg/L		100	90 - 110

Lab Sample ID: LCS 480-711015/53
Matrix: Water
Analysis Batch: 711015

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.50	1.49		mg/L		99	90 - 110

Lab Sample ID: 240-203359-8 MS
Matrix: Water
Analysis Batch: 711015

Client Sample ID: MW-18B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	ND	F1	1.00	0.864	F1	mg/L		86	90 - 110

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 480-709521/1
Matrix: Water
Analysis Batch: 709521

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			04/25/24 16:09	1

Lab Sample ID: LCS 480-709521/2
Matrix: Water
Analysis Batch: 709521

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	197	206		mg/L		105	85 - 115

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Method: SM 5210B - BOD, 5-Day (Continued)

Lab Sample ID: USB 480-709634/1
Matrix: Water
Analysis Batch: 709634

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			04/26/24 11:35	1

Lab Sample ID: LCS 480-709634/2
Matrix: Water
Analysis Batch: 709634

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Biochemical Oxygen Demand			197	196		mg/L		99	85 - 115		

General Chemistry

Analysis Batch: 709431

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203359-2	MW-5A	Total/NA	Water	300.0	
240-203359-3	MW-15	Total/NA	Water	300.0	
240-203359-5	MW-5B	Total/NA	Water	300.0	
240-203359-6	MW-10A	Total/NA	Water	300.0	
240-203359-7	MW-10B	Total/NA	Water	300.0	
240-203359-8	MW-18B	Total/NA	Water	300.0	
240-203359-9	RB-20240424	Total/NA	Water	300.0	
MB 480-709431/28	Method Blank	Total/NA	Water	300.0	
LCS 480-709431/29	Lab Control Sample	Total/NA	Water	300.0	
240-203359-9 MS	RB-20240424	Total/NA	Water	300.0	

Analysis Batch: 709497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203359-2	MW-5A	Total/NA	Water	353.2	
240-203359-3	MW-15	Total/NA	Water	353.2	
240-203359-5	MW-5B	Total/NA	Water	353.2	
240-203359-6	MW-10A	Total/NA	Water	353.2	
240-203359-7	MW-10B	Total/NA	Water	353.2	
240-203359-8	MW-18B	Total/NA	Water	353.2	
240-203359-9	RB-20240424	Total/NA	Water	353.2	
MB 480-709497/27	Method Blank	Total/NA	Water	353.2	
MB 480-709497/51	Method Blank	Total/NA	Water	353.2	
LCS 480-709497/28	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-709497/52	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 709521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203359-2	MW-5A	Total/NA	Water	SM 5210B	
240-203359-3	MW-15	Total/NA	Water	SM 5210B	
USB 480-709521/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 480-709521/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 709634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203359-5	MW-5B	Total/NA	Water	SM 5210B	
240-203359-6	MW-10A	Total/NA	Water	SM 5210B	
240-203359-7	MW-10B	Total/NA	Water	SM 5210B	
240-203359-8	MW-18B	Total/NA	Water	SM 5210B	
240-203359-9	RB-20240424	Total/NA	Water	SM 5210B	
USB 480-709634/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 480-709634/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 711015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203359-2	MW-5A	Total/NA	Water	353.2	
240-203359-3	MW-15	Total/NA	Water	353.2	
240-203359-5	MW-5B	Total/NA	Water	353.2	
240-203359-6	MW-10A	Total/NA	Water	353.2	
240-203359-7	MW-10B	Total/NA	Water	353.2	
240-203359-8	MW-18B	Total/NA	Water	353.2	
240-203359-9	RB-20240424	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 711015 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-711015/28	Method Blank	Total/NA	Water	353.2	
MB 480-711015/52	Method Blank	Total/NA	Water	353.2	
LCS 480-711015/29	Lab Control Sample	Total/NA	Water	353.2	
LCS 480-711015/53	Lab Control Sample	Total/NA	Water	353.2	
240-203359-8 MS	MW-18B	Total/NA	Water	353.2	

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-5A
Date Collected: 04/24/24 08:35
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		2	709431	AF	EET BUF	04/26/24 01:36
Total/NA	Analysis	353.2		1	709497	KB	EET BUF	04/25/24 23:05
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:20
Total/NA	Analysis	SM 5210B		1	709521	CG	EET BUF	04/25/24 16:09

Client Sample ID: MW-15
Date Collected: 04/24/24 09:15
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	709431	AF	EET BUF	04/26/24 01:50
Total/NA	Analysis	353.2		1	709497	KB	EET BUF	04/25/24 23:03
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:22
Total/NA	Analysis	SM 5210B		1	709521	CG	EET BUF	04/25/24 16:09

Client Sample ID: MW-5B
Date Collected: 04/24/24 11:55
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	709431	AF	EET BUF	04/26/24 02:05
Total/NA	Analysis	353.2		1	709497	KB	EET BUF	04/25/24 23:10
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:23
Total/NA	Analysis	SM 5210B		1	709634	CG	EET BUF	04/26/24 11:35

Client Sample ID: MW-10A
Date Collected: 04/24/24 12:05
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	709431	AF	EET BUF	04/26/24 02:20
Total/NA	Analysis	353.2		1	709497	KB	EET BUF	04/25/24 23:08
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:25
Total/NA	Analysis	SM 5210B		1	709634	CG	EET BUF	04/26/24 11:35

Client Sample ID: MW-10B
Date Collected: 04/24/24 13:35
Date Received: 04/24/24 16:20

Lab Sample ID: 240-203359-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	709431	AF	EET BUF	04/26/24 02:35
Total/NA	Analysis	353.2		1	709497	KB	EET BUF	04/25/24 23:06
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:26
Total/NA	Analysis	SM 5210B		1	709634	CG	EET BUF	04/26/24 11:35

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203359-1

Client Sample ID: MW-18B

Lab Sample ID: 240-203359-8

Date Collected: 04/24/24 13:40

Matrix: Water

Date Received: 04/24/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		5	709431	AF	EET BUF	04/26/24 02:49
Total/NA	Analysis	353.2		1	709497	KB	EET BUF	04/25/24 23:09
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:30
Total/NA	Analysis	SM 5210B		1	709634	CG	EET BUF	04/26/24 11:35

Client Sample ID: RB-20240424

Lab Sample ID: 240-203359-9

Date Collected: 04/24/24 15:00

Matrix: Water

Date Received: 04/24/24 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	709431	AF	EET BUF	04/26/24 03:04
Total/NA	Analysis	353.2		1	709497	KB	EET BUF	04/25/24 23:12
Total/NA	Analysis	353.2		1	711015	KB	EET BUF	05/07/24 12:33
Total/NA	Analysis	SM 5210B		1	709634	CG	EET BUF	04/26/24 11:35

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: AECOM
Job ID: 240-203359-1
Project/Site: BP Hyde Park

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-23 *
Connecticut	State	PH-0807	03-31-25
Florida	NELAP	E87672	06-30-23 *
Georgia	State	10026 (NY)	03-31-25
Georgia	State Program	N/A	03-31-09 *
Illinois	NELAP	200003	09-30-24
Iowa	State	374	03-01-25
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	02-01-25
Kentucky (UST)	State	108092	04-01-24 *
Kentucky (WW)	State	KY90029	12-31-24
Louisiana	NELAP	02031	06-30-23 *
Louisiana (All)	NELAP	02031	06-30-23 *
Maine	State	NY00044	12-04-24
Maryland	State	294	06-30-24
Massachusetts	State	M-NY044	07-01-24
Michigan	State	9937	03-31-25
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-24
New Jersey	NELAP	NY455	06-30-24
New York	NELAP	10026	03-31-25
Pennsylvania	NELAP	68-00281	08-31-24
Rhode Island	State	LAO00378	12-30-24
Texas	NELAP	T104704412-18-10	07-31-23 *
Virginia	NELAP	460185	09-14-24
Washington	State	C784	02-10-25
Wisconsin	State	998310390	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Login Sample Receipt Checklist

Client: AECOM

Job Number: 240-203359-1

Login Number: 203359

List Number: 1

Creator: Johnson, Opal

List Source: Eurofins Cleveland

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ann Marie Kropovitch
AECOM
50 Lakefront Boulevard
Suite 111
Buffalo, New York 14202

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JOB DESCRIPTION

BP Hyde Park

JOB NUMBER

240-203418-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

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Authorized for release by
Opal Johnson, Project Manager II
Opal.Johnson@et.eurofinsus.com
(330)966-9279

Table of Contents

Definitions/Glossary

Client: AECOM
Job ID: 240-203418-1
Project/Site: BP Hyde Park

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job Narrative
240-203418-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/26/2024 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-611871 was outside the method criteria for the following analyte(s): 1,1-Dichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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

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

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

General Chemistry
Method 5210B: The glucose-glutamic acid standard (LCS) recovered outside the recovery limits specified in the method in batch 240-611041. The method holding time had expired, therefore the analysis was not repeated. The data was qualified and reported.

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

Method Summary

Client: AECOM
Job ID: 240-203418-1
Project/Site: BP Hyde Park

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
RSK-175	Dissolved Gases (GC)	RSK	EET CLE
6010D	Metals (ICP)	SW846	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
410.4	COD	EPA	EET CLE
4500 S2 F-2000	Sulfide, Total	SM	EET CLE
5210B-2001	BOD, 5-Day	SM	EET CLE
5310C-2000	Total Organic Carbon/Persulfate - Ultrav	SM	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
5030C	Purge and Trap	SW846	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-203418-1	MW-17B	Water	04/25/24 09:15	04/26/24 10:10
240-203418-2	MW-7B	Water	04/25/24 09:25	04/26/24 10:10
240-203418-3	TB-20240425	Water	04/25/24 00:00	04/26/24 10:10

Detection Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Client Sample ID: MW-17B — Lab Sample ID: 240-203418-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	7.7		1.0	0.47	ug/L	1		8260D	Total/NA
Chloroethane	2.2		1.0	0.83	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	5.9		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	5.8		1.0	0.45	ug/L	1		8260D	Total/NA
Methane	27000		20	3.5	ug/L	20		RSK-175	Total/NA
Ethane	36		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	11		1.0	0.12	ug/L	1		RSK-175	Total/NA
Iron	130	J	200	83	ug/L	1		6010D	Dissolved
Chloride	120		1.0	0.13	mg/L	1		300.0	Total/NA
Sulfate	120		1.0	0.35	mg/L	1		300.0	Total/NA
Chemical Oxygen Demand	22		10	1.8	mg/L	1		410.4	Total/NA
Sulfide	4.0		1.0	0.27	mg/L	1		4500 S2 F-2000	Total/NA
Biochemical Oxygen Demand	17	*-	2.0	2.0	mg/L	1		5210B-2001	Total/NA
Total Organic Carbon	3.9		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: MW-7B — Lab Sample ID: 240-203418-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.7		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	11		1.0	0.45	ug/L	1		8260D	Total/NA
Methane	200		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	0.42	J	1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	3.5		1.0	0.12	ug/L	1		RSK-175	Total/NA
Chloride	190		1.0	0.13	mg/L	1		300.0	Total/NA
Sulfate	250		5.0	1.7	mg/L	5		300.0	Total/NA
Chemical Oxygen Demand	11		10	1.8	mg/L	1		410.4	Total/NA
Sulfide	0.80	J	1.0	0.27	mg/L	1		4500 S2 F-2000	Total/NA
Total Organic Carbon	3.1		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: TB-20240425 — Lab Sample ID: 240-203418-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Client Sample ID: MW-17B

Date Collected: 04/25/24 09:15
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203418-1

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 14:59	1
1,1-Dichloroethane	**7.7**		1.0	0.47	ug/L			05/04/24 14:59	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 14:59	1
Chloroethane	**2.2**		1.0	0.83	ug/L			05/04/24 14:59	1
cis-1,2-Dichloroethene	**5.9**		1.0	0.46	ug/L			05/04/24 14:59	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 14:59	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 14:59	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 14:59	1
Vinyl chloride	**5.8**		1.0	0.45	ug/L			05/04/24 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*89*		*78 - 122*		*05/04/24 14:59*	*1*
Dibromofluoromethane (Surr)	*108*		*73 - 120*		*05/04/24 14:59*	*1*
4-Bromofluorobenzene (Surr)	*78*		*56 - 136*		*05/04/24 14:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*62 - 137*		*05/04/24 14:59*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**27000**		20	3.5	ug/L			05/01/24 16:10	20
Ethane	**36**		1.0	0.29	ug/L			04/30/24 20:48	1
Ethylene	**11**		1.0	0.12	ug/L			04/30/24 20:48	1
Propane	ND		1.0	0.38	ug/L			04/30/24 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*95*		*60 - 140*		*04/30/24 20:48*	*1*
1,1,1-Trifluoroethane	*100*		*60 - 140*		*05/01/24 16:10*	*20*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**130**	**J**	200	83	ug/L		04/30/24 05:00	05/01/24 20:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**120**		1.0	0.13	mg/L			04/27/24 00:33	1
Nitrite as N (EPA 300.0)	ND		0.10	0.014	mg/L			04/27/24 00:33	1
Nitrate as N (EPA 300.0)	ND		0.10	0.015	mg/L			04/27/24 00:33	1
Sulfate (EPA 300.0)	**120**		1.0	0.35	mg/L			04/27/24 00:33	1
Chemical Oxygen Demand (EPA 410.4)	**22**		10	1.8	mg/L			05/06/24 10:01	1
Sulfide (SM 4500 S2 F-2000)	**4.0**		1.0	0.27	mg/L			04/29/24 08:06	1
Biochemical Oxygen Demand (SM 5210B-2001)	**17**	***-**	2.0	2.0	mg/L			04/26/24 16:04	1
Total Organic Carbon (SM 5310C-2000)	**3.9**		1.0	0.44	mg/L			04/30/24 08:34	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Client Sample ID: MW-7B

Date Collected: 04/25/24 09:25
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203418-2

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 15:22	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 15:22	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 15:22	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 15:22	1
cis-1,2-Dichloroethene	**1.7**		1.0	0.46	ug/L			05/04/24 15:22	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 15:22	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 15:22	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 15:22	1
Vinyl chloride	**11**		1.0	0.45	ug/L			05/04/24 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/04/24 15:22*	*1*
Dibromofluoromethane (Surr)	*103*		*73 - 120*		*05/04/24 15:22*	*1*
4-Bromofluorobenzene (Surr)	*78*		*56 - 136*		*05/04/24 15:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*62 - 137*		*05/04/24 15:22*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**200**		1.0	0.17	ug/L			04/30/24 21:05	1
Ethane	**0.42**	**J**	1.0	0.29	ug/L			04/30/24 21:05	1
Ethylene	**3.5**		1.0	0.12	ug/L			04/30/24 21:05	1
Propane	ND		1.0	0.38	ug/L			04/30/24 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*96*		*60 - 140*		*04/30/24 21:05*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/30/24 05:00	05/01/24 20:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**190**		1.0	0.13	mg/L			04/27/24 01:14	1
Nitrite as N (EPA 300.0)	ND		0.10	0.014	mg/L			04/27/24 01:14	1
Nitrate as N (EPA 300.0)	ND		0.10	0.015	mg/L			04/27/24 01:14	1
Sulfate (EPA 300.0)	**250**		5.0	1.7	mg/L			04/27/24 01:34	5
Chemical Oxygen Demand (EPA 410.4)	**11**		10	1.8	mg/L			05/06/24 10:01	1
Sulfide (SM 4500 S2 F-2000)	**0.80**	**J**	1.0	0.27	mg/L			04/29/24 08:06	1
Biochemical Oxygen Demand (SM 5210B-2001)	ND	*-	2.0	2.0	mg/L			04/26/24 16:11	1
Total Organic Carbon (SM 5310C-2000)	**3.1**		1.0	0.44	mg/L			04/30/24 09:23	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Client Sample ID: TB-20240425
Date Collected: 04/25/24 00:00
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203418-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 13:02	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 13:02	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 13:02	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 13:02	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/04/24 13:02	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 13:02	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 13:02	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 13:02	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/04/24 13:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*78 - 122*		*05/04/24 13:02*	*1*
Dibromofluoromethane (Surr)	*101*		*73 - 120*		*05/04/24 13:02*	*1*
4-Bromofluorobenzene (Surr)	*81*		*56 - 136*		*05/04/24 13:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*62 - 137*		*05/04/24 13:02*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			04/30/24 21:22	1
Ethane	ND		1.0	0.29	ug/L			04/30/24 21:22	1
Ethylene	ND		1.0	0.12	ug/L			04/30/24 21:22	1
Propane	ND		1.0	0.38	ug/L			04/30/24 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*101*		*60 - 140*		*04/30/24 21:22*	*1*

Surrogate Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	DCA
Lab Sample ID	Client Sample ID	(78-122)	(73-120)	(56-136)	(62-137)
240-203418-1	MW-17B	89	108	78	89
240-203418-2	MW-7B	88	103	78	87
240-203418-3	TB-20240425	86	101	81	92
LCS 240-611871/4	Lab Control Sample	91	97	87	84
MB 240-611871/7	Method Blank	88	100	84	89

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		TFE1
Lab Sample ID	Client Sample ID	(60-140)
240-203418-1	MW-17B	95
240-203418-1	MW-17B	100
240-203418-2	MW-7B	96
240-203418-3	TB-20240425	101
LCS 240-611316/4	Lab Control Sample	101
LCS 240-611474/4	Lab Control Sample	100
MB 240-611316/3	Method Blank	103
MB 240-611474/3	Method Blank	104

Surrogate Legend

TFE = 1,1,1-Trifluoroethane

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-611871/7
Matrix: Water
Analysis Batch: 611871

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 12:38	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 12:38	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 12:38	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 12:38	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/04/24 12:38	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 12:38	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 12:38	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 12:38	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/04/24 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/04/24 12:38*	*1*
Dibromofluoromethane (Surr)	*100*		*73 - 120*		*05/04/24 12:38*	*1*
4-Bromofluorobenzene (Surr)	*84*		*56 - 136*		*05/04/24 12:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*62 - 137*		*05/04/24 12:38*	*1*

Lab Sample ID: LCS 240-611871/4
Matrix: Water
Analysis Batch: 611871

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	24.0		ug/L		96	64 - 131
1,1-Dichloroethane	25.0	24.2		ug/L		97	72 - 127
1,1-Dichloroethene	25.0	25.6		ug/L		102	63 - 134
Chloroethane	12.5	11.3		ug/L		90	38 - 152
cis-1,2-Dichloroethene	25.0	25.6		ug/L		102	77 - 123
Tetrachloroethene	25.0	28.3		ug/L		113	76 - 123
trans-1,2-Dichloroethene	25.0	26.7		ug/L		107	75 - 124
Trichloroethene	25.0	25.8		ug/L		103	70 - 122
Vinyl chloride	12.5	10.9		ug/L		87	60 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*91*		*78 - 122*
Dibromofluoromethane (Surr)	*97*		*73 - 120*
4-Bromofluorobenzene (Surr)	*87*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*84*		*62 - 137*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 240-611316/3
Matrix: Water
Analysis Batch: 611316

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			04/30/24 14:17	1
Ethane	ND		1.0	0.29	ug/L			04/30/24 14:17	1
Ethylene	ND		1.0	0.12	ug/L			04/30/24 14:17	1
Propane	ND		1.0	0.38	ug/L			04/30/24 14:17	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: MB 240-611316/3
Matrix: Water
Analysis Batch: 611316

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,1-Trifluoroethane	103		60 - 140		04/30/24 14:17	1

Lab Sample ID: LCS 240-611316/4
Matrix: Water
Analysis Batch: 611316

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	293		ug/L		103	80 - 120
Ethane	537	536		ug/L		100	80 - 120
Ethylene	506	506		ug/L		100	80 - 120
Propane	794	774		ug/L		98	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,1-Trifluoroethane	101		60 - 140

Lab Sample ID: MB 240-611474/3
Matrix: Water
Analysis Batch: 611474

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			05/01/24 12:46	1
Ethane	ND		1.0	0.29	ug/L			05/01/24 12:46	1
Ethylene	ND		1.0	0.12	ug/L			05/01/24 12:46	1
Propane	ND		1.0	0.38	ug/L			05/01/24 12:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1,1-Trifluoroethane	104		60 - 140		05/01/24 12:46	1

Lab Sample ID: LCS 240-611474/4
Matrix: Water
Analysis Batch: 611474

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	292		ug/L		103	80 - 120
Ethane	537	535		ug/L		100	80 - 120
Ethylene	506	503		ug/L		99	80 - 120
Propane	794	768		ug/L		97	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,1,1-Trifluoroethane	100		60 - 140

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-611172/1-A
Matrix: Water
Analysis Batch: 611559

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 611172

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/30/24 05:00	05/01/24 18:42	1

Lab Sample ID: LCS 240-611172/2-A
Matrix: Water
Analysis Batch: 611559

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 611172

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	9860		ug/L		99	80 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-611033/3
Matrix: Water
Analysis Batch: 611033

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/26/24 15:09	1
Sulfate	ND		1.0	0.35	mg/L			04/26/24 15:09	1

Lab Sample ID: LCS 240-611033/4
Matrix: Water
Analysis Batch: 611033

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.3		mg/L		101	90 - 110
Sulfate	50.0	50.9		mg/L		102	90 - 110

Lab Sample ID: MB 240-611034/3
Matrix: Water
Analysis Batch: 611034

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10	0.014	mg/L			04/26/24 15:09	1
Nitrate as N	ND		0.10	0.015	mg/L			04/26/24 15:09	1

Lab Sample ID: LCS 240-611034/4
Matrix: Water
Analysis Batch: 611034

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrite as N	2.50	2.47		mg/L		99	90 - 110
Nitrate as N	2.50	2.58		mg/L		103	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 240-611980/9
Matrix: Water
Analysis Batch: 611980

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	1.8	mg/L			05/06/24 10:01	1

Lab Sample ID: LCS 240-611980/10
Matrix: Water
Analysis Batch: 611980

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	41.2	39.8		mg/L		97	90 - 110

Method: 4500 S2 F-2000 - Sulfide, Total

Lab Sample ID: MB 240-611098/1
Matrix: Water
Analysis Batch: 611098

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.27	mg/L			04/29/24 08:06	1

Lab Sample ID: LCS 240-611098/2
Matrix: Water
Analysis Batch: 611098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	21.9	22.0		mg/L		101	80 - 120

Method: 5210B-2001 - BOD, 5-Day

Lab Sample ID: SCB 240-611041/2
Matrix: Water
Analysis Batch: 611041

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

Analyte	SCB Result	SCB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			04/26/24 10:50	1

Lab Sample ID: USB 240-611041/1
Matrix: Water
Analysis Batch: 611041

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		2.0	2.0	mg/L			04/26/24 10:47	1

Lab Sample ID: LCS 240-611041/3
Matrix: Water
Analysis Batch: 611041

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	166	*-	mg/L		84	85 - 115

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Method: 5310C-2000 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 240-611417/5
Matrix: Water
Analysis Batch: 611417

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.44	mg/L			04/29/24 21:45	1

Lab Sample ID: LCS 240-611417/21
Matrix: Water
Analysis Batch: 611417

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			16.3	15.9		mg/L		98	85 - 115		

GC/MS VOA

Analysis Batch: 611871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	8260D	
240-203418-2	MW-7B	Total/NA	Water	8260D	
240-203418-3	TB-20240425	Total/NA	Water	8260D	
MB 240-611871/7	Method Blank	Total/NA	Water	8260D	
LCS 240-611871/4	Lab Control Sample	Total/NA	Water	8260D	

GC VOA

Analysis Batch: 611316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	RSK-175	
240-203418-2	MW-7B	Total/NA	Water	RSK-175	
240-203418-3	TB-20240425	Total/NA	Water	RSK-175	
MB 240-611316/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-611316/4	Lab Control Sample	Total/NA	Water	RSK-175	

Analysis Batch: 611474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	RSK-175	
MB 240-611474/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-611474/4	Lab Control Sample	Total/NA	Water	RSK-175	

Metals

Prep Batch: 611172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Dissolved	Water	3005A	
240-203418-2	MW-7B	Dissolved	Water	3005A	
MB 240-611172/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-611172/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 611559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Dissolved	Water	6010D	611172
240-203418-2	MW-7B	Dissolved	Water	6010D	611172
MB 240-611172/1-A	Method Blank	Total Recoverable	Water	6010D	611172
LCS 240-611172/2-A	Lab Control Sample	Total Recoverable	Water	6010D	611172

General Chemistry

Analysis Batch: 611033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	300.0	
240-203418-2	MW-7B	Total/NA	Water	300.0	
240-203418-2	MW-7B	Total/NA	Water	300.0	
MB 240-611033/3	Method Blank	Total/NA	Water	300.0	
LCS 240-611033/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 611034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	300.0	
240-203418-2	MW-7B	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 611034 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-611034/3	Method Blank	Total/NA	Water	300.0	
LCS 240-611034/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 611041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	5210B-2001	
240-203418-2	MW-7B	Total/NA	Water	5210B-2001	
SCB 240-611041/2	Method Blank	Total/NA	Water	5210B-2001	
USB 240-611041/1	Method Blank	Total/NA	Water	5210B-2001	
LCS 240-611041/3	Lab Control Sample	Total/NA	Water	5210B-2001	

Analysis Batch: 611098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	4500 S2 F-2000	
240-203418-2	MW-7B	Total/NA	Water	4500 S2 F-2000	
MB 240-611098/1	Method Blank	Total/NA	Water	4500 S2 F-2000	
LCS 240-611098/2	Lab Control Sample	Total/NA	Water	4500 S2 F-2000	

Analysis Batch: 611417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	5310C-2000	
240-203418-2	MW-7B	Total/NA	Water	5310C-2000	
MB 240-611417/5	Method Blank	Total/NA	Water	5310C-2000	
LCS 240-611417/21	Lab Control Sample	Total/NA	Water	5310C-2000	

Analysis Batch: 611980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203418-1	MW-17B	Total/NA	Water	410.4	
240-203418-2	MW-7B	Total/NA	Water	410.4	
MB 240-611980/9	Method Blank	Total/NA	Water	410.4	
LCS 240-611980/10	Lab Control Sample	Total/NA	Water	410.4	

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203418-1

Client Sample ID: MW-17B

Lab Sample ID: 240-203418-1

Date Collected: 04/25/24 09:15

Matrix: Water

Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 14:59
Total/NA	Analysis	RSK-175		1	611316	JBN	EET CLE	04/30/24 20:48
Total/NA	Analysis	RSK-175		20	611474	JBN	EET CLE	05/01/24 16:10
Dissolved	Prep	3005A			611172	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611559	KLC	EET CLE	05/01/24 20:39
Total/NA	Analysis	300.0		1	611033	JWW	EET CLE	04/27/24 00:33
Total/NA	Analysis	300.0		1	611034	JWW	EET CLE	04/27/24 00:33
Total/NA	Analysis	410.4		1	611980	MS	EET CLE	05/06/24 10:01
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5210B-2001		1	611041	QUY8	EET CLE	04/26/24 16:04
Total/NA	Analysis	5310C-2000		1	611417	QUY8	EET CLE	04/30/24 08:34

Client Sample ID: MW-7B

Lab Sample ID: 240-203418-2

Date Collected: 04/25/24 09:25

Matrix: Water

Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 15:22
Total/NA	Analysis	RSK-175		1	611316	JBN	EET CLE	04/30/24 21:05
Dissolved	Prep	3005A			611172	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611559	KLC	EET CLE	05/01/24 20:44
Total/NA	Analysis	300.0		1	611033	JWW	EET CLE	04/27/24 01:14
Total/NA	Analysis	300.0		1	611034	JWW	EET CLE	04/27/24 01:14
Total/NA	Analysis	300.0		5	611033	JWW	EET CLE	04/27/24 01:34
Total/NA	Analysis	410.4		1	611980	MS	EET CLE	05/06/24 10:01
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5210B-2001		1	611041	QUY8	EET CLE	04/26/24 16:11
Total/NA	Analysis	5310C-2000		1	611417	QUY8	EET CLE	04/30/24 09:23

Client Sample ID: TB-20240425

Lab Sample ID: 240-203418-3

Date Collected: 04/25/24 00:00

Matrix: Water

Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 13:02
Total/NA	Analysis	RSK-175		1	611316	JBN	EET CLE	04/30/24 21:22

Laboratory References:

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: AECOM
Job ID: 240-203418-1
Project/Site: BP Hyde Park

Laboratory: Eurofins Cleveland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10975	04-02-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chloride
300.0		Water	Nitrate as N
300.0		Water	Nitrite as N
300.0		Water	Sulfate
5310C-2000		Water	Total Organic Carbon
RSK-175		Water	Ethane
RSK-175		Water	Ethylene
RSK-175		Water	Methane
RSK-175		Water	Propane

3.2/3.4

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP IPO
Req Due Date (mm/dd/yy):
Rush TAT: Yes ___ No X
BP/ARC Facility No: BP Hyde Park
Lab Work Order Number:

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd	Consultant/Contractor:	AECOM
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305	Consultant/Contractor Project No:	60481767.105.24.01H
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC	Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:		Consultant/Contractor PM:	James Kaczor
Lab Shipping Accnt:		Enfos Proposal No:		Phone:	716-923-1300
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To:	James.Kaczor@aecom.com
Other Info:	PO # 1643548	Stage:	Activity:	Invoice To:	BP/ARC ___ Contractor X
BP/ARC EBM:					
EBM Phone:					
EBM Email:					

Report Type & QC Level: Standard ___ Full Data Package ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4		8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Disslolved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	Comments
	MW-17B	4/25/24	0915		X			14	2	1	6	1	4		3	1	1	3	3	1	1	1			
	MW-7B	4/25/24	0925		X			14	2	1	6	1	4		3	1	1	3	3	1	1	1			
	TB-20240425	4/25/24	—		X			4			4				2			2							

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

240-203418 Chain of Custody

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	T. Morgan, D. VanHerder, S. Connelly						
Sampler's Company:	AECOM	S. Connelly / AECOM	4/25/24	1230	TAB	4-25-24	1230
Shipment Method:	Dropoff at Eurofins Buffalo, NY — Ship Date:	[illegible]	4/25/24	1606	J. MOROSKO	04/26/24	1010
Shipment Tracking No:							

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______°F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP/ARC LaMP COC Rev. 6 01/01/2009

Eurofins – Cleveland Sample Receipt Form/Narrative Login # · 203418
Barberton Facility

Client BP Hyde Park Site Name

Cooler unpacked by J MOROSKO

Cooler Received on 04/26/24 Opened on 04/26/24

FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

Receipt After-hours Drop-off Date/Time Storage Location

Eurofins Cooler # EC Foam Box Client Cooler Box Other

Packing material used Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☐ See Multiple Cooler Form

IR GUN # 17 (CF T0.2 °C) Observed Cooler Temp. 3.2 °C Corrected Cooler Temp 3.4 °C

2	Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes No
	-Were the seals on the outside of the cooler(s) signed & dated?	Yes No NA
	-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes No
	-Were tamper/custody seals intact and uncompromised?	Yes No NA
3	Shippers' packing slip attached to the cooler(s)?	Yes No
4	Did custody papers accompany the sample(s)?	Yes No
5	Were the custody papers relinquished & signed in the appropriate place?	Yes No
6	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes No
7	Did all bottles arrive in good condition (Unbroken)?	Yes No
8	Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes No
9	For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	
10	Were correct bottle(s) used for the test(s) indicated?	Yes No
11	Sufficient quantity received to perform indicated analyses?	Yes No
12.	Are these work share samples and all listed on the COC?	Yes No
	If yes, Questions 13-17 have been checked at the originating laboratory	
13	Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA pH Strip Lot# HC439975
14	Were VOAs on the COC?	Yes No
15	Were air bubbles >6 mm in any VOA vials? ● ← Larger than this	Yes No NA
16	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered	Yes No JM 4/26
17	Was a LL Hg or Me Hg trip blank present?	Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by

Added bottles to login, but did not add BOD or Nitrate-Nitrite test, per PM.

19 SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired

Sample(s) were received in a broken container

Sample(s) were received with bubble >6 mm in diameter (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory

Time preserved Preservative(s) added/Lot number(s)

VOA Sample Preservation Date/Time VOAs Frozen

4/26/2024

Login Container Summary Report

240-203418

5/7/2024

Temperature readings _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservation Added	Preservation Lot Number
MW-17B	240 203418-A-1	Voa Vial 40ml - Hydrochloric Acid				
MW-17B	240-203418-B-1	Voa Vial 40ml - Hydrochloric Acid				
MW 17B	240-203418-C-1	Voa Vial 40ml Hydrochloric Acid				
MW-17B	240-203418-D-1	Voa Vial 40ml - Hydrochloric Acid				
MW-17B	240 203418-E-1	Voa Vial 40ml - Hydrochloric Acid				
MW-17B	240-203418-F-1	Voa Vial 40ml Hydrochloric Acid				
MW-17B	240 203418-G-1	Voa Vial 40ml - with Sulfuric Acid				
MW-17B	240-203418-H-1	Voa Vial 40ml with Sulfuric Acid				
MW 17B	240-203418-I-1	Voa Vial 40ml - with Sulfuric Acid				
MW-17B	240-203418-J-1	Plastic 60 mL - unpreserved				
MW-17B	240-203418-K-1	Plastic 250ml - with Sulfuric Acid	<2			
MW-17B	240 203418 L-1	Plastic 500ml - with Zn Acetate and NaOH	>9			
MW-17B	240-203418-M-1	Plastic 500ml - w/ Nitric - Dis	<2			
MW-17B	240-203418-N-1	Plastic 1 liter - unpreserved				
MW 7B	240-203418 A 2	Voa Vial 40ml - Hydrochloric Acid				
MW-7B	240-203418-B-2	Voa Vial 40ml Hydrochloric Acid				
MW 7B	240-203418-C-2	Voa Vial 40ml - Hydrochloric Acid				
MW-7B	240-203418-D-2	Voa Vial 40ml - Hydrochloric Acid				
MW 7B	240-203418-E-2	Voa Vial 40ml - Hydrochloric Acid				
MW-7B	240-203418-F-2	Voa Vial 40ml - Hydrochloric Acid				
MW-7B	240-203418-G-2	Voa Vial 40ml with Sulfuric Acid				
MW-7B	240-203418 H 2	Voa Vial 40ml - with Sulfuric Acid				
MW-7B	240-203418-I-2	Voa Vial 40ml with Sulfuric Acid				
MW-7B	240-203418-J-2	Plastic 60 mL - unpreserved				
MW 7B	240-203418-K-2	Plastic 250ml - with Sulfuric Acid	<2			
MW-7B	240-203418 L-2	Plastic 500ml - with Zn Acetate and NaOH	>9			
MW-7B	240-203418-M-2	Plastic 500ml - w/ Nitric - Dis	<2			
MW-7B	240-203418 N 2	Plastic 1 liter - unpreserved				
TB-20240425	240-203418-A-3	Voa Vial 40ml Hydrochloric Acid				
TB-20240425	240-203418-B-3	Voa Vial 40ml - Hydrochloric Acid				
TB-20240425	240-203418-C-3	Voa Vial 40ml Hydrochloric Acid				
TB-20240425	240-203418-D-3	Voa Vial 40ml - Hydrochloric Acid				

5/7/2024

SAMPLE CONTROL
EUROFINS ENVIRONMENT TESTING
10 HAZELWOOD DRIVE

BUFFALO, NY 142282223
UNITED STATES US

ACTWGT: 37.80 LB
CAD: 0759273/CAFE3755
DIMS: 26x15x14 IN

BILL RECIPIENT

TO SAMPLE RECEIPT
EUROFINS CLEVELAND
180 S VAN BUREN AVE

BARBERTON OH 442033543
(330) 497-9396
REF: TA BARBERTON

Part # 159469-434 MTW EXP 01/25

FedEx Express

TRK# 0201 7117 9318 9456

FRI - 26 APR 10:30
PRIORITY OVERNIGHT

NX CAKA

44203
OH-US

240-203418 Waybill

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Ms. Ann Marie Kropovitch
AECOM
50 Lakefront Boulevard
Suite 111
Buffalo, New York 14202

Generated 5/17/2024 3:58:55 PM

JOB DESCRIPTION

BP Hyde Park

JOB NUMBER

240-203421-1

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton OH 44203

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization

Generated
5/17/2024 3:58:55 PM

Authorized for release by
Opal Johnson, Project Manager II
Opal.Johnson@et.eurofinsus.com
(330)966-9279

Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job Narrative
240-203421-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/26/2024 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.6°C, 1.7°C, 3.0°C and 3.4°C.

Receipt Exceptions
The following sample(s) was received at the laboratory outside the required temperature criteria:

Received cooler out of temperature ,19.2 C, cooler was delayed by FedEx.Only water in cooler indicates ice melted.

The following samples were in the cooler out of temperature:

Samples : 2,6 & 9 containers k &L

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-611871 was outside the method criteria for the following analyte(s): 1,1-Dichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-612132 was outside the method criteria for the following analyte(s): Trichloroethene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

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

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

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

PFAS
Method PFC_IDA: The following samples was received in 500 mL bottle: RB-20240424 (240-203421-9). The samples was transferred into new 250 mL bottle. After transferring into a new container, the sample was fortified with IDA then extracted.

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

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

General Chemistry
Method 300: The following sample(s) was received with less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-5B

Job ID: 240-203421-1 (Continued) Eurofins Cleveland

(240-203421-5), MW-10A (240-203421-6), MW-10B (240-203421-7), MW-18B (240-203421-8) and RB-20240424 (240-203421-9).

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

Method Summary

Client: AECOM
Job ID: 240-203421-1
Project/Site: BP Hyde Park

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CLE
8270D SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET BUF
RSK-175	Dissolved Gases (GC)	RSK	EET CLE
537 (modified)	Fluorinated Alkyl Substances	EPA	EET SAC
6010D	Metals (ICP)	SW846	EET CLE
300.0	Anions, Ion Chromatography	EPA	EET CLE
410.4	COD	EPA	EET CLE
4500 S2 F-2000	Sulfide, Total	SM	EET CLE
5310C-2000	Total Organic Carbon/Persulfate - Ultrav	SM	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF
3535	Solid-Phase Extraction (SPE)	SW846	EET SAC
5030C	Purge and Trap	SW846	EET CLE

Protocol References:

EPA = US Environmental Protection Agency

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique , RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: AECOM
Job ID: 240-203421-1
Project/Site: BP Hyde Park

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-203421-1	MW-13B	Water	04/24/24 08:05	04/26/24 10:10
240-203421-2	MW-5A	Water	04/24/24 08:35	04/26/24 10:10
240-203421-3	MW-15	Water	04/24/24 09:15	04/26/24 10:10
240-203421-4	MW-14B	Water	04/24/24 10:20	04/26/24 10:10
240-203421-5	MW-5B	Water	04/24/24 11:55	04/26/24 10:10
240-203421-6	MW-10A	Water	04/24/24 12:05	04/26/24 10:10
240-203421-7	MW-10B	Water	04/24/24 13:35	04/26/24 10:10
240-203421-8	MW-18B	Water	04/24/24 13:40	04/26/24 10:10
240-203421-9	RB-20240424	Water	04/24/24 15:00	04/26/24 10:10
240-203421-10	TB-20240424	Water	04/24/24 00:00	04/26/24 10:10

Detection Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-13B — Lab Sample ID: 240-203421-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	4.3		1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	11		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-5A — Lab Sample ID: 240-203421-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	120		10	4.6	ug/L	10		8260D	Total/NA
Vinyl chloride	160		10	4.5	ug/L	10		8260D	Total/NA
1,4-Dioxane	1.3		0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
Methane	1700		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	23		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	23		1.0	0.12	ug/L	1		RSK-175	Total/NA
Propane	1.5		1.0	0.38	ug/L	1		RSK-175	Total/NA
Perfluorobutanoic acid (PFBA)	8.6		4.7	2.3	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		1.9	0.46	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.5		1.9	0.55	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.6	J	1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	12		1.9	0.80	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.90	J	1.9	0.19	ng/L	1		537 (modified)	Total/NA
Chloride	98		1.0	0.13	mg/L	1		300.0	Total/NA
Nitrate as N	0.015	J H H3	0.10	0.015	mg/L	1		300.0	Total/NA
Sulfate	72		1.0	0.35	mg/L	1		300.0	Total/NA
Chemical Oxygen Demand	6.3	J	10	1.8	mg/L	1		410.4	Total/NA
Total Organic Carbon	0.71	J	1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: MW-15 — Lab Sample ID: 240-203421-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.6		1.0	0.47	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	16		1.0	0.46	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.56	J	1.0	0.51	ug/L	1		8260D	Total/NA
Vinyl chloride	20		1.0	0.45	ug/L	1		8260D	Total/NA
Methane	5300		10	1.7	ug/L	10		RSK-175	Total/NA
Ethane	8.1		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	20		1.0	0.12	ug/L	1		RSK-175	Total/NA
Propane	0.49	J	1.0	0.38	ug/L	1		RSK-175	Total/NA
Chloride	170		1.0	0.13	mg/L	1		300.0	Total/NA
Nitrate as N	0.020	J H H3	0.10	0.015	mg/L	1		300.0	Total/NA
Sulfate	220		10	3.5	mg/L	10		300.0	Total/NA
Chemical Oxygen Demand	22		10	1.8	mg/L	1		410.4	Total/NA
Sulfide	4.0		1.0	0.27	mg/L	1		4500 S2 F-2000	Total/NA
Total Organic Carbon	3.2		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: MW-14B — Lab Sample ID: 240-203421-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.75	J	1.0	0.46	ug/L	1		8260D	Total/NA
Vinyl chloride	1.9		1.0	0.45	ug/L	1		8260D	Total/NA

Client Sample ID: MW-5B — Lab Sample ID: 240-203421-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	23		1.0	0.46	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-5B (Continued) — Lab Sample ID: 240-203421-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	88		2.0	0.90	ug/L	2		8260D	Total/NA
Methane	180		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	0.43	J	1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	2.2		1.0	0.12	ug/L	1		RSK-175	Total/NA
Propane	0.64	J	1.0	0.38	ug/L	1		RSK-175	Total/NA
Iron	250		200	83	ug/L	1		6010D	Dissolved
Chloride	120		1.0	0.13	mg/L	1		300.0	Total/NA
Sulfate	220		10	3.5	mg/L	10		300.0	Total/NA
Chemical Oxygen Demand	12		10	1.8	mg/L	1		410.4	Total/NA
Total Organic Carbon	3.1		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: MW-10A — Lab Sample ID: 240-203421-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	550		10	4.6	ug/L	10		8260D	Total/NA
trans-1,2-Dichloroethene	7.1	J	10	5.1	ug/L	10		8260D	Total/NA
Trichloroethene	5.9	J	10	4.4	ug/L	10		8260D	Total/NA
Vinyl chloride	150		10	4.5	ug/L	10		8260D	Total/NA
1,4-Dioxane	2.9		0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
Methane	2700		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	4.9		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	30		1.0	0.12	ug/L	1		RSK-175	Total/NA
Perfluorobutanoic acid (PFBA)	4.0	J	5.0	2.4	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.2	J	2.0	0.49	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	2.7		2.0	0.58	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1	J	2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.2		2.0	0.85	ng/L	1		537 (modified)	Total/NA
Iron	890		200	83	ug/L	1		6010D	Dissolved
Chloride	140		1.0	0.13	mg/L	1		300.0	Total/NA
Sulfate	120		1.0	0.35	mg/L	1		300.0	Total/NA
Chemical Oxygen Demand	2.4	J	10	1.8	mg/L	1		410.4	Total/NA
Total Organic Carbon	1.2		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: MW-10B — Lab Sample ID: 240-203421-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	310		5.0	2.3	ug/L	5		8260D	Total/NA
Vinyl chloride	130		5.0	2.3	ug/L	5		8260D	Total/NA
Methane	1800		1.0	0.17	ug/L	1		RSK-175	Total/NA
Ethane	0.79	J	1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	18		1.0	0.12	ug/L	1		RSK-175	Total/NA
Propane	2.5		1.0	0.38	ug/L	1		RSK-175	Total/NA
Iron	180	J	200	83	ug/L	1		6010D	Dissolved
Chloride	140		1.0	0.13	mg/L	1		300.0	Total/NA
Sulfate	220		10	3.5	mg/L	10		300.0	Total/NA
Chemical Oxygen Demand	5.3	J	10	1.8	mg/L	1		410.4	Total/NA
Total Organic Carbon	3.3		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: MW-18B — Lab Sample ID: 240-203421-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	29		1.0	0.46	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample ID: MW-18B (Continued)
Lab Sample ID: 240-203421-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	56		1.0	0.45	ug/L	1		8260D	Total/NA
Methane	22000		20	3.5	ug/L	20		RSK-175	Total/NA
Ethane	2.8		1.0	0.29	ug/L	1		RSK-175	Total/NA
Ethylene	14		1.0	0.12	ug/L	1		RSK-175	Total/NA
Chloride	120		1.0	0.13	mg/L	1		300.0	Total/NA
Sulfate	190		1.0	0.35	mg/L	1		300.0	Total/NA
Chemical Oxygen Demand	40		10	1.8	mg/L	1		410.4	Total/NA
Sulfide	9.6		1.0	0.27	mg/L	1		4500 S2 F-2000	Total/NA
Total Organic Carbon	4.4		1.0	0.44	mg/L	1		5310C-2000	Total/NA

Client Sample ID: RB-20240424
Lab Sample ID: 240-203421-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methane	0.62	J	1.0	0.17	ug/L	1		RSK-175	Total/NA
Chloride	22		1.0	0.13	mg/L	1		300.0	Total/NA
Nitrate as N	0.67	H	0.10	0.015	mg/L	1		300.0	Total/NA
Sulfate	18		1.0	0.35	mg/L	1		300.0	Total/NA

Client Sample ID: TB-20240424
Lab Sample ID: 240-203421-10

No Detections.

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-13B
Date Collected: 04/24/24 08:05
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/07/24 16:35	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/07/24 16:35	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/07/24 16:35	1
Chloroethane	ND		1.0	0.83	ug/L			05/07/24 16:35	1
cis-1,2-Dichloroethene	**4.3**		1.0	0.46	ug/L			05/07/24 16:35	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/07/24 16:35	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/07/24 16:35	1
Trichloroethene	ND		1.0	0.44	ug/L			05/07/24 16:35	1
Vinyl chloride	**11**		1.0	0.45	ug/L			05/07/24 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*78 - 122*		*05/07/24 16:35*	*1*
Dibromofluoromethane (Surr)	*108*		*73 - 120*		*05/07/24 16:35*	*1*
4-Bromofluorobenzene (Surr)	*80*		*56 - 136*		*05/07/24 16:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*62 - 137*		*05/07/24 16:35*	*1*

Client Sample ID: MW-5A
Date Collected: 04/24/24 08:35
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		10	4.8	ug/L			05/06/24 19:29	10
1,1-Dichloroethane	ND		10	4.7	ug/L			05/06/24 19:29	10
1,1-Dichloroethene	ND		10	4.9	ug/L			05/06/24 19:29	10
Chloroethane	ND		10	8.3	ug/L			05/06/24 19:29	10
cis-1,2-Dichloroethene	**120**		10	4.6	ug/L			05/06/24 19:29	10
Tetrachloroethene	ND		10	4.4	ug/L			05/06/24 19:29	10
trans-1,2-Dichloroethene	ND		10	5.1	ug/L			05/06/24 19:29	10
Trichloroethene	ND		10	4.4	ug/L			05/06/24 19:29	10
Vinyl chloride	**160**		10	4.5	ug/L			05/06/24 19:29	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/06/24 19:29*	*10*
Dibromofluoromethane (Surr)	*106*		*73 - 120*		*05/06/24 19:29*	*10*
4-Bromofluorobenzene (Surr)	*76*		*56 - 136*		*05/06/24 19:29*	*10*
1,2-Dichloroethane-d4 (Surr)	*90*		*62 - 137*		*05/06/24 19:29*	*10*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.3**		0.20	0.10	ug/L		04/30/24 14:32	05/03/24 01:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*32*		*15 - 110*	*04/30/24 14:32*	*05/03/24 01:05*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**1700**		1.0	0.17	ug/L			04/30/24 21:39	1
Ethane	**23**		1.0	0.29	ug/L			04/30/24 21:39	1
Ethylene	**23**		1.0	0.12	ug/L			04/30/24 21:39	1
Propane	**1.5**		1.0	0.38	ug/L			04/30/24 21:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*98*		*60 - 140*		*04/30/24 21:39*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**8.6**		4.7	2.3	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluoropentanoic acid (PFPeA)	**2.4**		1.9	0.46	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorohexanoic acid (PFHxA)	**3.5**		1.9	0.55	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluoroheptanoic acid (PFHpA)	**1.6**	**J**	1.9	0.24	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorooctanoic acid (PFOA)	**12**		1.9	0.80	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.25	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.29	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	1.0	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.52	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	1.2	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.69	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorobutanesulfonic acid (PFBS)	**0.90**	**J**	1.9	0.19	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.54	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.9	0.18	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	0.51	ng/L		04/30/24 04:36	05/15/24 20:51	1

Client Sample ID: MW-5A
Date Collected: 04/24/24 08:35
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-2
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.30	ng/L		04/30/24 04:36	05/15/24 20:51	1
Perfluorooctanesulfonamide (FOSA)	ND		1.9	0.92	ng/L		04/30/24 04:36	05/15/24 20:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.7	1.1	ng/L		04/30/24 04:36	05/15/24 20:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.7	1.2	ng/L		04/30/24 04:36	05/15/24 20:51	1
6:2 FTS	ND		4.7	2.4	ng/L		04/30/24 04:36	05/15/24 20:51	1
8:2 FTS	ND		1.9	0.43	ng/L		04/30/24 04:36	05/15/24 20:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*102*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C5-PFPeA	*97*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C2 PFHxA	*89*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C4 PFHpA	*100*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C4 PFOA	*100*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C5 PFNA	*103*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C2 PFDA	*111*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C2 PFUnA	*103*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C2 PFDoA	*101*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C2 PFTeDA	*90*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C3 PFBS	*88*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
18O2 PFHxS	*98*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C4 PFOS	*100*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
13C8 FOSA	*99*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
d3-NMeFOSAA	*103*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
d5-NEtFOSAA	*97*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
M2-6:2 FTS	*103*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*
M2-8:2 FTS	*112*		*25 - 150*	*04/30/24 04:36*	*05/15/24 20:51*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/30/24 05:00	05/01/24 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**98**		1.0	0.13	mg/L			04/29/24 17:37	1
Nitrite as N (EPA 300.0)	ND	H H3	0.10	0.014	mg/L			04/29/24 17:37	1
Nitrate as N (EPA 300.0)	**0.015**	**J H H3**	0.10	0.015	mg/L			04/29/24 17:37	1
Sulfate (EPA 300.0)	**72**		1.0	0.35	mg/L			04/29/24 17:37	1
Chemical Oxygen Demand (EPA 410.4)	**6.3**	**J**	10	1.8	mg/L			04/30/24 13:48	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**0.71**	**J**	1.0	0.44	mg/L			04/29/24 22:33	1

Client Sample ID: MW-15
Date Collected: 04/24/24 09:15
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 16:32	1
1,1-Dichloroethane	**1.6**		1.0	0.47	ug/L			05/04/24 16:32	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 16:32	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 16:32	1
cis-1,2-Dichloroethene	**16**		1.0	0.46	ug/L			05/04/24 16:32	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 16:32	1
trans-1,2-Dichloroethene	**0.56**	**J**	1.0	0.51	ug/L			05/04/24 16:32	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 16:32	1
Vinyl chloride	**20**		1.0	0.45	ug/L			05/04/24 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*90*		*78 - 122*		*05/04/24 16:32*	*1*
Dibromofluoromethane (Surr)	*105*		*73 - 120*		*05/04/24 16:32*	*1*
4-Bromofluorobenzene (Surr)	*81*		*56 - 136*		*05/04/24 16:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*62 - 137*		*05/04/24 16:32*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**5300**		10	1.7	ug/L			05/01/24 16:27	10
Ethane	**8.1**		1.0	0.29	ug/L			04/30/24 21:56	1
Ethylene	**20**		1.0	0.12	ug/L			04/30/24 21:56	1
Propane	**0.49**	**J**	1.0	0.38	ug/L			04/30/24 21:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*96*		*60 - 140*		*04/30/24 21:56*	*1*
1,1,1-Trifluoroethane	*99*		*60 - 140*		*05/01/24 16:27*	*10*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/30/24 05:00	05/01/24 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**170**		1.0	0.13	mg/L			04/29/24 18:57	1
Nitrite as N (EPA 300.0)	ND	H H3	0.10	0.014	mg/L			04/29/24 18:57	1
Nitrate as N (EPA 300.0)	**0.020**	**J H H3**	0.10	0.015	mg/L			04/29/24 18:57	1
Sulfate (EPA 300.0)	**220**		10	3.5	mg/L			04/29/24 19:17	10
Chemical Oxygen Demand (EPA 410.4)	**22**		10	1.8	mg/L			04/30/24 13:48	1
Sulfide (SM 4500 S2 F-2000)	**4.0**		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**3.2**		1.0	0.44	mg/L			04/30/24 03:21	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-14B
Date Collected: 04/24/24 10:20
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/07/24 16:59	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/07/24 16:59	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/07/24 16:59	1
Chloroethane	ND		1.0	0.83	ug/L			05/07/24 16:59	1
cis-1,2-Dichloroethene	**0.75**	**J**	1.0	0.46	ug/L			05/07/24 16:59	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/07/24 16:59	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/07/24 16:59	1
Trichloroethene	ND		1.0	0.44	ug/L			05/07/24 16:59	1
Vinyl chloride	**1.9**		1.0	0.45	ug/L			05/07/24 16:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*84*		*78 - 122*		*05/07/24 16:59*	*1*
Dibromofluoromethane (Surr)	*105*		*73 - 120*		*05/07/24 16:59*	*1*
4-Bromofluorobenzene (Surr)	*79*		*56 - 136*		*05/07/24 16:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*62 - 137*		*05/07/24 16:59*	*1*

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-5B

Date Collected: 04/24/24 11:55
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-5

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 16:56	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 16:56	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 16:56	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 16:56	1
cis-1,2-Dichloroethene	**23**		1.0	0.46	ug/L			05/04/24 16:56	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 16:56	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 16:56	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 16:56	1
Vinyl chloride	**88**		2.0	0.90	ug/L			05/06/24 20:17	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*78 - 122*		*05/04/24 16:56*	*1*
Toluene-d8 (Surr)	*87*		*78 - 122*		*05/06/24 20:17*	*2*
Dibromofluoromethane (Surr)	*101*		*73 - 120*		*05/04/24 16:56*	*1*
Dibromofluoromethane (Surr)	*109*		*73 - 120*		*05/06/24 20:17*	*2*
4-Bromofluorobenzene (Surr)	*80*		*56 - 136*		*05/04/24 16:56*	*1*
4-Bromofluorobenzene (Surr)	*79*		*56 - 136*		*05/06/24 20:17*	*2*
1,2-Dichloroethane-d4 (Surr)	*92*		*62 - 137*		*05/04/24 16:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*62 - 137*		*05/06/24 20:17*	*2*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**180**		1.0	0.17	ug/L			05/01/24 16:44	1
Ethane	**0.43**	**J**	1.0	0.29	ug/L			05/01/24 16:44	1
Ethylene	**2.2**		1.0	0.12	ug/L			05/01/24 16:44	1
Propane	**0.64**	**J**	1.0	0.38	ug/L			05/01/24 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*95*		*60 - 140*		*05/01/24 16:44*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**250**		200	83	ug/L		04/30/24 05:00	05/01/24 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**120**		1.0	0.13	mg/L			04/29/24 19:37	1
Nitrite as N (EPA 300.0)	ND	H	0.10	0.014	mg/L			04/29/24 19:37	1
Nitrate as N (EPA 300.0)	ND	H	0.10	0.015	mg/L			04/29/24 19:37	1
Sulfate (EPA 300.0)	**220**		10	3.5	mg/L			04/29/24 19:58	10
Chemical Oxygen Demand (EPA 410.4)	**12**		10	1.8	mg/L			04/30/24 13:46	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**3.1**		1.0	0.44	mg/L			04/30/24 04:33	1

Client Sample ID: MW-10A
Date Collected: 04/24/24 12:05
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-6
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		10	4.8	ug/L			05/04/24 18:07	10
1,1-Dichloroethane	ND		10	4.7	ug/L			05/04/24 18:07	10
1,1-Dichloroethene	ND		10	4.9	ug/L			05/04/24 18:07	10
Chloroethane	ND		10	8.3	ug/L			05/04/24 18:07	10
cis-1,2-Dichloroethene	**550**		10	4.6	ug/L			05/04/24 18:07	10
Tetrachloroethene	ND		10	4.4	ug/L			05/04/24 18:07	10
trans-1,2-Dichloroethene	**7.1**	**J**	10	5.1	ug/L			05/04/24 18:07	10
Trichloroethene	**5.9**	**J**	10	4.4	ug/L			05/04/24 18:07	10
Vinyl chloride	**150**		10	4.5	ug/L			05/04/24 18:07	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/04/24 18:07*	*10*
Dibromofluoromethane (Surr)	*102*		*73 - 120*		*05/04/24 18:07*	*10*
4-Bromofluorobenzene (Surr)	*79*		*56 - 136*		*05/04/24 18:07*	*10*
1,2-Dichloroethane-d4 (Surr)	*89*		*62 - 137*		*05/04/24 18:07*	*10*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.9**		0.20	0.10	ug/L		04/30/24 14:32	05/03/24 01:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*36*		*15 - 110*	*04/30/24 14:32*	*05/03/24 01:27*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**2700**		1.0	0.17	ug/L			05/01/24 17:18	1
Ethane	**4.9**		1.0	0.29	ug/L			05/01/24 17:18	1
Ethylene	**30**		1.0	0.12	ug/L			05/01/24 17:18	1
Propane	ND		1.0	0.38	ug/L			05/01/24 17:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*96*		*60 - 140*		*05/01/24 17:18*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.0**	**J**	5.0	2.4	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluoropentanoic acid (PFPeA)	**1.2**	**J**	2.0	0.49	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorohexanoic acid (PFHxA)	**2.7**		2.0	0.58	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluoroheptanoic acid (PFHpA)	**1.1**	**J**	2.0	0.25	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorooctanoic acid (PFOA)	**5.2**		2.0	0.85	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.19	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		04/30/24 04:36	05/15/24 21:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		04/30/24 04:36	05/15/24 21:14	1

Client Sample ID: MW-10A
Date Collected: 04/24/24 12:05
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-6
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.98	ng/L		04/30/24 04:36	05/15/24 21:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0	1.2	ng/L		04/30/24 04:36	05/15/24 21:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0	1.3	ng/L		04/30/24 04:36	05/15/24 21:14	1
6:2 FTS	ND		5.0	2.5	ng/L		04/30/24 04:36	05/15/24 21:14	1
8:2 FTS	ND		2.0	0.46	ng/L		04/30/24 04:36	05/15/24 21:14	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C5-PFPeA	*94*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C2 PFHxA	*91*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C4 PFHpA	*87*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C4 PFOA	*100*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C5 PFNA	*96*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C2 PFDA	*98*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C2 PFUnA	*98*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C2 PFDoA	*96*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C2 PFTeDA	*90*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C3 PFBS	*89*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
18O2 PFHxS	*97*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C4 PFOS	*96*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
13C8 FOSA	*92*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
d3-NMeFOSAA	*98*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
d5-NEtFOSAA	*87*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
M2-6:2 FTS	*128*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*
M2-8:2 FTS	*96*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:14*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**890**		200	83	ug/L		04/30/24 05:00	05/01/24 14:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**140**		1.0	0.13	mg/L			04/29/24 20:18	1
Nitrite as N (EPA 300.0)	ND	H	0.10	0.014	mg/L			04/29/24 20:18	1
Nitrate as N (EPA 300.0)	ND	H	0.10	0.015	mg/L			04/29/24 20:18	1
Sulfate (EPA 300.0)	**120**		1.0	0.35	mg/L			04/29/24 20:18	1
Chemical Oxygen Demand (EPA 410.4)	**2.4**	**J**	10	1.8	mg/L			04/30/24 13:46	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**1.2**		1.0	0.44	mg/L			04/30/24 11:48	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-10B

Date Collected: 04/24/24 13:35
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-7

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	2.4	ug/L			05/04/24 17:43	5
1,1-Dichloroethane	ND		5.0	2.4	ug/L			05/04/24 17:43	5
1,1-Dichloroethene	ND		5.0	2.5	ug/L			05/04/24 17:43	5
Chloroethane	ND		5.0	4.2	ug/L			05/04/24 17:43	5
cis-1,2-Dichloroethene	**310**		5.0	2.3	ug/L			05/04/24 17:43	5
Tetrachloroethene	ND		5.0	2.2	ug/L			05/04/24 17:43	5
trans-1,2-Dichloroethene	ND		5.0	2.6	ug/L			05/04/24 17:43	5
Trichloroethene	ND		5.0	2.2	ug/L			05/04/24 17:43	5
Vinyl chloride	**130**		5.0	2.3	ug/L			05/04/24 17:43	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/04/24 17:43*	*5*
Dibromofluoromethane (Surr)	*104*		*73 - 120*		*05/04/24 17:43*	*5*
4-Bromofluorobenzene (Surr)	*79*		*56 - 136*		*05/04/24 17:43*	*5*
1,2-Dichloroethane-d4 (Surr)	*88*		*62 - 137*		*05/04/24 17:43*	*5*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**1800**		1.0	0.17	ug/L			05/01/24 17:35	1
Ethane	**0.79**	**J**	1.0	0.29	ug/L			05/01/24 17:35	1
Ethylene	**18**		1.0	0.12	ug/L			05/01/24 17:35	1
Propane	**2.5**		1.0	0.38	ug/L			05/01/24 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*94*		*60 - 140*		*05/01/24 17:35*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**180**	**J**	200	83	ug/L		04/30/24 05:00	05/01/24 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**140**		1.0	0.13	mg/L			04/29/24 21:38	1
Nitrite as N (EPA 300.0)	ND	H	0.10	0.014	mg/L			04/29/24 21:38	1
Nitrate as N (EPA 300.0)	ND	H	0.10	0.015	mg/L			04/29/24 21:38	1
Sulfate (EPA 300.0)	**220**		10	3.5	mg/L			04/29/24 21:59	10
Chemical Oxygen Demand (EPA 410.4)	**5.3**	**J**	10	1.8	mg/L			04/30/24 13:46	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**3.3**		1.0	0.44	mg/L			04/30/24 03:45	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-18B

Date Collected: 04/24/24 13:40
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-8

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 17:19	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 17:19	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 17:19	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 17:19	1
cis-1,2-Dichloroethene	**29**		1.0	0.46	ug/L			05/04/24 17:19	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 17:19	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 17:19	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 17:19	1
Vinyl chloride	**56**		1.0	0.45	ug/L			05/04/24 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/04/24 17:19*	*1*
Dibromofluoromethane (Surr)	*104*		*73 - 120*		*05/04/24 17:19*	*1*
4-Bromofluorobenzene (Surr)	*79*		*56 - 136*		*05/04/24 17:19*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*62 - 137*		*05/04/24 17:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**22000**		20	3.5	ug/L			05/02/24 14:02	20
Ethane	**2.8**		1.0	0.29	ug/L			05/01/24 17:52	1
Ethylene	**14**		1.0	0.12	ug/L			05/01/24 17:52	1
Propane	ND		1.0	0.38	ug/L			05/01/24 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*93*		*60 - 140*		*05/01/24 17:52*	*1*
1,1,1-Trifluoroethane	*99*		*60 - 140*		*05/02/24 14:02*	*20*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/30/24 05:00	05/01/24 14:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**120**		1.0	0.13	mg/L			04/29/24 22:19	1
Nitrite as N (EPA 300.0)	ND	H	0.10	0.014	mg/L			04/29/24 22:19	1
Nitrate as N (EPA 300.0)	ND	H	0.10	0.015	mg/L			04/29/24 22:19	1
Sulfate (EPA 300.0)	**190**		1.0	0.35	mg/L			04/29/24 22:19	1
Chemical Oxygen Demand (EPA 410.4)	**40**		10	1.8	mg/L			04/30/24 13:48	1
Sulfide (SM 4500 S2 F-2000)	**9.6**		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	**4.4**		1.0	0.44	mg/L			04/30/24 05:44	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: RB-20240424
Date Collected: 04/24/24 15:00
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-9
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 14:12	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 14:12	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 14:12	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 14:12	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/04/24 14:12	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 14:12	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 14:12	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 14:12	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/04/24 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*86*		*78 - 122*		*05/04/24 14:12*	*1*
Dibromofluoromethane (Surr)	*103*		*73 - 120*		*05/04/24 14:12*	*1*
4-Bromofluorobenzene (Surr)	*79*		*56 - 136*		*05/04/24 14:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*62 - 137*		*05/04/24 14:12*	*1*

Method: SW846 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		04/30/24 14:32	05/03/24 01:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*33*		*15 - 110*	*04/30/24 14:32*	*05/03/24 01:48*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**0.62**	**J**	1.0	0.17	ug/L			05/01/24 18:26	1
Ethane	ND		1.0	0.29	ug/L			05/01/24 18:26	1
Ethylene	ND		1.0	0.12	ug/L			05/01/24 18:26	1
Propane	ND		1.0	0.38	ug/L			05/01/24 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*99*		*60 - 140*		*05/01/24 18:26*	*1*

Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.8	2.3	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluoropentanoic acid (PFPeA)	ND		1.9	0.47	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorohexanoic acid (PFHxA)	ND		1.9	0.56	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluoroheptanoic acid (PFHpA)	ND		1.9	0.24	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorooctanoic acid (PFOA)	ND		1.9	0.82	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorononanoic acid (PFNA)	ND		1.9	0.26	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.30	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	1.1	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.53	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	1.3	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.70	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.9	0.19	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.9	0.55	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		1.9	0.18	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.9	0.52	ng/L		04/30/24 04:36	05/15/24 21:25	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.31	ng/L		04/30/24 04:36	05/15/24 21:25	1

Client Sample ID: RB-20240424
Date Collected: 04/24/24 15:00
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-9
Matrix: Water

Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonamide (FOSA)	ND		1.9	0.94	ng/L		04/30/24 04:36	05/15/24 21:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.8	1.2	ng/L		04/30/24 04:36	05/15/24 21:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.8	1.3	ng/L		04/30/24 04:36	05/15/24 21:25	1
6:2 FTS	ND		4.8	2.4	ng/L		04/30/24 04:36	05/15/24 21:25	1
8:2 FTS	ND		1.9	0.44	ng/L		04/30/24 04:36	05/15/24 21:25	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*101*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C5-PFPeA	*99*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C2 PFHxA	*99*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C4 PFHpA	*104*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C4 PFOA	*106*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C5 PFNA	*110*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C2 PFDA	*111*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C2 PFUnA	*104*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C2 PFDoA	*99*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C2 PFTeDA	*86*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C3 PFBS	*96*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
18O2 PFHxS	*96*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C4 PFOS	*103*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
13C8 FOSA	*95*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
d3-NMeFOSAA	*106*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
d5-NEtFOSAA	*108*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
M2-6:2 FTS	*95*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*
M2-8:2 FTS	*108*		*25 - 150*	*04/30/24 04:36*	*05/15/24 21:25*	*1*

Method: SW846 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/30/24 05:00	05/01/24 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	**22**		1.0	0.13	mg/L			04/29/24 18:37	1
Nitrite as N (EPA 300.0)	ND	H	0.10	0.014	mg/L			04/29/24 18:37	1
Nitrate as N (EPA 300.0)	**0.67**	**H**	0.10	0.015	mg/L			04/29/24 18:37	1
Sulfate (EPA 300.0)	**18**		1.0	0.35	mg/L			04/29/24 18:37	1
Chemical Oxygen Demand (EPA 410.4)	ND		10	1.8	mg/L			04/30/24 13:48	1
Sulfide (SM 4500 S2 F-2000)	ND		1.0	0.27	mg/L			04/29/24 08:06	1
Total Organic Carbon (SM 5310C-2000)	ND		1.0	0.44	mg/L			04/30/24 08:58	1

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: TB-20240424
Date Collected: 04/24/24 00:00
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-10
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 13:48	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 13:48	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 13:48	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 13:48	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/04/24 13:48	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 13:48	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 13:48	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 13:48	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/04/24 13:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/04/24 13:48*	*1*
Dibromofluoromethane (Surr)	*101*		*73 - 120*		*05/04/24 13:48*	*1*
4-Bromofluorobenzene (Surr)	*81*		*56 - 136*		*05/04/24 13:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*94*		*62 - 137*		*05/04/24 13:48*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			05/01/24 18:43	1
Ethane	ND		1.0	0.29	ug/L			05/01/24 18:43	1
Ethylene	ND		1.0	0.12	ug/L			05/01/24 18:43	1
Propane	ND		1.0	0.38	ug/L			05/01/24 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*98*		*60 - 140*		*05/01/24 18:43*	*1*

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DBFM	BFB	DCA
Lab Sample ID	Client Sample ID	(78-122)	(73-120)	(56-136)	(62-137)
240-203421-1	MW-13B	86	108	80	89
240-203421-2	MW-5A	88	106	76	90
240-203421-3	MW-15	90	105	81	93
240-203421-4	MW-14B	84	105	79	91
240-203421-5	MW-5B	86	101	80	92
240-203421-5	MW-5B	87	109	79	93
240-203421-6	MW-10A	88	102	79	89
240-203421-7	MW-10B	88	104	79	88
240-203421-8	MW-18B	88	104	79	88
240-203421-9	RB-20240424	86	103	79	91
240-203421-10	TB-20240424	88	101	81	94
LCS 240-611871/4	Lab Control Sample	91	97	87	84
LCS 240-611978/4	Lab Control Sample	90	98	88	83
LCS 240-612132/4	Lab Control Sample	91	97	87	83
MB 240-611871/7	Method Blank	88	100	84	89
MB 240-611978/7	Method Blank	88	103	81	89
MB 240-612132/7	Method Blank	87	99	81	85

Surrogate Legend

TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: RSK-175 - Dissolved Gases (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		TFE1
Lab Sample ID	Client Sample ID	(60-140)
240-203421-2	MW-5A	98
240-203421-3	MW-15	96
240-203421-3	MW-15	99
240-203421-5	MW-5B	95
240-203421-6	MW-10A	96
240-203421-7	MW-10B	94
240-203421-8	MW-18B	93
240-203421-8	MW-18B	99
240-203421-9	RB-20240424	99
240-203421-10	TB-20240424	98
LCS 240-611316/4	Lab Control Sample	101
LCS 240-611474/4	Lab Control Sample	100
LCS 240-611635/4	Lab Control Sample	99
MB 240-611316/3	Method Blank	103
MB 240-611474/3	Method Blank	104
MB 240-611635/3	Method Blank	102

Surrogate Legend

TFE = 1,1,1-Trifluoroethane

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-611871/7
Matrix: Water
Analysis Batch: 611871

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/04/24 12:38	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/04/24 12:38	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/04/24 12:38	1
Chloroethane	ND		1.0	0.83	ug/L			05/04/24 12:38	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/04/24 12:38	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/04/24 12:38	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/04/24 12:38	1
Trichloroethene	ND		1.0	0.44	ug/L			05/04/24 12:38	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/04/24 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/04/24 12:38*	*1*
Dibromofluoromethane (Surr)	*100*		*73 - 120*		*05/04/24 12:38*	*1*
4-Bromofluorobenzene (Surr)	*84*		*56 - 136*		*05/04/24 12:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*62 - 137*		*05/04/24 12:38*	*1*

Lab Sample ID: LCS 240-611871/4
Matrix: Water
Analysis Batch: 611871

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	24.0		ug/L		96	64 - 131
1,1-Dichloroethane	25.0	24.2		ug/L		97	72 - 127
1,1-Dichloroethene	25.0	25.6		ug/L		102	63 - 134
Chloroethane	12.5	11.3		ug/L		90	38 - 152
cis-1,2-Dichloroethene	25.0	25.6		ug/L		102	77 - 123
Tetrachloroethene	25.0	28.3		ug/L		113	76 - 123
trans-1,2-Dichloroethene	25.0	26.7		ug/L		107	75 - 124
Trichloroethene	25.0	25.8		ug/L		103	70 - 122
Vinyl chloride	12.5	10.9		ug/L		87	60 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*91*		*78 - 122*
Dibromofluoromethane (Surr)	*97*		*73 - 120*
4-Bromofluorobenzene (Surr)	*87*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*84*		*62 - 137*

Lab Sample ID: MB 240-611978/7
Matrix: Water
Analysis Batch: 611978

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/06/24 13:56	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/06/24 13:56	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/06/24 13:56	1
Chloroethane	ND		1.0	0.83	ug/L			05/06/24 13:56	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/06/24 13:56	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/06/24 13:56	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-611978/7
Matrix: Water
Analysis Batch: 611978

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/06/24 13:56	1
Trichloroethene	ND		1.0	0.44	ug/L			05/06/24 13:56	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/06/24 13:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*88*		*78 - 122*		*05/06/24 13:56*	*1*
Dibromofluoromethane (Surr)	*103*		*73 - 120*		*05/06/24 13:56*	*1*
4-Bromofluorobenzene (Surr)	*81*		*56 - 136*		*05/06/24 13:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*62 - 137*		*05/06/24 13:56*	*1*

Lab Sample ID: LCS 240-611978/4
Matrix: Water
Analysis Batch: 611978

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	24.6		ug/L		98	64 - 131
1,1-Dichloroethane	25.0	24.4		ug/L		98	72 - 127
1,1-Dichloroethene	25.0	25.7		ug/L		103	63 - 134
Chloroethane	12.5	11.6		ug/L		93	38 - 152
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	77 - 123
Tetrachloroethene	25.0	28.5		ug/L		114	76 - 123
trans-1,2-Dichloroethene	25.0	26.8		ug/L		107	75 - 124
Trichloroethene	25.0	27.7		ug/L		111	70 - 122
Vinyl chloride	12.5	11.6		ug/L		93	60 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*90*		*78 - 122*
Dibromofluoromethane (Surr)	*98*		*73 - 120*
4-Bromofluorobenzene (Surr)	*88*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*83*		*62 - 137*

Lab Sample ID: MB 240-612132/7
Matrix: Water
Analysis Batch: 612132

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.48	ug/L			05/07/24 12:15	1
1,1-Dichloroethane	ND		1.0	0.47	ug/L			05/07/24 12:15	1
1,1-Dichloroethene	ND		1.0	0.49	ug/L			05/07/24 12:15	1
Chloroethane	ND		1.0	0.83	ug/L			05/07/24 12:15	1
cis-1,2-Dichloroethene	ND		1.0	0.46	ug/L			05/07/24 12:15	1
Tetrachloroethene	ND		1.0	0.44	ug/L			05/07/24 12:15	1
trans-1,2-Dichloroethene	ND		1.0	0.51	ug/L			05/07/24 12:15	1
Trichloroethene	ND		1.0	0.44	ug/L			05/07/24 12:15	1
Vinyl chloride	ND		1.0	0.45	ug/L			05/07/24 12:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*87*		*78 - 122*		*05/07/24 12:15*	*1*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 240-612132/7
Matrix: Water
Analysis Batch: 612132

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*99*		*73 - 120*		*05/07/24 12:15*	*1*
4-Bromofluorobenzene (Surr)	*81*		*56 - 136*		*05/07/24 12:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*85*		*62 - 137*		*05/07/24 12:15*	*1*

Lab Sample ID: LCS 240-612132/4
Matrix: Water
Analysis Batch: 612132

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	25.0	24.8		ug/L		99	64 - 131
1,1-Dichloroethane	25.0	26.4		ug/L		105	72 - 127
1,1-Dichloroethene	25.0	27.0		ug/L		108	63 - 134
Chloroethane	12.5	12.6		ug/L		100	38 - 152
cis-1,2-Dichloroethene	25.0	28.6		ug/L		115	77 - 123
Tetrachloroethene	25.0	29.5		ug/L		118	76 - 123
trans-1,2-Dichloroethene	25.0	29.4		ug/L		118	75 - 124
Trichloroethene	25.0	29.3		ug/L		117	70 - 122
Vinyl chloride	12.5	11.5		ug/L		92	60 - 144

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	*91*		*78 - 122*
Dibromofluoromethane (Surr)	*97*		*73 - 120*
4-Bromofluorobenzene (Surr)	*87*		*56 - 136*
1,2-Dichloroethane-d4 (Surr)	*83*		*62 - 137*

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 480-710046/1-A
Matrix: Water
Analysis Batch: 710334

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 710046

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		04/30/24 13:54	05/02/24 19:40	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	*35*		*15 - 110*	*04/30/24 13:54*	*05/02/24 19:40*	*1*

Lab Sample ID: LCS 480-710046/2-A
Matrix: Water
Analysis Batch: 710334

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 710046

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	2.00	2.22		ug/L		111	40 - 140

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8	*35*		*15 - 110*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 240-611316/3
Matrix: Water
Analysis Batch: 611316

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			04/30/24 14:17	1
Ethane	ND		1.0	0.29	ug/L			04/30/24 14:17	1
Ethylene	ND		1.0	0.12	ug/L			04/30/24 14:17	1
Propane	ND		1.0	0.38	ug/L			04/30/24 14:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*103*		*60 - 140*		*04/30/24 14:17*	*1*

Lab Sample ID: LCS 240-611316/4
Matrix: Water
Analysis Batch: 611316

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	293		ug/L		103	80 - 120
Ethane	537	536		ug/L		100	80 - 120
Ethylene	506	506		ug/L		100	80 - 120
Propane	794	774		ug/L		98	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,1,1-Trifluoroethane	*101*		*60 - 140*

Lab Sample ID: MB 240-611474/3
Matrix: Water
Analysis Batch: 611474

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			05/01/24 12:46	1
Ethane	ND		1.0	0.29	ug/L			05/01/24 12:46	1
Ethylene	ND		1.0	0.12	ug/L			05/01/24 12:46	1
Propane	ND		1.0	0.38	ug/L			05/01/24 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*104*		*60 - 140*		*05/01/24 12:46*	*1*

Lab Sample ID: LCS 240-611474/4
Matrix: Water
Analysis Batch: 611474

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	292		ug/L		103	80 - 120
Ethane	537	535		ug/L		100	80 - 120
Ethylene	506	503		ug/L		99	80 - 120
Propane	794	768		ug/L		97	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,1,1-Trifluoroethane	*100*		*60 - 140*

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: MB 240-611635/3
Matrix: Water
Analysis Batch: 611635

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.17	ug/L			05/02/24 12:19	1
Ethane	ND		1.0	0.29	ug/L			05/02/24 12:19	1
Ethylene	ND		1.0	0.12	ug/L			05/02/24 12:19	1
Propane	ND		1.0	0.38	ug/L			05/02/24 12:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,1,1-Trifluoroethane	*102*		*60 - 140*		*05/02/24 12:19*	*1*

Lab Sample ID: LCS 240-611635/4
Matrix: Water
Analysis Batch: 611635

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	284	293		ug/L		103	80 - 120
Ethane	537	536		ug/L		100	80 - 120
Ethylene	506	505		ug/L		100	80 - 120
Propane	794	767		ug/L		97	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,1,1-Trifluoroethane	*99*		*60 - 140*

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-758270/1-A
Matrix: Water
Analysis Batch: 763646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 758270

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		5.0	2.4	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		2.0	0.19	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		04/30/24 04:36	05/15/24 19:09	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.98	ng/L		04/30/24 04:36	05/15/24 19:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		5.0	1.2	ng/L		04/30/24 04:36	05/15/24 19:09	1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: MB 320-758270/1-A
Matrix: Water
Analysis Batch: 763646

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 758270

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		5.0	1.3	ng/L		04/30/24 04:36	05/15/24 19:09	1
6:2 FTS	ND		5.0	2.5	ng/L		04/30/24 04:36	05/15/24 19:09	1
8:2 FTS	ND		2.0	0.46	ng/L		04/30/24 04:36	05/15/24 19:09	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*99*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C5-PFPeA	*82*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C2 PFHxA	*86*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C4 PFHpA	*94*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C4 PFOA	*98*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C5 PFNA	*100*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C2 PFDA	*96*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C2 PFUnA	*102*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C2 PFDoA	*97*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C2 PFTeDA	*80*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C3 PFBS	*82*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
18O2 PFHxS	*93*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C4 PFOS	*97*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
13C8 FOSA	*97*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
d3-NMeFOSAA	*87*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
d5-NEtFOSAA	*87*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
M2-6:2 FTS	*120*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*
M2-8:2 FTS	*97*		*25 - 150*	*04/30/24 04:36*	*05/15/24 19:09*	*1*

Lab Sample ID: LCS 320-758270/2-A
Matrix: Water
Analysis Batch: 763646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 758270

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	40.0	40.4		ng/L		101	76 - 136
Perfluoropentanoic acid (PFPeA)	40.0	40.5		ng/L		101	71 - 131
Perfluorohexanoic acid (PFHxA)	40.0	42.1		ng/L		105	73 - 133
Perfluoroheptanoic acid (PFHpA)	40.0	42.0		ng/L		105	72 - 132
Perfluorooctanoic acid (PFOA)	40.0	44.4		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	40.0	44.0		ng/L		110	75 - 135
Perfluorodecanoic acid (PFDA)	40.0	43.3		ng/L		108	76 - 136
Perfluoroundecanoic acid (PFUnA)	40.0	39.9		ng/L		100	68 - 128
Perfluorododecanoic acid (PFDoA)	40.0	38.9		ng/L		97	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	38.4		ng/L		96	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	42.8		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.5	38.0		ng/L		107	67 - 127
Perfluorohexanesulfonic acid (PFHxS)	36.5	37.9		ng/L		104	59 - 119
Perfluoroheptanesulfonic acid (PFHpS)	38.2	36.0		ng/L		94	76 - 136

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-758270/2-A
Matrix: Water
Analysis Batch: 763646

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 758270

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonic acid (PFOS)			37.2	35.1		ng/L		94	70 - 130		
Perfluorodecanesulfonic acid (PFDS)			38.6	33.8		ng/L		88	71 - 131		
Perfluorooctanesulfonamide (FOSA)			40.0	40.6		ng/L		101	73 - 133		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			40.0	42.6		ng/L		106	76 - 136		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			40.0	42.9		ng/L		107	76 - 136		
6:2 FTS			38.1	39.1		ng/L		103	59 - 175		
8:2 FTS			38.4	38.3		ng/L		100	75 - 135		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*97*		*25 - 150*
13C5-PFPeA	*91*		*25 - 150*
13C2 PFHxA	*90*		*25 - 150*
13C4 PFHpA	*98*		*25 - 150*
13C4 PFOA	*106*		*25 - 150*
13C5 PFNA	*93*		*25 - 150*
13C2 PFDA	*97*		*25 - 150*
13C2 PFUnA	*101*		*25 - 150*
13C2 PFDoA	*101*		*25 - 150*
13C2 PFTeDA	*89*		*25 - 150*
13C3 PFBS	*89*		*25 - 150*
18O2 PFHxS	*92*		*25 - 150*
13C4 PFOS	*103*		*25 - 150*
13C8 FOSA	*91*		*25 - 150*
d3-NMeFOSAA	*94*		*25 - 150*
d5-NEtFOSAA	*94*		*25 - 150*
M2-6:2 FTS	*101*		*25 - 150*
M2-8:2 FTS	*103*		*25 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-611169/1-A
Matrix: Water
Analysis Batch: 611558

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 611169

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		200	83	ug/L		04/30/24 05:00	05/01/24 13:13	1

Lab Sample ID: LCS 240-611169/2-A
Matrix: Water
Analysis Batch: 611558

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 611169

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron			10000	9800		ug/L		98	80 - 120		

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-611244/3
Matrix: Water
Analysis Batch: 611244

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.0	0.13	mg/L			04/29/24 15:36	1
Sulfate	ND		1.0	0.35	mg/L			04/29/24 15:36	1

Lab Sample ID: LCS 240-611244/4
Matrix: Water
Analysis Batch: 611244

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			50.0	50.3		mg/L		101	90 - 110		
Sulfate			50.0	50.8		mg/L		102	90 - 110		

Lab Sample ID: 240-203421-2 MS
Matrix: Water
Analysis Batch: 611244

Client Sample ID: MW-5A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	98		50.0	148		mg/L		101	80 - 120		
Sulfate	72		50.0	124		mg/L		104	80 - 120		

Lab Sample ID: 240-203421-2 MSD
Matrix: Water
Analysis Batch: 611244

Client Sample ID: MW-5A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	98		50.0	148		mg/L		100	80 - 120	0	15
Sulfate	72		50.0	124		mg/L		104	80 - 120	0	15

Lab Sample ID: MB 240-611251/3
Matrix: Water
Analysis Batch: 611251

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.10	0.014	mg/L			04/29/24 15:36	1
Nitrate as N	ND		0.10	0.015	mg/L			04/29/24 15:36	1

Lab Sample ID: LCS 240-611251/4
Matrix: Water
Analysis Batch: 611251

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrite as N			2.50	2.50		mg/L		100	90 - 110		
Nitrate as N			2.50	2.59		mg/L		104	90 - 110		

Lab Sample ID: 240-203421-2 MS
Matrix: Water
Analysis Batch: 611251

Client Sample ID: MW-5A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrite as N	ND	H H3	2.50	2.73		mg/L		109	80 - 120		
Nitrate as N	0.015	J H H3	2.50	2.80		mg/L		112	80 - 120		

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 240-203421-2 MSD
Matrix: Water
Analysis Batch: 611251

Client Sample ID: MW-5A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	ND	H H3	2.50	2.78		mg/L		111	80 - 120	2	15
Nitrate as N	0.015	J H H3	2.50	2.80		mg/L		112	80 - 120	0	15

Method: 410.4 - COD

Lab Sample ID: MB 240-611359/41
Matrix: Water
Analysis Batch: 611359

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	1.8	mg/L			04/30/24 13:46	1

Lab Sample ID: MB 240-611359/9
Matrix: Water
Analysis Batch: 611359

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10	1.8	mg/L			04/30/24 13:46	1

Lab Sample ID: LCS 240-611359/10
Matrix: Water
Analysis Batch: 611359

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	41.2	41.2		mg/L		100	90 - 110

Lab Sample ID: LCS 240-611359/42
Matrix: Water
Analysis Batch: 611359

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	41.2	44.4		mg/L		108	90 - 110

Lab Sample ID: 240-203421-5 MS
Matrix: Water
Analysis Batch: 611359

Client Sample ID: MW-5B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	12		50.0	57.7		mg/L		91	90 - 110

Lab Sample ID: 240-203421-5 MSD
Matrix: Water
Analysis Batch: 611359

Client Sample ID: MW-5B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	12		50.0	62.2		mg/L		100	90 - 110	8	20

Method: 4500 S2 F-2000 - Sulfide, Total

Lab Sample ID: MB 240-611098/1
Matrix: Water
Analysis Batch: 611098

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		1.0	0.27	mg/L			04/29/24 08:06	1

Lab Sample ID: LCS 240-611098/2
Matrix: Water
Analysis Batch: 611098

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	21.9	22.0		mg/L		101	80 - 120

Method: 5310C-2000 - Total Organic Carbon/Persulfate - Ultrav

Lab Sample ID: MB 240-611377/5
Matrix: Water
Analysis Batch: 611377

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.44	mg/L			04/29/24 21:45	1

Lab Sample ID: LCS 240-611377/21
Matrix: Water
Analysis Batch: 611377

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	16.3	15.9		mg/L		98	85 - 115

Lab Sample ID: LCS 240-611377/6
Matrix: Water
Analysis Batch: 611377

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	16.3	15.3		mg/L		94	85 - 115

Lab Sample ID: 240-203421-2 MS
Matrix: Water
Analysis Batch: 611377

Client Sample ID: MW-5A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	0.71	J	10.0	11.3		mg/L		106	65 - 134

Lab Sample ID: 240-203421-2 MSD
Matrix: Water
Analysis Batch: 611377

Client Sample ID: MW-5A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	0.71	J	10.0	11.0		mg/L		103	65 - 134	3	10

Method: 5310C-2000 - Total Organic Carbon/Persulfate - Ultrav (Continued)

Lab Sample ID: MB 240-611417/37
Matrix: Water
Analysis Batch: 611417

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.44	mg/L			04/30/24 10:35	1

Lab Sample ID: MB 240-611417/5
Matrix: Water
Analysis Batch: 611417

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	0.44	mg/L			04/29/24 21:45	1

Lab Sample ID: LCS 240-611417/21
Matrix: Water
Analysis Batch: 611417

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			16.3	15.9		mg/L		98	85 - 115		

Lab Sample ID: LCS 240-611417/36
Matrix: Water
Analysis Batch: 611417

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			16.3	15.3		mg/L		94	85 - 115		

Lab Sample ID: 240-203421-5 MS
Matrix: Water
Analysis Batch: 611417

Client Sample ID: MW-5B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon	3.1		10.0	12.9		mg/L		98	65 - 134		

Lab Sample ID: 240-203421-5 MSD
Matrix: Water
Analysis Batch: 611417

Client Sample ID: MW-5B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	3.1		10.0	13.0		mg/L		99	65 - 134	1	10

Lab Sample ID: 240-203421-6 MS
Matrix: Water
Analysis Batch: 611417

Client Sample ID: MW-10A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon	1.2		10.0	11.6		mg/L		105	65 - 134		

Lab Sample ID: 240-203421-6 MSD
Matrix: Water
Analysis Batch: 611417

Client Sample ID: MW-10A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	1.2		10.0	11.5		mg/L		104	65 - 134	1	10

GC/MS VOA

Analysis Batch: 611871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-3	MW-15	Total/NA	Water	8260D	
240-203421-5	MW-5B	Total/NA	Water	8260D	
240-203421-6	MW-10A	Total/NA	Water	8260D	
240-203421-7	MW-10B	Total/NA	Water	8260D	
240-203421-8	MW-18B	Total/NA	Water	8260D	
240-203421-9	RB-20240424	Total/NA	Water	8260D	
240-203421-10	TB-20240424	Total/NA	Water	8260D	
MB 240-611871/7	Method Blank	Total/NA	Water	8260D	
LCS 240-611871/4	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 611978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	8260D	
240-203421-5	MW-5B	Total/NA	Water	8260D	
MB 240-611978/7	Method Blank	Total/NA	Water	8260D	
LCS 240-611978/4	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 612132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-1	MW-13B	Total/NA	Water	8260D	
240-203421-4	MW-14B	Total/NA	Water	8260D	
MB 240-612132/7	Method Blank	Total/NA	Water	8260D	
LCS 240-612132/4	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 710046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	3510C	
240-203421-6	MW-10A	Total/NA	Water	3510C	
240-203421-9	RB-20240424	Total/NA	Water	3510C	
MB 480-710046/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-710046/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 710334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	8270D SIM ID	710046
240-203421-6	MW-10A	Total/NA	Water	8270D SIM ID	710046
240-203421-9	RB-20240424	Total/NA	Water	8270D SIM ID	710046
MB 480-710046/1-A	Method Blank	Total/NA	Water	8270D SIM ID	710046
LCS 480-710046/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	710046

GC VOA

Analysis Batch: 611316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	RSK-175	
240-203421-3	MW-15	Total/NA	Water	RSK-175	
MB 240-611316/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-611316/4	Lab Control Sample	Total/NA	Water	RSK-175	

GC VOA

Analysis Batch: 611474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-3	MW-15	Total/NA	Water	RSK-175	
240-203421-5	MW-5B	Total/NA	Water	RSK-175	
240-203421-6	MW-10A	Total/NA	Water	RSK-175	
240-203421-7	MW-10B	Total/NA	Water	RSK-175	
240-203421-8	MW-18B	Total/NA	Water	RSK-175	
240-203421-9	RB-20240424	Total/NA	Water	RSK-175	
240-203421-10	TB-20240424	Total/NA	Water	RSK-175	
MB 240-611474/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-611474/4	Lab Control Sample	Total/NA	Water	RSK-175	

Analysis Batch: 611635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-8	MW-18B	Total/NA	Water	RSK-175	
MB 240-611635/3	Method Blank	Total/NA	Water	RSK-175	
LCS 240-611635/4	Lab Control Sample	Total/NA	Water	RSK-175	

LCMS

Prep Batch: 758270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	3535	
240-203421-6	MW-10A	Total/NA	Water	3535	
240-203421-9	RB-20240424	Total/NA	Water	3535	
MB 320-758270/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-758270/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 763646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	537 (modified)	758270
240-203421-6	MW-10A	Total/NA	Water	537 (modified)	758270
240-203421-9	RB-20240424	Total/NA	Water	537 (modified)	758270
MB 320-758270/1-A	Method Blank	Total/NA	Water	537 (modified)	758270
LCS 320-758270/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	758270

Metals

Prep Batch: 611169

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Dissolved	Water	3005A	
240-203421-3	MW-15	Dissolved	Water	3005A	
240-203421-5	MW-5B	Dissolved	Water	3005A	
240-203421-6	MW-10A	Dissolved	Water	3005A	
240-203421-7	MW-10B	Dissolved	Water	3005A	
240-203421-8	MW-18B	Dissolved	Water	3005A	
240-203421-9	RB-20240424	Dissolved	Water	3005A	
MB 240-611169/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-611169/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 611558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Dissolved	Water	6010D	611169
240-203421-3	MW-15	Dissolved	Water	6010D	611169

Metals (Continued)

Analysis Batch: 611558 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-5	MW-5B	Dissolved	Water	6010D	611169
240-203421-6	MW-10A	Dissolved	Water	6010D	611169
240-203421-7	MW-10B	Dissolved	Water	6010D	611169
240-203421-8	MW-18B	Dissolved	Water	6010D	611169
240-203421-9	RB-20240424	Dissolved	Water	6010D	611169
MB 240-611169/1-A	Method Blank	Total Recoverable	Water	6010D	611169
LCS 240-611169/2-A	Lab Control Sample	Total Recoverable	Water	6010D	611169

General Chemistry

Analysis Batch: 611098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	4500 S2 F-2000	
240-203421-3	MW-15	Total/NA	Water	4500 S2 F-2000	
240-203421-5	MW-5B	Total/NA	Water	4500 S2 F-2000	
240-203421-6	MW-10A	Total/NA	Water	4500 S2 F-2000	
240-203421-7	MW-10B	Total/NA	Water	4500 S2 F-2000	
240-203421-8	MW-18B	Total/NA	Water	4500 S2 F-2000	
240-203421-9	RB-20240424	Total/NA	Water	4500 S2 F-2000	
MB 240-611098/1	Method Blank	Total/NA	Water	4500 S2 F-2000	
LCS 240-611098/2	Lab Control Sample	Total/NA	Water	4500 S2 F-2000	

Analysis Batch: 611244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	300.0	
240-203421-3	MW-15	Total/NA	Water	300.0	
240-203421-3	MW-15	Total/NA	Water	300.0	
240-203421-5	MW-5B	Total/NA	Water	300.0	
240-203421-5	MW-5B	Total/NA	Water	300.0	
240-203421-6	MW-10A	Total/NA	Water	300.0	
240-203421-7	MW-10B	Total/NA	Water	300.0	
240-203421-7	MW-10B	Total/NA	Water	300.0	
240-203421-8	MW-18B	Total/NA	Water	300.0	
240-203421-9	RB-20240424	Total/NA	Water	300.0	
MB 240-611244/3	Method Blank	Total/NA	Water	300.0	
LCS 240-611244/4	Lab Control Sample	Total/NA	Water	300.0	
240-203421-2 MS	MW-5A	Total/NA	Water	300.0	
240-203421-2 MSD	MW-5A	Total/NA	Water	300.0	

Analysis Batch: 611251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	300.0	
240-203421-3	MW-15	Total/NA	Water	300.0	
240-203421-5	MW-5B	Total/NA	Water	300.0	
240-203421-6	MW-10A	Total/NA	Water	300.0	
240-203421-7	MW-10B	Total/NA	Water	300.0	
240-203421-8	MW-18B	Total/NA	Water	300.0	
240-203421-9	RB-20240424	Total/NA	Water	300.0	
MB 240-611251/3	Method Blank	Total/NA	Water	300.0	
LCS 240-611251/4	Lab Control Sample	Total/NA	Water	300.0	
240-203421-2 MS	MW-5A	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 611251 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2 MSD	MW-5A	Total/NA	Water	300.0	

Analysis Batch: 611359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	410.4	
240-203421-3	MW-15	Total/NA	Water	410.4	
240-203421-5	MW-5B	Total/NA	Water	410.4	
240-203421-6	MW-10A	Total/NA	Water	410.4	
240-203421-7	MW-10B	Total/NA	Water	410.4	
240-203421-8	MW-18B	Total/NA	Water	410.4	
240-203421-9	RB-20240424	Total/NA	Water	410.4	
MB 240-611359/41	Method Blank	Total/NA	Water	410.4	
MB 240-611359/9	Method Blank	Total/NA	Water	410.4	
LCS 240-611359/10	Lab Control Sample	Total/NA	Water	410.4	
LCS 240-611359/42	Lab Control Sample	Total/NA	Water	410.4	
240-203421-5 MS	MW-5B	Total/NA	Water	410.4	
240-203421-5 MSD	MW-5B	Total/NA	Water	410.4	

Analysis Batch: 611377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-2	MW-5A	Total/NA	Water	5310C-2000	
240-203421-3	MW-15	Total/NA	Water	5310C-2000	
240-203421-7	MW-10B	Total/NA	Water	5310C-2000	
MB 240-611377/5	Method Blank	Total/NA	Water	5310C-2000	
LCS 240-611377/21	Lab Control Sample	Total/NA	Water	5310C-2000	
LCS 240-611377/6	Lab Control Sample	Total/NA	Water	5310C-2000	
240-203421-2 MS	MW-5A	Total/NA	Water	5310C-2000	
240-203421-2 MSD	MW-5A	Total/NA	Water	5310C-2000	

Analysis Batch: 611417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-203421-5	MW-5B	Total/NA	Water	5310C-2000	
240-203421-6	MW-10A	Total/NA	Water	5310C-2000	
240-203421-8	MW-18B	Total/NA	Water	5310C-2000	
240-203421-9	RB-20240424	Total/NA	Water	5310C-2000	
MB 240-611417/37	Method Blank	Total/NA	Water	5310C-2000	
MB 240-611417/5	Method Blank	Total/NA	Water	5310C-2000	
LCS 240-611417/21	Lab Control Sample	Total/NA	Water	5310C-2000	
LCS 240-611417/36	Lab Control Sample	Total/NA	Water	5310C-2000	
240-203421-5 MS	MW-5B	Total/NA	Water	5310C-2000	
240-203421-5 MSD	MW-5B	Total/NA	Water	5310C-2000	
240-203421-6 MS	MW-10A	Total/NA	Water	5310C-2000	
240-203421-6 MSD	MW-10A	Total/NA	Water	5310C-2000	

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-13B

Date Collected: 04/24/24 08:05
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	612132	LEE	EET CLE	05/07/24 16:35

Client Sample ID: MW-5A

Date Collected: 04/24/24 08:35
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	611978	LEE	EET CLE	05/06/24 19:29
Total/NA	Prep	3510C			710046	LSC	EET BUF	04/30/24 14:32
Total/NA	Analysis	8270D SIM ID		1	710334	JMM	EET BUF	05/03/24 01:05
Total/NA	Analysis	RSK-175		1	611316	JBN	EET CLE	04/30/24 21:39
Total/NA	Prep	3535			758270	F1D	EET SAC	04/30/24 04:36
Total/NA	Analysis	537 (modified)		1	763646	P1P	EET SAC	05/15/24 20:51
Dissolved	Prep	3005A			611169	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611558	KLC	EET CLE	05/01/24 13:56
Total/NA	Analysis	300.0		1	611244	JWW	EET CLE	04/29/24 17:37
Total/NA	Analysis	300.0		1	611251	JWW	EET CLE	04/29/24 17:37
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:48
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611377	QUY8	EET CLE	04/29/24 22:33

Client Sample ID: MW-15

Date Collected: 04/24/24 09:15
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 16:32
Total/NA	Analysis	RSK-175		1	611316	JBN	EET CLE	04/30/24 21:56
Total/NA	Analysis	RSK-175		10	611474	JBN	EET CLE	05/01/24 16:27
Dissolved	Prep	3005A			611169	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611558	KLC	EET CLE	05/01/24 14:00
Total/NA	Analysis	300.0		1	611244	JWW	EET CLE	04/29/24 18:57
Total/NA	Analysis	300.0		1	611251	JWW	EET CLE	04/29/24 18:57
Total/NA	Analysis	300.0		10	611244	JWW	EET CLE	04/29/24 19:17
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:48
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611377	QUY8	EET CLE	04/30/24 03:21

Lab Chronicle

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Client Sample ID: MW-14B

Date Collected: 04/24/24 10:20
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	612132	LEE	EET CLE	05/07/24 16:59

Client Sample ID: MW-5B

Date Collected: 04/24/24 11:55
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 16:56
Total/NA	Analysis	8260D		2	611978	LEE	EET CLE	05/06/24 20:17
Total/NA	Analysis	RSK-175		1	611474	JBN	EET CLE	05/01/24 16:44
Dissolved	Prep	3005A			611169	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611558	KLC	EET CLE	05/01/24 14:05
Total/NA	Analysis	300.0		1	611244	JWW	EET CLE	04/29/24 19:37
Total/NA	Analysis	300.0		1	611251	JWW	EET CLE	04/29/24 19:37
Total/NA	Analysis	300.0		10	611244	JWW	EET CLE	04/29/24 19:58
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:46
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611417	QUY8	EET CLE	04/30/24 04:33

Client Sample ID: MW-10A

Date Collected: 04/24/24 12:05
Date Received: 04/26/24 10:10

Lab Sample ID: 240-203421-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	611871	LEE	EET CLE	05/04/24 18:07
Total/NA	Prep	3510C			710046	LSC	EET BUF	04/30/24 14:32
Total/NA	Analysis	8270D SIM ID		1	710334	JMM	EET BUF	05/03/24 01:27
Total/NA	Analysis	RSK-175		1	611474	JBN	EET CLE	05/01/24 17:18
Total/NA	Prep	3535			758270	F1D	EET SAC	04/30/24 04:36
Total/NA	Analysis	537 (modified)		1	763646	P1P	EET SAC	05/15/24 21:14
Dissolved	Prep	3005A			611169	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611558	KLC	EET CLE	05/01/24 14:09
Total/NA	Analysis	300.0		1	611244	JWW	EET CLE	04/29/24 20:18
Total/NA	Analysis	300.0		1	611251	JWW	EET CLE	04/29/24 20:18
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:46
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611417	QUY8	EET CLE	04/30/24 11:48

Client Sample ID: MW-10B
Lab Sample ID: 240-203421-7

Date Collected: 04/24/24 13:35
Matrix: Water
Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		5	611871	LEE	EET CLE	05/04/24 17:43
Total/NA	Analysis	RSK-175		1	611474	JBN	EET CLE	05/01/24 17:35
Dissolved	Prep	3005A			611169	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611558	KLC	EET CLE	05/01/24 14:13
Total/NA	Analysis	300.0		1	611244	JWW	EET CLE	04/29/24 21:38
Total/NA	Analysis	300.0		1	611251	JWW	EET CLE	04/29/24 21:38
Total/NA	Analysis	300.0		10	611244	JWW	EET CLE	04/29/24 21:59
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:46
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611377	QUY8	EET CLE	04/30/24 03:45

Client Sample ID: MW-18B
Lab Sample ID: 240-203421-8

Date Collected: 04/24/24 13:40
Matrix: Water
Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 17:19
Total/NA	Analysis	RSK-175		1	611474	JBN	EET CLE	05/01/24 17:52
Total/NA	Analysis	RSK-175		20	611635	JBN	EET CLE	05/02/24 14:02
Dissolved	Prep	3005A			611169	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611558	KLC	EET CLE	05/01/24 14:18
Total/NA	Analysis	300.0		1	611244	JWW	EET CLE	04/29/24 22:19
Total/NA	Analysis	300.0		1	611251	JWW	EET CLE	04/29/24 22:19
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:48
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611417	QUY8	EET CLE	04/30/24 05:44

Client Sample ID: RB-20240424
Lab Sample ID: 240-203421-9

Date Collected: 04/24/24 15:00
Matrix: Water
Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 14:12
Total/NA	Prep	3510C			710046	LSC	EET BUF	04/30/24 14:32
Total/NA	Analysis	8270D SIM ID		1	710334	JMM	EET BUF	05/03/24 01:48
Total/NA	Analysis	RSK-175		1	611474	JBN	EET CLE	05/01/24 18:26
Total/NA	Prep	3535			758270	F1D	EET SAC	04/30/24 04:36
Total/NA	Analysis	537 (modified)		1	763646	P1P	EET SAC	05/15/24 21:25
Dissolved	Prep	3005A			611169	BN	EET CLE	04/30/24 05:00
Dissolved	Analysis	6010D		1	611558	KLC	EET CLE	05/01/24 14:31
Total/NA	Analysis	300.0		1	611244	JWW	EET CLE	04/29/24 18:37
Total/NA	Analysis	300.0		1	611251	JWW	EET CLE	04/29/24 18:37
Total/NA	Analysis	410.4		1	611359	MS	EET CLE	04/30/24 13:48

Lab Chronicle

Client: AECOM
Job ID: 240-203421-1
Project/Site: BP Hyde Park

Client Sample ID: RB-20240424
Lab Sample ID: 240-203421-9

Date Collected: 04/24/24 15:00
Matrix: Water
Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	4500 S2 F-2000		1	611098	BLW	EET CLE	04/29/24 08:06
Total/NA	Analysis	5310C-2000		1	611417	QUY8	EET CLE	04/30/24 08:58

Client Sample ID: TB-20240424
Lab Sample ID: 240-203421-10

Date Collected: 04/24/24 00:00
Matrix: Water
Date Received: 04/26/24 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	611871	LEE	EET CLE	05/04/24 13:48
Total/NA	Analysis	RSK-175		1	611474	JBN	EET CLE	05/01/24 18:43

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: AECOM
Job ID: 240-203421-1
Project/Site: BP Hyde Park

Laboratory: Eurofins Cleveland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10975	04-02-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chloride
300.0		Water	Nitrate as N
300.0		Water	Nitrite as N
300.0		Water	Sulfate
5310C-2000		Water	Total Organic Carbon
RSK-175		Water	Ethane
RSK-175		Water	Ethylene
RSK-175		Water	Methane
RSK-175		Water	Propane

Laboratory: Eurofins Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-23 *
Connecticut	State	PH-0807	03-31-25
Florida	NELAP	E87672	06-30-23 *
Georgia	State	10026 (NY)	03-31-25
Georgia	State Program	N/A	03-31-09 *
Illinois	NELAP	200003	09-30-24
Iowa	State	374	03-01-25
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	02-01-25
Kentucky (UST)	State	108092	04-01-24 *
Kentucky (WW)	State	KY90029	12-31-24
Louisiana	NELAP	02031	06-30-23 *
Louisiana (All)	NELAP	02031	06-30-23 *
Maine	State	NY00044	12-04-24
Maryland	State	294	06-30-24
Massachusetts	State	M-NY044	07-01-24
Michigan	State	9937	03-31-25
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-24
New Jersey	NELAP	NY455	06-30-24
New York	NELAP	10026	03-31-25
Pennsylvania	NELAP	68-00281	08-31-24
Rhode Island	State	LAO00378	12-30-24
Texas	NELAP	T104704412-18-10	07-31-23 *
Virginia	NELAP	460185	09-14-24
Washington	State	C784	02-10-25
Wisconsin	State	998310390	08-31-24

Laboratory: Eurofins Sacramento

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

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: AECOM
Job ID: 240-203421-1
Project/Site: BP Hyde Park

Laboratory: Eurofins Sacramento (Continued)

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-27
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468	01-20-27
Arizona	State	AZ0708	08-11-24
Arkansas DEQ	State	88-0691	05-18-24
California	State	2897	01-31-26
Colorado	State	CA00044	08-31-24
Florida	NELAP	E87570	06-30-24
Georgia	State	4040	01-29-25
Hawaii	State	Eurofins Sacramento	01-29-25
Illinois	NELAP	200060	03-31-25
Kansas	NELAP	E-10375	10-31-24
Louisiana	NELAP	01944	06-30-24
Louisiana (All)	NELAP	01944	06-30-24
Maine	State	CA00004	04-14-26
Michigan	State	9947	01-29-25
Nevada	State	CA00044	07-31-24
New Hampshire	NELAP	2997	04-19-25
New Jersey	NELAP	CA005	07-02-24
New York	NELAP	11666	04-01-25
Ohio	State	41252	01-29-25
Oregon	NELAP	4040	01-29-25
Texas	NELAP	T104704399-23-17	05-31-24
US Fish & Wildlife	US Federal Programs	A22139	04-30-25
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-28-25
Virginia	NELAP	460278	03-14-25
Washington	State	C581	05-05-24 *
West Virginia (DW)	State	9930C	01-31-25
Wisconsin	State	998204680	08-31-25
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP IPO **Req Due Date (mm/dd/yy):** ______ **Rush TAT:** Yes ___ No X

BP/ARC Facility No: BP Hyde Park **Lab Work Order Number:** ______

Lab Name:	Eurofins (Cleveland, OH)	BP/ARC Facility Address:	3425 Hyde Park Blvd	Consultant/Contractor:	AECOM
Lab Address:	180 S Van Buren Ave, Barberton, OH 44203	City, State, ZIP Code:	Niagara, NY 14305	Consultant/Contractor Project No:	60481767.105.24.01H
Lab PM:	Lab Contact: Opal Johnson	Lead Regulatory Agency:	NYSDEC	Address:	50 Lakefront Blvd Ste 111, Buffalo, NY 14202
Lab Phone:	330-497-9396 / 330-497-0772 (fax)	California Global ID No.:		Consultant/Contractor PM:	James Kaczor
Lab Shipping Accnt:		Enfos Proposal No:		Phone:	716-923-1300
Lab Bottle Order No:		Accounting Mode:	Provision ___ OOC-BU ___ OOC-RM ___	Email EDD To:	James.Kaczor@aecom.com
Other Info:	PO # 1643548	Stage:	Activity:	Invoice To:	BP/ARC ___ Contractor X
BP/ARC EBM:					
EBM Phone:					
EBM Email:					

Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor		Total Number of Containers	Unpreserved	HNO3	HCl	NaoH/Zn-acetate	H2SO4		8260C -VOCs	SM-4500_S2_F -Sulfide	410.4 - COD	RSK 175 - Dissolved Gases	5310 C - TOC	5210-BOD (TA-Buffalo)	300, 353.2, nitrate-nitrite 300.0_28D chloride, sulfate (TA - Buffalo)	6010C - Dissloved Iron (field filtered)	1633 - PFC_IDA-PFAS	8270D - SIM 1,4-Dioxane	Report Type & QC Level
	MW-13B	4/24/24	0805		X			3			3				3										
	MW-5A	4/24/24	0835		X			18	6	1	6	1	4		3	1	1	3	2	1	1	1	2	2	
	MW-15	4/24/24	0915		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	MW-14B	4/24/24	1020		X			3			3				3										
	MW-5B	4/24/24	1155		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	MW-10A	4/24/24	1205		X			18	6	1	6	1	4		3	1	1	3	2	1	1	1	2	2	
	MW-10B	4/24/24	1335		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	MW-18B	4/24/24	1340		X			14	2	1	6	1	4		3	1	1	3	2	1	1	1			
	RB-20240424	4/24/24	1500		X			18	6	1	6	1	4		3	1	1	3	2	1	1	1	2	2	1,4-Dioxane (limited volume)
	TB-20240424	4/24/24	—		X			4			4				2			2							

Report Type & QC Level: Standard ___ Full Data Package ___

Note: If sam... Sample" in ... and initial ar... No ...out ...iption.

240-203421 Chain of Custody

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	S. Connelly / T. Urban / D. VanMarter						
Sampler's Company:	AECOM	S. Connelly / AECOM	4/24/24	1620	[illegible] Eurofins Lab	04/24/24	1620
Shipment Method:	Dropoff at Eurofins Buffalo, NY Ship Date:	[illegible] Eurofins Lab	4/25/24	1600	J. Morosco	04/26/24	1010
Shipment Tracking No:					Temp 2.9 3.8 3.6 4.0 # 1 ICE		

Special Instructions: PO #97842 Line 17: Eurofins Buffalo to ship to Eurofins Cleveland except short hold bottles 5210-BOD, 300, 353.2, 300.0_28D :

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP/ARC LaMP COC Rev. 6 01/01/2009

Eurofins – Cleveland Sample Receipt Form/Narrative **Login # :** _____
Barberton Facility

Client BP Hyde Park Site Name _____ Cooler unpacked by J MOROSKO

Cooler Received on 04/26/24 Opened on 04/26/24

FedEx 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other _____

Receipt After-hours Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # EC Foam Box Client Cooler Box Other _____

Packing material used. Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1 Cooler temperature upon receipt ☒ See Multiple Cooler Form

IR GUN # 17 (CF TO 2 °C) Observed Cooler Temp _____ °C Corrected Cooler Temp. _____ °C

2	Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes No
	Were the seals on the outside of the cooler(s) signed & dated?	Yes No NA
	Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes No
	-Were tamper/custody seals intact and uncompromised?	Yes No NA
3	Shippers' packing slip attached to the cooler(s)?	Yes No
4	Did custody papers accompany the sample(s)?	Yes No
5	Were the custody papers relinquished & signed in the appropriate place?	Yes No
6	Was/were the person(s) who collected the samples clearly identified on the COC?	Yes No
7	Did all bottles arrive in good condition (Unbroken)?	Yes No
8	Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes No
9	For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp(Y/N)?	
10	Were correct bottle(s) used for the test(s) indicated?	Yes No
11	Sufficient quantity received to perform indicated analyses?	Yes No
12	Are these work share samples and all listed on the COC?	Yes No
	If yes, Questions 13-17 have been checked at the originating laboratory	
13	Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA pH Strip Lot# HC439975
14.	Were VOAs on the COC?	Yes No
15	Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes No NA
16	Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # Covered	Yes No
17	Was a LL Hg or Me Hg trip blank present? _____	Yes No

Tests that are not checked for pH by Receiving

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page | Samples processed by:

Sent 5 - received samples that were suppose
JM to stay in Buffalo.
4.26 - logged all bottles received, did not log BOD or nitrate/nitrite per pm.

19 SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired

Sample(s) _____ were received in a broken container

Sample(s) _____ were received with bubble >6 mm in diameter (Notify PM)

20 SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory

Time preserved _____ Preservative(s) added/Lot number(s) _____

VOA Sample Preservation Date/Time VOAs Frozen _____

Login # · ____________

Eurofins - Cleveland Sample Receipt Multiple Cooler Form

Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
(EC circled) Client Box Other	IR GUN #: 17	2.8	3.0	(Wet Ice circled) Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.4	1.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	1.5	1.7	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:	3.2	3.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #:			Wet Ice Blue Ice Dry Ice Water None

☐ See Temperature Excursion Form

WI-NC-099 Cooler Receipt For Page 2 – Multiple Coolers

SAMPLE CONTROL
EUROFINS ENVIRONMENT TESTING
10 HAZELWOOD DRIVE

BUFFALO, NY 142282223
UNITED STATES US

ACTWGT: 48.35 LB
CAD: 0759273/CAFE3755
DIMS: 26x15x14 IN

BILL SENDER

TO SAMPLE RECEIPT
EUROFINS CLEVELAND
180 S VAN BUREN AVE

BARBERTON OH 442033543
(330) 497-9396
REF: TA BARBERTON

FedEx Express

4 of 4
MPS# 0263 7117 9318 9412
Mstr# 7117 9318 9386

FRI - 26 APR 10:30A
PRIORITY OVERNIGHT

0201

NX CAKA

44203
OH-US CLE

240-203421 Waybill

5/17/2024

Page 50 of 58

SAMPLE CONTROL
EUROFINS ENVIRONMENT TESTING
10 HAZELWOOD DRIVE

BUFFALO, NY 142282223
UNITED STATES US

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TO SAMPLE RECEIPT
EUROFINS CLEVELAND
180 S VAN BUREN AVE

BARBERTON OH 442033543
(330) 497-9396
REF: TA BARBERTON

Trk# 135459434 MTW EXP 01/25

FedEx Express

4 of 4
MPS# 0263 7117 9318 9412
Mstr# 7117 9318 9386

FRI - 26 APR 10:30A
PRIORITY OVERNIGHT

0201

NX CAKA

44203
OH-US CLE

240-203421 Waybill

5/17/2024

Eurofins Cleveland
180 S Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Johnson Opal	Carrier Tracking No(s):	COC No: 240-183724.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Opal.Johnson@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Environment Testing Northern Ca		Accreditations Required (See note): NELAP New York		Job #: 240-203421 1
Address: 880 Riverside Parkway	Due Date Requested: 5/9/2024	Analysis Requested		Preservation Codes:
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: BP Hyde Park	Project #: 24018856			
Site:	SSOW#:			Other:

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_PFC PFAS, Standard List (21 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-5A (240-203421-2)	4/24/24	08:35 Eastern		Water			X	2	BP LaMP
MW-10A (240-203421-6)	4/24/24	12:05 Eastern		Water			X	2	BP LaMP
RB-20240424 (240-203421-9)	4/24/24	15:00 Eastern		Water			X	2	BP LaMP

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	4/24/24 2pm	CE		4/29/24 9:15	EETSAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 1.92

Ver: 06/08/2021

Eurofins Cleveland
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Johnson, Opal	Carrier Tracking No(s):	COC No: 240-183723.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Opal.Johnson@et.eurofinsus.com	State of Origin: New York	Page: Page 1 of 1
Company: Eurofins Environment Testing Northeast,		Accreditations Required (See note): NELAP - New York		Job #: 240-203421-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 5/9/2024			Preservation Codes: -
City: Amherst	TAT Requested (days):			
State, Zip: NY, 14228-2298				
Phone: 716-691-2600(Tel) 716-691-7991(Fax)	PO #:			
Email:	WO #:			
Project Name: BP Hyde Park	Project #: 24018856			
Site:	SSOW#:			Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D_SIM_MS_ID/3510C SIM List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-5A (240-203421-2)	4/24/24	08:35 Eastern		Water			X	2	BP LaMP
MW-10A (240-203421-6)	4/24/24	12:05 Eastern		Water			X	2	BP LaMP
RB-20240424 (240-203421-9)	4/24/24	15:00 Eastern		Water			X	2	BP LaMP

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

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: 4-29-24
Relinquished by:	Date/Time: 4/29/24 14:00	Company	Received by:	Date/Time: 4-30-24 1100	Company TAB
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.8 ICE

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: AECOM

Job Number: 240-203421-1

Login Number: 203421
List Number: 3
Creator: Yeager, Brian A

List Source: Eurofins Buffalo
List Creation: 04/30/24 03:29 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.8 ICE
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	FEDEX DELAY
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 240-203421-1

Login Number: 203421
List Number: 2
Creator: Soto-Hernandez, Flor N

List Source: Eurofins Sacramento
List Creation: 04/29/24 10:06 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	19.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Sacramento Sample Receiving Notes (SSRN)

Tracking # 7180 5081 2825

Job _ 240-203421 Field Sheet

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSL / OnTrac / Goldstreak / USPS / Other_____

Use this form to record Sample Custody Seal Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm ID t-09 Corr Factor (+ / -) N/A °C

Ice_____ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: —

Cooler ID: —

Temp Observed 19.2 °C Corrected 19.2 °C

From Temp Blank ☐ Sample ☑

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☑	☐
Cooler Temperature is acceptable?	☐	☑	☐
Frozen samples show signs of thaw?	☐	☐	☑

Initials: FSH Date: 4/29/24

Unpacking/Labeling The Samples	Yes	No	NA
Containers are not broken or leaking?	☑	☐	☐
Samples compromised/tampered with?	☐	☑	☐
COC is complete w/o discrepancies	☑	☐	☐
Sample custody seal?	☐	☐	☑
Sample containers have legible labels?	☑	☐	☐
Sample date/times are provided?	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Is the Field Sampler's name on COC?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
Perchlorate has headspace? (Methods 314, 331 6850)	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: FSH Date: 4/29/24

Notes NCM ice melted water only

Trizma Lot #(s). _____

Ammonium Acetate Lot #(s) _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☑	☐	☐
NCM Filed?	☑	☐	☐
Samples received within hold time?	☐	☐	☑
Log Release checked in TALS?	☐	☐	☑

Initials: FSH Date: 4/29/24

Isotope Dilution Summary

Client: AECOM
Project/Site: BP Hyde Park

Job ID: 240-203421-1

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(15-110)
240-203421-2	MW-5A	32
240-203421-6	MW-10A	36
240-203421-9	RB-20240424	33
LCS 480-710046/2-A	Lab Control Sample	35
MB 480-710046/1-A	Method Blank	35

Surrogate Legend

DXE = 1,4-Dioxane-d8

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA	PFPeA	PFHxA	C4PFHA	PFOA	PFNA	PFDA	PFUnA
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
240-203421-2	MW-5A	102	97	89	100	100	103	111	103
240-203421-6	MW-10A	99	94	91	87	100	96	98	98
240-203421-9	RB-20240424	101	99	99	104	106	110	111	104
LCS 320-758270/2-A	Lab Control Sample	97	91	90	98	106	93	97	101
MB 320-758270/1-A	Method Blank	99	82	86	94	98	100	96	102

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFDoA	PFTDA	C3PFBS	PFHxS	PFOS	PFOSA	d3NMFOS	d5NEFOS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)	(25-150)
240-203421-2	MW-5A	101	90	88	98	100	99	103	97
240-203421-6	MW-10A	96	90	89	97	96	92	98	87
240-203421-9	RB-20240424	99	86	96	96	103	95	106	108
LCS 320-758270/2-A	Lab Control Sample	101	89	89	92	103	91	94	94
MB 320-758270/1-A	Method Blank	97	80	82	93	97	97	87	87

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		M262FTS	M282FTS
Lab Sample ID	Client Sample ID	(25-150)	(25-150)
240-203421-2	MW-5A	103	112
240-203421-6	MW-10A	128	96
240-203421-9	RB-20240424	95	108
LCS 320-758270/2-A	Lab Control Sample	101	103
MB 320-758270/1-A	Method Blank	120	97

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5-PFPeA
PFHxA = 13C2 PFHxA
C4PFHA = 13C4 PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
PFHxS = 18O2 PFHxS

Isotope Dilution Summary

Client: AECOM

Job ID: 240-203421-1

Project/Site: BP Hyde Park

PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
M262FTS = M2-6:2 FTS
M282FTS = M2-8:2 FTS

Appendix E

Monitoring Well Analytical Data Summary, 2007 to 2024

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 1A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	5 U	5 U	5 U	2 U				5 U	5 U	5 U									
4/23/2008	5 U	5 U	5 U	5 U	5 U	2 U	1 U	1 U	2.6	5 U	5 U	5 U		2 U	6.02	1.53	112	109	1 U	0.05 U	0.05 U
10/27/2009	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	30	5 U	5 U	5 U		1.7 U	16.5 J	2	140 J	141	0.16 U	0 R	0.05 U

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 1B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/30/2007	5 U	5 U	11	5 U	5 U	16	0.36 J	0.97 J	160	5 U	5 U	5 U		2 U	5 UJ	4.23	97.6	301	1 U		
4/23/2008	5 U	5 U	1.2 J	5 U	5 U	1.9 J	1 U	1 U	64	5 U	0.71 J	5 U		2 U	13	4.06	70	181	1 U	0.05 U	0.05 U
10/27/2009	5 U	5 U	1.3 J	5 U	5 U	1.7 J	5 U	5 U	59	5 U	5 U	5 U		1.6 U	32.5 J	4.5	71.8 J	218	0.16 U	0 R	0.05 U

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 2A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	0.91 J	9.8	5 U	5 U	1.9 J				5 U	7.1	4.9 J									
4/28/2008	5 U	5 U	0.38 J	5 U	2.4 J	2 U				2 J	14	1.2 J									
10/28/2009	5 U	5 U	5 U	5 U	6	1.3 J				7.6	26	1.2 J									
5/11/2010	5 U	5 U	5 U	5 U	4.3 J	1.2 J	5 U	5 U	30	4.9 J	18	1.7 J									

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 2B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	5 U	48	5 U	5 U	59				5 U	5 U	5 U									
4/28/2008	5 U	5 U	41	5 U	5 U	62				5 U	5 U	5 U									
10/28/2009	5 U	5 U	9.1	5 U	5 U	16				5 U	5 U	5 U									
5/11/2010	5 U	5 U	3.7 J	5 U	5 U	7.6	1.9 J	55	2300	5 U	5 U	5 U									
10/20/2011	5 U	5 U	1.8 J	5 U	5 U	2.6 J				5 U	5 U	5 U									
6/13/2012	5 U	5 U	2.7 J	5 U	5 U	8.6				5 U	5 U	5 U									
8/30/2013	5 U	5 U	2.3 J	5 U	5 U	4 J				5 U	5 U	5 U									
4/3/2014	1 U	1 U	1	0.72 J	1 U	2.2				1 UJ	0.92 J	1 U									
11/20/2015	1 U	1 U	0.87 J	0.56 J	1 U	3.4				1 U	0.65 J	1 U									
4/19/2016	1.0 U	1.0 U	0.95 J	1.0 U	1.0 U	2.2				1.0 U	0.96 J	1.0 U									
9/12/2017	1.0 U	1.0 U	0.77 J	1.0 U	1.0 U	1.8				1.0 U	0.5 J	1.0 U									
4/25/2018	1.0 U	1.0 U	1.3	1.0 U	1.0 U	2.6				1.0 U	1.0 U	1.0 U									

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 3A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	0.9 J	5 U	5 U	2 U	0.54 J	1 U	6	5 U	5 U	5 U		2 U	19 J	3.21	16.4	319	3.64		
4/24/2008	5 U	0.21 J	0.71 J	5 U	5 U	2 U	1 U	1 U	12	5 U	5 U	5 U		2 U	6.92	2.89	0.2 U	292	1 U	0.05 U	0.05 U
8/12/2008	5 U	5 U	0.89 J	5 U	5 U	5 U	5 U	5 U	25	5 U	5 U					2.6	17.6	318			
10/6/2008	5 U	1.9 J	11	5 U	5 U	5 U	5 U	5 U	19 J	5 U	5 U	5 U				2.3	19.4 J	347			
12/8/2008	5 U	1.4 J	5 U	5 U	5 U	5 U	5 U	5 U	7.7 J	5 U	5 U	5 U				4.9	23.3	444			
1/26/2009	5 U	5 U	1 J	5 U	5 U	5 U	5 U	5 U	7.3 J	5 U	5 U	5 U									
3/16/2009	5 U	5 U	0.99 J	5 U	5 U	5 U	5 U	5 U	5 J	5 U	5 U	5 U				3.7	27.3	334			
10/27/2009	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	14 J	5 U	5 U	5 U		1.9 U	25.6 J	2.2	15.9 J	250	0.16 U	0 R	0.05 U

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 3B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	1.9 J	5 U	5 U	2.2	1 U	1 U	220	5 U	5 U	5 U		2 U	5 UJ	3.19	134	395	1 U		
4/25/2008	5 U	5 U	2.1 J	5 U	5 U	2.2	0.6 J	1 U	180	5 U	5 U	5 U		4.17	14.1	3.64	132	333	1 U	0.05 U	0.05 U
10/27/2009	5 U	5 U	1.5 J	5 U	5 U	2.9 J	5 U	5 U	170	5 U	5 U	5 U		2.2 U	16.5 J	3.8	121 J	254	0.9	0 R	0.05 U

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 4A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	34	200	3.2 J	1.8 J	56	0.55 J	5.6	130	5 U	12	5 U		2 U	5 UJ	1.87	106	242	1 U		
4/29/2008	5 U	34	200	3.1 J	1.6 J	53	0.55 J	5.6	130	5 U	15	5 U		2 U	6.62	1.52	117	231	1 U	0.05 U	0.05 U
11/3/2009	5 U	130	110	5.7	2.5 J	41	5 U	4.6 J	83	5 U	17	5 U		2.6 U	50 U	1.7 J	97.1	244	0.16 U	0.1 U	0.05 U
5/14/2010	5 U	94	250	4.9 J	2.6 J	45	5 U	5.7	110	5 U	21	5 U		2.1 U	50 U	1.8	109	249	0.16 U	0.1 U	0.05 U
10/25/2011	5 U	160	150	8.1	3.8 J	73	5 U	12	170	5 U	18	5 U	0.0146 J	3.1 U	50 U	2.1	95.9 J	263 J	0.16 U	0.1 U	0.05 U
3/14/2012																					
3/15/2012	50 UJ	65 J	97 J	9.5 J	50 UJ	14 J	5.7	20	1200	50 UJ	18 J	50 UJ	0.0523 J			999	160	46.3			
6/12/2012	5 U	7.5	140	2.9 J	0.81 J	20	5 U	3.9 J	3700	5 U	5.4	7.8	3.22		1350	434	89.8	5 U		0.1 U	0.05 U
6/13/2012																			0.34		
6/25/2012														796							
11/29/2012	5 U	5.5	120	4.2 J	0.92 J	39	5 U	48	7900	5 U	3.6 J	21	4.85			397	37.8	5 U			
9/3/2013	5 U	4.2 J	31	3.5 J	5 U	11	1.4 J	60 J	11000	5 U	1.3 J	17		551 J	1040 J	251	82.9	1.6 J	0.074 J	0.1 UJ	0.05 U
1/22/2014	5 U	1.1 J	7.5	2.4 J	5 U	7.2	5 U	65	22000	5 U	5 U	12	39.4			362	87.3	5 U	0.16 U		
4/3/2014	1 U	1.2	3.7	2.1	1 U	4.1	4.2 J	47	25000	1 U	1 U	12	36.2	342	640	205	99	5 U	0.17	0.1 UJ	0.018 J
10/14/2014	1 U	0.57 J	5.3	2.2	1 U	5.8	3.5 J	56	19000 J	1 UJ	1.1	9.1	57.6			159	83.8	2.5 J	0.16 U		
11/18/2015	1 U	1.2	1.3	1 U	1 U	1.1	5.2	18	17000	1 U	1	3	14.5	70.6	443	36.6	123	5.6	0.085 J	0.1 U	0.05 U
4/21/2016	1.0 U	3.4	2.8	1.0 U	1.0 U	1.1	4.3 J	8.6	26000 D	1.0 U	1.4	3	9.67	34.3	181	20.4	179	7.6	0.069 J	0.10 U	0.050 U
9/11/2017	1.0 U	1.3	0.68 J	1.0 U	1.0 UJ	2.6	3.9	5.5	5400 D	1.0 U	1.4	2.7	11	27	48	17	26	2.1 J	1.0 U	0.25 U	0.050 UJ
4/23/2018	1.0 U	0.44 J	1.1	0.51 J	1.0 U	0.96 J	10 U	10 U	21000	1.0 U	1.8	2.5	14	7.6	23	7.2	110	3.7 J	1.0 U	0.25 U	0.050 UJ

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 4B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	23	5 U	5 U	11	0.39 J	0.39 J	200	5 U	1.4 J	5 U		2 U	5.52 J	3.15	152	316	2.59		
4/29/2008	5 U	5 U	12	5 U	5 U	13	0.43 J	0.66 J	260	5 U	5 U	5 U		2 U	8.98	3.29	152	247	1 U	0.05 U	0.05 U
11/3/2009	5 U	5 U	9.7	5 U	5 U	9.5	5 U	5 U	140	5 U	5 U	5 U		3 U	25.6 J	2.9 J	190	267	0.16 J	0.1 U	0.05 U
5/14/2010	5 U	5 U	2.8 J	5 U	5 U	12	5 U	5 U	160	5 U	5 U	5 U		2.7 U	13.3 J	3.4	165	305	0.16 U	0.1 U	0.05 U
1/16/2014	5 U	5 U	11	5 U	5 U	15	5 U	2.8 J	150	5 U	1.1 J	5 U	0.459			3.9	142	298 J+	0.16 U		

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 5A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007															5 UJ						
10/30/2007	5 U	0.59 J	2.6 J	5 U	5 U	2 U	1 U	1 U	0.74 J	5 U	5 U	5 U		2 U		1.14	569	172	1 U		
4/22/2008	5 U	0.47 J	37	0.35 J	5 U	16	2	4.7	22	5 U	5 U	5 U		2 U	12.2	1.44	542	164	1 U	0.613	0.05 U
10/29/2009	5 U	5 U	5.9	5 U	5 U	1.8 J	5 U	5 U	5.5 J	5 U	5 U	5 U		1.7 U	23.3 J	1.1	263	148 J	0.16 U	0.85	0.05 U
5/13/2010	5 U	5 U	110	0.97 J	5 U	84	1.8 J	45	100	5 U	5 U	5 U		1.6 U	15.6 J	1.3	188	126	0.16 U	0.7	0.05 U
10/21/2011	5 U	5 U	5.7	5 U	5 U	3.3 J	5 U	1.5 J	9.6 J	5 U	5 U	5 U	0.0265 J	3.1 U	50 U	1.5	204	164	0.16 U	0.75	0.05 U
6/12/2012	5 U	5 U	88	1 J	5 U	82	2.8 J	34	130	5 U	5 U	1 J	0.2 U	3.2 U	50 U	0.98 J	120	116	0.16 U	0.57	0.05 U
8/28/2013	5 U	5 U	110	1.4 J	5 U	190	9.5	100	460	5 U	1.3 J	5 U		4.3 U	50 U	1.2	106 J	91.7	0.16 U	0.35	0.05 U
4/2/2014	1 U	1 U	240	2.3	1 U	300	16	110	1100	1 UJ	3.3	2.1	0.4 U	4.1 U	50 U	2.3	128 J-	63.3 J+	0.16 U	0.13	0.05 U
11/17/2015	1 U	1 U	150	1.6	1 U	140	5.4	39	2000	1 U	1.4	1.5	0.4 U		50 U	1 U	102	102	0.16 U	0.61	0.05 U
11/20/2015														6 U							
4/19/2016	1.0 U	1.0 U	340 D	5.4	1.0 U	340 D	12	87	7500	1.0 U	4.2	1.0 U	0.400 U	7.3	24.4 J	1.2	151	70.2	0.10 U	0.56	0.050 U
9/13/2017	2.0 U	2.0 U	61	0.74 J	2.0 U	68	2.1	9.8	460	2.0 U	0.88 J	2.0 U	0.100 U	2.0 U	12	0.76 J	69	99	1.0 U	0.25 U	0.050 U
4/24/2018	13 U	13 U	250	13 U	13 U	310	18	69	4200	13 U	3.3 J	13 U	0.200 U	4	4.2 J	1.5	120	60	1.0 U	0.13 J	0.050 UJ
12/3/2019	1.0 U	0.47 J	9.5	1.0 U	1.0 U	11	2.1	3.7	140	1.0 U	1.0 U	1.0 U	0.20 U	2.0 U	4.1 J	0.68 J	89	97	1.0 U	0.59	
3/18/2020	5.0 U	0.52 J	130	1.2 J	5.0 U	180	38	47	2600	5.0 U	2.5 J	5.0 U	0.2 U	1.3 J	12	1.2	130	67	1.0 U	0.098 J	0.10 U
12/6/2021	1.0 U	1.0 U	52	1.0 U	1.0 U	62	7.2 J	7.1	470	1.0 U	1	0.6 J	0.05 U	2.0 U	17	1.5	76	87	1.0 U	0.47	0.10 U
5/10/2022	1.0 U	1.0 U	78	0.62 J	1.0 U	70 D	32	32	2100	1.0 U	1.9	1.0 U	0.2 U	6.0 U	6.8 J	1.0 U	85	77	1.0 U	0.24	0.10 U
10/4/2023	1.0 U	0.49 J	67	1.0 U	1.0 U	150 D	29	35	2100	1.0 U	1.7	1.0 U	200 U	2.0 U	10 U	0.97 J	110	66	1.0 U	0.25 U	0.25 U
4/24/2024	10 U	10 U	120	10 U	10 U	160	23	23	1700	10 U	10 U	10 U	200 U	2.8	6.3 J	0.71 J	98 J+	72 J+	1.0 U	0.10 UJ	0.10 UJ

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 5B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007	5 U	0.76 J	61	0.66 J	5 U	49	1 U	0.6 J	86	5 U	0.38 J	5 U		2 U	5 UJ	4.26	83.2	230	1 U		
4/22/2008	5 U	0.51 J	58	0.5 J	5 U	57	0.37 J	0.76 J	80	5 U	5 U	5 U		2 U	9.57	4.49	81	223	1.94	0.05 U	0.05 U
10/29/2009	5 U	5 U	39	5 U	5 U	37	5 U	5 U	50	5 U	5 U	5 U		1.7 U	14.2 J	4.9	112	229 J	0.16 U	0.1 U	0.05 U
5/13/2010	5 U	1.1 J	36	5 U	5 U	39	5 U	5 U	63	5 U	5 U	5 U		1.2 U	15.6 J	4.7	98.5	234	0.16 U	0.1 U	0.05 U
11/9/2010	5 U	5 U	43	5 U	5 U	45	5 U	1.1 J	81	5 U	5 U	5 U				4.1	111	254			
10/21/2011	5 U	5 U	48	5 U	5 U	63	5 U	5 U	72	5 U	5 U	5 U	0.0196 J	2.5 U	17.9 J	4.9	130	358	0.16 U	0.1 U	0.05 U
6/13/2012	5 U	5 U	33	5 U	5 U	34	5 U	5 U	50	5 U	5 U	5 U	0.2 U	3.7 U	33.3 J	3.4	187	255	0.16 U	0.1 U	0.05 U
11/30/2012	5 U	5 U	39	5 U	5 U	44	5 U	5 U	66	5 U	5 U	5 U				3	166	267			
8/28/2013	5 U	5 U	32	5 U	5 U	44	5 U	5 U	41	5 U	5 U	5 U		2.8 U	15.6 J	4.5	119 J	299	0.16 U	0.1 U	0.05 U
4/3/2014	1 U	1	16	1 U	1 U	29	5 U	5 U	63	1 UJ	1 U	1 U	0.379 J	4.4 U	50 U	5.3	100	240	0.16 U	0.1 UJ	0.05 U
11/17/2015	1 U	0.58 J	34	1 U	1 U	65	5 U	2.3 J	120	1 U	1 U	1 U	0.502	5.1 U	17.5 J	3.1	117	251	0.16 U	0.1 U	0.05 U
4/19/2016	1.0 U	1.0 U	32	1.0 U	1.0 U	71	5.0 U	1.6 J	86	1.0 U	1.0 U	1.0 U	0.332 J	3.3 U	24.4 J	3	166	259	0.10 U	0.10 U	0.050 U
9/13/2017	5.0 U	5.0 U	36	5.0 U	5.0 U	91	0.50 U	2.2	110	5.0 U	5.0 U	5.0 U	0.54	2.0 U	17	3.4	110	240	1.0 U	0.50 U	0.050 U
4/24/2018	1.0 U	1.0 U	32	1.0 U	1.0 U	78	1.0 U	3.3	160	1.0 U	0.3 J	1.0 U	0.4	2.0 U	8.3 J	3.6	110	240	1.0 U	0.25 UJ	0.050 UJ
12/3/2019	2.0 U	2.0 U	32	2.0 U	2.0 U	90	0.66 J	4.8	270	2.0 U	2.0 U	2.0 U	0.41	2.0 U	9.4 J	3.3	110	240	1.1	0.25 U	
3/18/2020	2.0 U	2.0 U	26	2.0 U	2.0 U	68	1.0 U	2.9	160	2.0 U	2.0 U	2.0 U	0.37	2.0 U	10	3.2	140	220	1.0 U	0.50 U	0.10 U
12/6/2021	2.0 U	2.0 U	40	2.0 U	2.0 U	140	7.5 U	2.4 J	300	2.0 U	2.0 U	2.0 U	0.24	2.0 U	35	4.5	120	230	1.0 U	0.25 U	0.25 U
5/10/2022	1.0 U	1.0 U	35	1.0 U	1.0 U	71 D	0.68 J	3.2	250	1.0 U	1.0 U	1.0 U	0.14 J	12 U	9.5 J	2.6	140	200	1.0 U	0.25 U	0.25 U
10/4/2023	1.0 U	1.0 U	24	1.0 U	1.0 U	140 D	0.37 J	2.6	210	1.0 U	1.0 U	1.0 U	200 U	2.0 U	2.8 J	3.2	140	240	1.0 U	0.25 U	0.25 U
4/24/2024	1.0 U	1.0 U	23	1.0 U	1.0 UJ	88	0.43 J	2.2	180	1.0 U	1.0 U	1.0 U	250	2.0 U	12	3.1	120 J+	220 J+	1.0 U	0.10 UJ	0.10 UJ

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U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 6

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	5 U	130	0.52 J	5 U	82				5 U	5 U	5 U									
4/29/2008	5 U	5 U	150	0.39 J	5 U	100				5 U	5 U	5 U									
10/30/2009	5 U	5 U	85	5 U	5 U	69				5 U	5 U	5 U									
5/12/2010	5 U	5 U	39	5 U	5 U	48	5 U	23	310	5 U	5 U	5 U		3.6 U	22.4 J	3.9	140 J	217	3.4	0.1 U	0.05 U
10/20/2011	5 U	5 U	33	5 U	5 U	57				5 U	5 U	5 U									
6/13/2012	5 U	5 U	30	5 U	5 U	47				5 U	5 U	5 U									
8/30/2013	5 U	5 U	24	5 U	5 U	42				5 U	5 U	5 U									
4/3/2014	1 U	1 U	18	1 U	1 U	39				1 U	1 U	1 U									
11/20/2015	1 U	1 U	20	1 U	1 U	57				1 U	1 U	1 U									
4/21/2016	1.0 U	1.0 U	18	1.0 U	1.0 U	59				1.0 U	1.0 U	1.0 U									
9/12/2017	5.0 U	5.0 U	16	5.0 U	5.0 U	79				5.0 U	5.0 U	5.0 U									
4/26/2018	1.0 U	1.0 U	12	1.0 U	1.0 U	48				1.0 U	1.0 U	1.0 U									
12/4/2019	1.0 U	1.0 U	10	1.0 U	1.0 U	78				1.0 U	1.0 U	1.0 U									
3/19/2020	1.0 U	1.0 U	11	1.0 U	1.0 U	72				1.0 U	1.0 U	1.0 U									
12/8/2021	2.0 U	2.0 U	13	2.0 U	2.0 U	98				2.0 U	2.0 U	2.0 U									
5/11/2022	1.0 U	1.0 U	12	1.0 U	1.0 U	61 DJ				1.0 U	1.0 U	1.0 U									
10/5/2023	1.0 U	1.0 U	12	1.0 U	1.0 U	59 DJ				1.0 U	1.0 U	1.0 UJ									
4/22/2024	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	71				2.0 U	2.0 U	2.0 U									

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 7A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	25 U	36	580	25 U	9 J	60	0.95 J	8.5	10	25 U	80	25 U		2 U	7.97 J	2.74	21	250	1 U		
4/28/2008	5 U	210	1700	6.1 J	24	130	0.44 J	5.3	8.6	1.3 J	220	5 U		2 U	5.42	2.23	17.3	210	1 U	0.05 U	0.24
8/13/2008	13 U	270	1800	5.9 J	34	130	5 U	7.2	21	4.1 J	280					3.2	22.3	282			
10/8/2008	5 U	58	1800	3.5 J	25	210	5 U	12	21 J	5 U	250	5 U				143	21.3 J	60.4			
12/9/2008	10 U	4.3 J	1100	1.7 J	9.6 J	180	5 U	27	24	10 U	150	10 U				25.1	24.1	295			
1/27/2009	5 U	3.2 J	840	2.4 J	7.6	390	5 U	51	110	5 U	230	5 U									
3/17/2009	5 U	2.9 J	620	1.5 J	3.6 J	250	5 U	69	210	5 U	140	5 U				8.8	25	253			
10/15/2009	5 U	2.7 J	120	5 U	5 U	240	5 U	110	760	5 U	56	5 U				4.7	21.1	228			
10/30/2009	5 U	1.8 J	210	5 U	5 U	150	5 U	51	260	5 U	49	5 U		4.2 U	23.3 J	3.2	21.8	233 J	2.2	0.1 U	0.05 U
11/18/2009																1150					
12/14/2009	5 U	5 U	140	5 U	5 U	100	5.1	100	1900	5 U	47	5 U				207	23.3 J	56.2 J			
2/9/2010	5 U	5 U	77	5 U	5 U	84	1.1 J	92	1200	5 U	48	5 U				40.1 J	24.1	87.6			
4/1/2010	5 U	5 U	22	5 U	5 U	49				5 UJ	39	5 U									
5/6/2010	5 U	5 U	65	5 U	5 U	50	5 U	5 U	15 U	5 U	33	5 U				95.5	20.9 J	52.2 J			
11/10/2010	5 U	5 U	44	5 U	5 U	18	43 J	65 J	16000	5 U	15	23				261	26.7	31.8			
10/27/2011	5 U	5 U	20	5 U	5 U	19	57	25	20000	5 U	22	13	0.115 J			25.1	28.7	57.1			
3/14/2012	25 U	25 U	11 J	25 U	25 U	25 U	20	8	6700	25 U	18 J	15 J	4.09			1380	34.3	5			
6/14/2012	5 U	1.2 J	3.8 J	5 U	5 U	5 U	5.8	3.3 J	6300	5 U	9.1	22	3.6			573	24.3	5 U			
11/28/2012	5 U	5 U	2.7 J	5 U	5 U	1.3 J	10	1.1 J	16000	5 U	13	16	0.691			204	26.2	5.7			
8/30/2013	5 U	5 U	3.9 J	5 U	5 U	2.2 J	11	3.5 J	13000	5 U	15	7.8		277 J	576	151	26	8.7	0.16 J	0.1 U	0.05 U
1/15/2014	5 U	5 U	4 J	5 U	5 U	1.8 J	8.4	2.7 J	17000	5 U	16	13	39.4			1340	50.4 J+	5 U	0.34		
4/2/2014	1 U	1 U	3	1 U	1 U	1	6.3	1.2 J	20000	1 U	12	16	22.9	589	1250	453	25.5	2.3 J	0.067 J	0.1 U	0.05 U
10/9/2014	1 U	1 U	0.92 J	1 U	1 U	0.94 J	4.7 J	5 U	16000	1 U	8.1	11	14.1			132	27.9	4 J	0.11 J		
11/19/2015	1 U	1 U	1.5	1 U	1 U	3.1	2.8 J	1.1 J	5900	1 U	11	4.8	7.85	99.3	293 J-	84.3	24.6	20.2	0.22	0.1 U	0.05 U
4/20/2016	1.0 U	1.0 U	1.9	1.0 U	1.0 U	3.7	4 J	1.3 J	16000 D	1.0 U	12	4.2	2.18	62	217	50.1	27.4	5.1	0.5	0.10 U	0.050 U
9/12/2017	2.0 U	2.0 U	26	2.0 U	2.0 U	33	2.9	4.1	3400 D	2.0 U	61 J	19	1.7	61	170	52	25	93	1.0 U	0.25 U	0.050 UJ
4/25/2018	5.0 U	5.0 U	46	5.0 U	5.0 U	42	61	63	14000	5.0 U	140	23	0.55	9.2 J	97	32	25	56	1.1	0.25 U	0.027 J
12/4/2019	2.5 U	2.5 U	21 J	2.5 U	2.5 U	35 J	95	25	13000 D	2.5 U	69	44	1.5	14 J-	42	17	12	70	1.0 U	0.25 U	
3/19/2020	2.0 U	2.0 U	50	2.0 U	2.0 U	45	80	20	16000 D	2.0 U	59	23	0.91		36	12	8	82	2.1	0.50 UJ	0.10 UJ
12/8/2021	4.0 U	7.3	150	4.0 U	4.0 U	150	170 U	150 U	13000	4.0 U	90	16	1.5	7.9	36	14	14	89	0.8 J	0.25 U	0.25 U
5/12/2022	1.0 U	1.0 U	17	1.0 U	1.0 U	33	53	46	13000 D	1.0 U	76 D	16	0.95	6.7	39	7.4	11	120	3.1	0.10 UJ	0.050 UJ
10/6/2023	1.0 U	1.0 U	3.5	1.0 U	1.0 U	8.5	26	6.1	7800	1.0 U	26	7	1200	3.8 J	32	6.5	14	140	2.9	0.25 UJ	0.25 UJ
4/23/2024	20 U	210	740	20 U	20 U	170	43	50	8600	20 U	43	20 U	3800	4.8		3.2	14 J+	220	1	0.25 U	0.25 U

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J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 7B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	5 U	11	5 U	5 U	31	0.31 J	1.9	220	5 U	5 U	5 U		2 U	6.58 J	3.41	157	298	1 U		
4/28/2008	5 U	5 U	10	5 U	5 U	45	0.44 J	2.8	230	5 U	5 U	5 U		2 U	11.6	3.45	130	278	1 U	0.05 U	0.05 U
10/7/2008	5 UJ	5 UJ	19 J	5 UJ	5 UJ	29 J	5 U	3.1 J	220 J	5 UJ	5 UJ	5 UJ				5	164 J	271			
12/9/2008	5 U	5 U	21	5 U	5 U	33	5 U	4.1 J	250	5 U	5 U	5 U				9	153	384			
1/27/2009	5 U	5 U	13	5 U	5 U	29	5 U	3.3 J	220	5 U	5 U	5 U									
3/17/2009	5 U	5 U	20	5 U	5 U	30	5 U	2.1 J	150	5 U	5 U	5 U				5.3	179	296			
10/15/2009	5 U	5 U	7.1	5 U	5 U	39	5 U	3.3 J	340	5 U	5 U	5 U				6.4	146	250			
10/30/2009	5 U	5 U	7.3	5 U	5 U	24				5 U	5 U	5 U									
12/14/2009	5 U	5 U	7.7	5 U	5 U	24	5 U	3.6 J	260	5 U	5 U	5 U				26.8	171 J	220 J			
2/9/2010	5 U	5 U	3.2 J	5 U	5 U	21	5 U	6.1	650	5 U	5 U	5 U				13.9 J	157	248			
3/31/2010	5 U	5 U	3.8 J	5 U	5 U	29				5 U	5 U	5 U									
5/6/2010	5 U	5 U	4.5 J	5 U	5 U	31	5 U	5 U	15 U	5 U	5 U	5 U				60.6	130 J	244 J			
11/11/2010	5 U	5 U	6.7	5 U	5 U	24	5 U	4.2 J	1200	5 U	5 U	5 U				17.5	168	239			
10/26/2011	5 U	5 U	6	5 U	5 U	25	5 U	3.6 J	3400	5 U	5 U	5 U	0.0747 J			8.4	168	218 J			
3/15/2012	50 U	50 U	50 U	50 U	50 U	11 J	5 U	9.3	4500	50 U	50 U	50 U	0.0443 J			68.1	153	122			
6/14/2012	5 U	5 U	1.6 J	5 U	5 U	9.2	5 U	7.9	2400	5 U	5 U	5 U	0.2 U			19.3	150	143			
11/27/2012	5 U	5 U	1.5 J	5 U	5 U	9.5	5 U	11	3300	5 U	5 U	5 U	0.2 U			8.7	173	178			
9/3/2013	5 U	5 U	1.2 J	5 U	5 U	7.5	5 U	11	6400	5 U	5 U	5 U		17.4	95 J	11.5	146 J	139	10.3	0.1 UJ	0.05 U
1/13/2014	5 U	5 U	5 U	5 U	5 U	2 J	5 U	9.4	18000	5 U	5 U	5 U	0.4 U			70.1	145	61.7	47.9		
4/2/2014	1 U	1 U	1 U	1 U	1 U	5.5	5 U	11	19000	1 U	1 U	1 U	0.4 U	366	772	132	136	117	33.3	1 U	0.026 J
10/10/2014	1 U	1 U	1.5	1 U	1 U	8	5 U	7	13000	1 U	1 U	1 U	0.4 U			22.2	164	129	22.6		
11/23/2015	1 U	1 U	1.2	1 U	1 U	6.1	5 U	4.3 J	11000	1 U	1 U	1 U	0.4 U	22.2	97.8	10.8	189	146	20.4	0.1 U	0.05 U
4/20/2016	1.0 U	1.0 U	0.82 J	1.0 U	1.0 U	10	5.0 U	5.6	5000 D	1.0 U	1.0 U	1.0 U	0.400 U	27.1	142	6.9	172	162	16.5	0.10 U	0.050 U
9/12/2017	1.0 U	1.0 U	2.2	1.0 U	1.0 U	18	0.50 U	1.9	370	1.0 U	1.0 U	1.0 U	0.100 U	9.6	41	4.8	170	180	1.1	0.25 U	0.050 UJ
4/25/2018	1.0 U	1.0 U	2.2	1.0 U	1.0 U	17	1.0 U	6.4	240	1.0 U	1.0 U	1.0 U	0.200 U	2	29	4.7	140	260	1.0 U	0.25 U	0.050 U
12/3/2019	1.0 U	1.0 U	1.3	1.0 U	1.0 U	10	0.58 J	3.3	290	1.0 U	1.0 U	1.0 U	0.20 U	2.0 U	12	3.3	180	190	7.1	0.25 U	
3/19/2020	1.0 U	1.0 U	5.4	1.0 U	1.0 U	18	1.0 U	6.4	230	1.0 U	1.0 U	1.0 U	0.2 U		11	3.2	130	260	1.7	0.50 UJ	0.10 UJ
12/8/2021	1.0 U	1.0 U	1.5	1.0 U	1.0 U	18	7.5 U	7.0 U	160	1.0 U	1.0 U	1.0 U	0.05 U	2.0 U	10 U	4.6	240	200	0.8 J	0.25 U	0.25 U
5/12/2022	1.0 U	1.0 U	1.9	1.0 U	1.0 U	12	0.61 J	3.4	170	1.0 U	1.0 U	1.0 U	0.2 U	6.0 U	16	3	170	270	0.73 J	0.10 UJ	0.050 UJ
10/6/2023	1.0 U	1.0 U	1.7	1.0 U	1.0 U	9.6	1.0 U	1.9	170	1.0 U	1.0 U	1.0 U	200 U	2.0 UJ	13	3.6	250	160	2.3	0.25 UJ	0.58 J
4/25/2024	1.0 U	1.0 U	1.7	1.0 U	1.0 UJ	11	0.42 J	3.5	200	1.0 U	1.0 U	1.0 U	200 U	2.0 UJ	11	3.1	190 J+	250	0.8 J	0.10 U	0.10 U

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D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW- 8

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	2.2 J	5 U	5 U	1.8 J				5 U	5 U	5 U									
4/25/2008	5 U	5 U	2.5 J	5 U	5 U	2.6				5 U	5 U	5 U									
11/2/2009	5 U	5 U	2.1 J	5 U	5 U	2.6 J				5 U	5 U	5 U									
5/12/2010	5 U	5 U	2.3 J	5 U	5 U	2.2 J	5 U	5 U	140	5 U	5 U	5 U									
10/24/2011	5 U	5 U	1.9 J	5 U	5 U	2.1 J				5 U	5 U	5 U									
6/12/2012	5 U	5 U	1.6 J	5 U	5 U	1.1 J				5 U	5 U	5 U									
8/30/2013	5 U	5 U	1.7 J	5 U	5 U	1.8 J				5 U	5 U	5 U									
4/3/2014	1 U	1 U	1.6	1 U	1 U	1.5				1 U	1 U	1 U									
11/23/2015	1 U	1 U	1.7	1 U	1 U	1.9				1 U	1 U	1 U									
4/22/2016	1.0 U	1.0 U	1.9	1.0 U	1.0 U	1.8				1.0 U	1.0 U	1.0 U									
9/13/2017	1.0 U	1.0 U	1.7	1.0 U	1.0 U	1.4				1.0 U	1.0 U	1.0 U									
4/23/2018	1.0 U	1.0 U	1.9	1.0 U	1.0 U	1.6				1.0 U	1.0 U	1.0 U									

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-10A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007	5 U	5 U	300	12	0.68 J	67	0.52 J	4.6	19	5 U	4.5 J	5 U		2 U	8.32 J	1.93	815	332	1 U		
4/22/2008	5 U	5 U	390	10	1.6 J	97	4.4	11	60	5 U	5.8	5 U		2 U	10.1	2.99	884	294	1 U	0.05 U	0.05 U
10/29/2009	5 U	5 U	400	9.4	1.5 J	140	5 U	10	38	5 U	6.4	5 U		1.8 U	46.2 J	1.6	903	279 J	0.16 U	0.1 U	0.05 U
5/11/2010	5 U	5 U	390	7.6	1.3 J	140	5 U	17	71	5 U	5.7	5 U		1.7 U	38.4 J	1.5	784	250	0.16 U	0.1 U	0.05 U
10/25/2011	5 U	5 U	630	11	1.2 J	250	5 U	29	66	5 U	7.7	5 U	0.0808 J	2.8 U	27 J	1.9	770 J	254 J	0.16 U	0.1 U	0.05 U
6/13/2012	5 U	5 U	620	13	1 J	170	1.5 J	43	120	5 U	7	5 U	0.2 U	3.2 U	31 J	0.98 J	621	264	0.16 U	0.1 U	0.05 U
8/29/2013	5 U	5 U	570	9.9	5 U	130	5 U	28	130	5 U	5.6	5 U		2.9 UJ	27 J	1.8	481	193	0.16 U	0.1 U	0.05 U
4/2/2014	1 U	1 U	560	8	0.6 J	95	5 U	24	170	1 UJ	4.4	1 U	0.719	3.9 U	17.2 J	2	438 J-	228 J+	0.16 U	0.1 U	0.05 U
11/18/2015	1 U	1 U	710	9.1	0.52 J	130	5 U	17	220	1 U	5.3	1 U	1.81	2.9 U	22.1 J	0.87 J	434	170	0.16 U	0.1 U	0.05 U
4/19/2016	1.0 U	0.57 J	960 D	12	0.71 J	83	5.0 U	6.4	88	1.0 U	5.4	1.0 U	0.831	3.4 U	33.6 J	0.9 J	523	216	0.10 U	0.10 U	0.050 U
9/13/2017	20 U	20 U	590	6.8 J	20 U	130	0.38 J	11	400	20 U	20 UJ	20 U	1.4	2.0 U	13	1.1	310	170	1.0 U	0.50 U	0.050 U
4/25/2018	20 U	20 U	540	20 U	20 U	94	1.0 U	12	640	20 U	20 U	20 U	1.2	2.0 U	10	1.4	260	160	1.0 U	0.25 U	0.050 U
12/4/2019	25 U	5 J	500	25 U	25 U	130	2.4	36	2000	25 U	25 U	25 U	1.1	2.0 UJ	4.2 J	1.4	200	150	1.0 U	0.25 U	
3/18/2020	20 U	7.6 J	570	4.4 J	20 U	130	2.7	34	2400	20 U	20 U	20 U	0.88	2.0 U	8.3 J	1.4	190	120	1.0 U	0.50 U	0.10 U
12/6/2021	25 U	13 J	650	25 U	25 U	180	7.5 U	14	880	25 U	25 U	25 U	1.4	2.0 U	26	2	220	150	1.0 U	0.25 U	0.25 U
5/10/2022	13 U	8.7 J	540	13 U	13 U	85	2.2	20	1800	13 U	13 U	13 U	0.84	6.0 U	2.8 J	1.0 U	160	140	1.0 U	0.25 U	0.25 U
10/4/2023	10 U	7.5 J	580	10 U	10 U	190	5.3	37	3500	10 U	10 U	10 U	1200	2.2	200	2.8	150	130	1.0 U	0.25 U	0.25 U
4/24/2024	10 U	5.9 J	550	7.1 J	10 UJ	150	4.9	30	2700	10 U	10 U	10 U	890	2.0 U	2.4 J	1.2	140 J+	120 J+	1.0 U	0.10 UJ	0.10 UJ

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-10B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007	5 U	0.7 J	220	1.9 J	0.38 J	130	0.43 J	1.5	100	5 U	0.69 J	5 U		2 U	5 UJ	3.81	226	236	1 U		
4/22/2008	5 U	0.46 J	180	1.3 J	5 U	76	0.48 J	1 J	96	5 U	0.54 J	5 U		2 U	12.7	4.22	87.4	198	1 U	0.05 U	0.05 U
4/23/2008																					
10/16/2009	5 U	5 U	420	3.1 J	5 U	120	5 U	2.7 J	110	5 U	5 U	5 U				3.8	121	239			
10/29/2009	5 U	5 U	370	3.8 J	5 U	150	5 U	2.2 J	94	5 U	5 U	5 U		2.1 U	16.5 J	4.6	107	245 J	0.16 U	0.1 U	0.05 U
12/16/2009	5 U	5 U	750	9	5 U	260	5 U	12	110	5 U	5 U	5 U				4.2	123 J	268 J			
2/10/2010	5 U	5 U	300	4 J	5 U	120	5 U	3.7 J	92	5 U	5 U	5 U				4.2 J	87.5	253			
3/30/2010	5 U	5 U	270	3.1 J	5 U	90				5 U	5 U	5 U									
5/6/2010	5 U	5 U	220	2 J	5 U	83	5 U	5 U	15 U	5 U	5 U	5 U		3.5 U	50 U	4.9	89.5 J	244 J	0.071 J	0.1 U	0.05 U
11/9/2010	5 U	5 U	1100	13	1.9 J	200	1.8 J	13	130	5 U	5 U	5 U				3.2	272	225			
10/26/2011	10 U	10 U	960	11	1.8 J	180	2.7 J	24	300	10 U	10 U	10 U	0.0459 J	3.5 U	13.4 J	3.4	189	259 J	0.16 U	0.1 U	0.05 U
3/12/2012	5 U	5 U	260	3 J	5 U	49	5 U	1.2 J	53	5 U	5 U	5 U	0.2 U			3.8	104	245			
6/14/2012	5 U	5 U	280	1.7 J	5 U	110	5 U	5.7	120	5 U	5 U	5 U	0.2 U	3.3 U	12.9 J	3.8	141	261	0.16 U	0.1 U	0.05 U
11/27/2012	5 U	5 U	630	5.8	5 U	130	5 U	11	160	5 U	5 U	5 U	0.2 U			3	194	265			
8/29/2013	5 U	5 U	230	1.5 J	5 U	120	5 U	9.2	220	5 U	5 U	5 U		3.1 UJ	24.7 J	2	156	246	0.16 U	0.1 U	0.05 U
1/17/2014	5 U	5 U	150	5 U	5 U	27	5 U	2 J	38	5 U	5 U	5 U	0.0884 J			7.9	128	250	0.16 U		
4/2/2014	1 U	1 U	190	0.7 J	1 U	22	5 U	2.3 J	38	1 U	1 U	1 U	0.076 J	3.2 U	50 U	4.8	133	256	0.16 U	0.1 U	0.05 U
10/14/2014	1 U	1 U	160	1 U	1 U	89	1.1 J	210	1100	1 UJ	1 U	1 U	0.05 J			5	137	215	1.3		
11/16/2015	1 U	1 U	190	0.68 J	1 U	190	2.1 J	190	2900	1 U	0.9 J	1 U	0.4 U	6 U	17.5 J	3	145	207	0.71	0.1 U	0.05 U
4/19/2016	1.0 U	1.0 U	220	1.1	1.0 U	6.1	5.0 U	5.0 U	9.1	1.0 U	1.0 U	1.0 U	0.400 U	3.6 U	26.7 J	2.9	160	272	0.10 U	0.087 J	0.050 U
9/13/2017	10 U	10 U	360	10 U	10 U	270	4.5	130	3900	10 U	10 UJ	10 U	0.24	2.0 U	17	3.2	150	230	1.0 U	0.50 U	0.050 U
4/25/2018	8.0 U	8.0 U	210	8.0 U	8.0 U	12	1.0 U	1.0 U	25	8.0 U	8.0 U	8.0 U	0.14 J	2.4 UJ	10 U	3.6	130	240	1.0 U	0.25 U	0.050 U
12/4/2019	20 U	20 U	420	4 J	20 U	180	1.8	27	1500	20 U	20 U	20 U	0.68	2.0 U	10 U	3	220	260	1.0 U	0.25 U	
3/18/2020	5.0 U	5.0 U	210	5.0 U	5.0 U	23	1.0 U	1.9	78	5.0 U	5.0 U	5.0 U	0.086 J	2.0 U	12	3.2	140	230	1.0 U	0.50 U	0.10 U
12/6/2021	10 U	10 U	220	10 U	10 U	370	170 U	150 U	1900	10 U	10 U	10 U	0.33	2.0 U	40	4.6	140	220	1.0 U	0.25 U	0.25 U
5/10/2022	6.3 U	6.3 U	320	6.3 U	6.3 U	140	1.1	25	2100	6.3 U	6.3 U	6.3 U	0.19 J	12 U	11	2.9	140	220	1.0 U	0.25 U	0.25 U
10/4/2023	5.0 U	5.0 U	320	5.0 U	5.0 U	260	1.3	40	3400	5.0 U	5.0 U	5.0 U	120 J	2.0 U	2.4 J	3.5	160	230	0.27 J	0.25 U	0.25 U
4/24/2024	5.0 U	5.0 U	310	5.0 U	5.0 UJ	130	0.79 J	18	1800	5.0 U	5.0 U	5.0 U	180 J	3.0 U	5.3 J	3.3	140 J+	220	1.0 U	0.10 UJ	0.10 UJ

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-11A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007	5 U	5 U	5 U	5 U	5 U	2 U				5 U	5 U	5 U									
4/22/2008	5 U	5 U	5 U	5 U	5 U	0.7 J				5 U	5 U	5 U									
10/30/2009	5 U	5 U	5 U	5 U	5 U	5 U				5 U	5 U	5 U									
5/11/2010	5 U	5 U	5 U	5 U	5 U	3.2 J	5 U	5 U	51	5 U	5 U	5 U									

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U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-11B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007	5 U	5 U	140	1 J	5 U	80				5 U	0.39 J	5 U									
4/22/2008	5 U	5 U	100	0.77 J	5 U	64				5 U	5 U	5 U									
3/18/2009																3.8					
10/16/2009	5 U	5 U	64	5 U	5 U	73	5 U	14	170	5 U	5 U	5 U				3.4	172	221			
10/30/2009	5 U	5 U	56	5 U	5 U	48	5 U	15	150	5 U	5 U	5 U		1.8 U	21 J	3.4	165	207 J	0.3	0.1 U	0.05 U
12/16/2009	5 U	5 U	5.3	5 U	5 U	17	5 U	81	190	5 U	5 U	5 U				7.4	148 J	221 J			
2/10/2010	5 U	5 U	2.3 J	5 U	5 U	11	5 U	130	760	5 U	5 U	5 U				11.7 J	146	50.2			
3/30/2010	5 U	5 U	2.1 J	5 U	5 U	7.1				5 U	5 U	5 U									
5/6/2010	5 U	5 U	1.9 J	5 U	5 U	7.4	5 U	5 U	15 U	5 U	1.3 J	5 U		64.7 J	132	14.1	114 J	101 J	48.3	0.1 U	0.05 U
11/9/2010	5 U	5 U	1.4 J	5 U	5 U	4.3 J	5 U	57	1100	5 U	1.2 J	5 U				3.9	125	208			
10/26/2011	5 U	5 U	2.2 J	5 U	5 U	4.6 J	5 U	90	1500	5 U	1.8 J	5 U	0.0859 J	8.9	31.5 J	3.8	157	245 J	8.5	0.043 J	0.05 U
3/12/2012	5 U	5 U	1.4 J	5 U	5 U	6.7	1.3 J	72	5200	5 U	1.5 J	5 U	0.0711 J			9.5	117	118			
6/14/2012	5 U	5 U	1.8 J	5 U	5 U	6.1	2.6 J	110	7400	5 U	1.4 J	5 U	0.2 U	32	76.5	4.3	121	135	44.4	0.1 U	0.05 U
11/27/2012	5 U	5 U	0.83 J	5 U	5 U	2.5 J	3.9 J	130	6800	5 U	1.4 J	5 U	0.2 U			3.9	143	164			
8/29/2013	5 U	5 U	5 U	5 U	5 U	1.4 J				5 U	1.9 J	5 U									
1/14/2014	5 U	5 U	5 U	1.1 J	5 U	1.2 J	4 J	260	10000	5 U	2.5 J	5 U	0.4 U			8	141	120	23.8		
4/2/2014	1 U	1 U	1 U	0.92 J	1 U	1.2	3.5 J	280	8300	1 U	2	1 U	0.4 U			5.2	141	158	27.8		
10/14/2014	1 U	1 U	1 U	0.66 J	1 U	2.5	1.4 J	86	4200	1 UJ	1.2	1 U	0.4 U			5.3	143	160	11.1		
11/17/2015	1 U	1 U	0.56 J	0.57 J	1 U	1.7				1 U	1	1 U									
4/22/2016	1.0 U	1.0 U	0.54 J	0.76 J	1.0 U	9.7				1.0 U	1.7	1.0 U									
9/14/2017	1.0 U	1.0 U	1.1	1.0 U	1.0 U	6.5				1.0 U	0.95 J	1.0 U									
4/24/2018	1.0 U	1.0 U	0.65 J	0.74 J	1.0 U	1.9				1.0 U	1.9	1.0 U									

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-12A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007	5 U	5 U	150	1.3 J	0.49 J	39				5 U	3.2 J	5 U									
4/22/2008	5 U	5 U	130	1 J	0.32 J	23				5 U	2 J	5 U									
11/2/2009	5 U	5 U	64	5 U	5 U	38				5 U	2.7 J	5 U									
5/11/2010	5 U	5 U	16	5 U	5 U	16	5 U	14	140	5 U	1.6 J	5 U									
10/20/2011	5 U	5 U	19	5 U	5 U	16				5 U	1.8 J	5 U									
6/13/2012	5 U	5 U	19	5 U	5 U	13				5 U	1.8 J	5 U									
8/29/2013	5 U	5 U	22	5 U	5 U	14	5.6	7.2	210	5 U	1.9 J	5 U		4.4 U	311	5.5	80.7	204	0.16 U	0.1 U	0.05 U
4/3/2014	1 U	1 U	8.9	1 U	1 U	6.8	5 U	2.4 J	140	1 U	0.89 J	1 U	0.962	4.7 U	15 J	5.6	69	179	0.16 U	0.14 J-	0.05 U
11/17/2015	1 U	1 U	1.6	1 U	1 U	9.6	5 U	5 U	140	1 U	0.7 J	1 U	2.27	3.8 U	26.7 J	7.7	63.6	119	0.079 J	0.1 U	0.05 U
4/22/2016	1.0 U	1.0 U	9.5	1.0 U	1.0 U	8.8	5.0 U	1.8 J	170	1.0 U	1.1	1.0 U	0.847	3.4 UJ	19.8 J	3.4	96	192	0.10 U	0.10 U	0.050 U
9/14/2017	1.0 U	1.0 U	21	0.34 J	1.0 U	13	0.31 J	2.7	210	1.0 U	1.6	1.0 U	1.5	2.0 U	49	4.2	330	650	1.0 U	1.0 U	0.050 U
4/24/2018	1.0 U	1.0 U	16	1.0 U	1.0 U	9.2	1.0 U	2	200	1.0 U	0.91 J	1.0 U	0.6	2.0 U	11	3.9	82	190	1.0 U	0.25 UJ	0.050 UJ

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-12B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/29/2007	5 U	5 U	110	1 J	5 U	76				5 U	1.8 J	5 U									
4/21/2008	5 U	5 U	140	1.6 J	0.31 J	70				5 U	1.6 J	5 U									
11/2/2009	5 U	5 U	2.6 J	5 U	5 U	5 U				5 U	5 U	5 U									
5/11/2010	5 U	5 U	11	5 U	5 U	5 U	5 U	5 U	15 U	5 U	5 U	5 U									
11/9/2010	5 U	5 U	59	5 U	5 U	71	1.2 J	3.3 J	120	5 U	5 U	5 U				3.2	149	312			
10/20/2011	5 U	5 U	0.98 J	5 U	5 U	5 U				5 U	5 U	5 U									
6/13/2012	5 U	5 U	5.6	5 U	5 U	10				5 U	5 U	5 U									
8/29/2013	5 U	5 U	45	5 U	5 U	73	5 U	15	160	5 U	5 U	5 U		4.2 U	17.9 J	4.1	143	230	0.093 J	0.1 U	0.05 U
4/3/2014	1 U	1 U	57	1 U	1 U	75	5 U	9.7	190	1 U	1 U	1 U	0.4 U	4.1 U	50 U	5.4	149	201	0.16 U	0.1 UJ	0.05 U
11/16/2015	1 U	1 U	13	1 U	1 U	9.1	5 U	5 U	25	1 U	1 U	1 U	0.111 J	4.7 U	22.1 J	9.2	148	244	0.16 U	0.2 J+	0.039 J
4/22/2016	1.0 U	1.0 U	73	1.0 U	1.0 U	59	5.0 U	2.6 J	200	1.0 U	1.0 U	1.0 U	0.0618 J	3.5 UJ	19.8 J	3	177	204	0.10 U	0.10 U	0.050 U
9/14/2017	2.0 U	2.0 U	52	2.0 U	2.0 U	110	0.45 J	3.9	140	2.0 U	0.66 J	2.0 U	0.032 J	2.0 U	17	2.7	280	530	1.0 U	0.50 U	0.050 U
4/25/2018	2.5 U	2.5 U	62	2.5 U	2.5 U	73	1.0 U	4.4	340	2.5 U	2.5 U	2.5 U	0.027 J	2.0 U	12	3.5	150	190	1.0 U	0.25 U	0.050 U
12/5/2019	2.5 U	2.5 U	65	2.5 U	2.5 U	94	0.89 J	5.3	210	2.5 U	2.5 U	2.5 U	0.20 U	2.0 U	10 U	2.8	150	240	1.0 U	0.25 U	
3/19/2020	2.0 U	2.0 U	51	2.0 U	2.0 U	85	1.0 U	5.9	410	2.0 U	0.41 J	2.0 U	0.2 U		7.3 J	3.1	150	220	0.67 J	0.50 UJ	0.10 UJ
12/7/2021	1.0 UJ	1.0 UJ	73 J-	1.0 UJ	1.0 UJ	49 DJ-	7.5 U	4.1 J	330	1.0 UJ	0.4 J-	1.0 UJ	0.048 J	2.0 U	100	6.3	77	72	1.0 U	0.24	0.050 U
5/11/2022	1.0 U	1.0 U	52	1.0 U	1.0 U	73 DJ	0.91 J	6.2	360	1.0 U	0.48 J	1.0 U	0.2 U	6.0 U	13	2.8	180	220	1.0 U	0.10 UJ	0.050 UJ
10/4/2023	1.0 U	1.0 U	53	1.0 U	1.0 U	100 D	0.81 J	6.9	240	1.0 U	1.0 U	1.0 U	200 U	2.0 U	10 U	3.1	170	240	1.0 U	0.25 UJ	0.25 UJ
4/23/2024	2.0 U	2.0 U	44	2.0 U	2.0 U	91	0.7 J	5.8	310	2.0 U	2.0 U	2.0 U	200 U	2.0 U		3.1	210 J+	220	1.0 U	0.25 U	0.050 UJ

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UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-13A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/30/2007	5 U	5 U	5 U	5 U	5 U	2 U				5 U	5 U	5 U									
4/29/2008																					
10/29/2009	5 U	5 U	5 U	5 U	5 U	5 U				5 U	5 U	5 U									

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-13B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/30/2007	5 U	0.78 J	82	1.1 J	5 U	59				5 U	0.61 J	5 U									
4/24/2008	5 U	0.65 J	65	0.51 J	5 U	56				5 U	0.48 J	5 U									
10/29/2009	5 U	5 U	88	5 U	5 U	68				5 U	5 U	5 U									
5/13/2010	5 U	5 U	46	5 U	5 U	47	5 U	1 J	65	5 U	5 U	5 U									
10/21/2011	5 U	5 U	17	5 U	5 U	24				5 U	5 U	5 U									
6/13/2012	5 U	5 U	27	5 U	5 U	57				5 U	5 U	5 U									
8/30/2013	5 U	5 U	8.6	5 U	5 U	48				5 U	5 U	5 U									
4/3/2014	1 U	1 U	19	1 U	1 U	15				1 UJ	1 U	1 U									
11/17/2015	1 U	1 U	18	1 U	1 U	21				1 U	1 U	1 U									
4/21/2016	1.0 U	1.0 U	9.9	1.0 U	1.0 U	12				1.0 U	1.0 U	1.0 U									
9/13/2017	1.0 U	1.0 U	22	1.0 U	1.0 U	38				1.0 U	1.0 UJ	1.0 U									
4/24/2018	1.0 U	1.0 U	7.8	1.0 U	1.0 U	9.7				1.0 U	1.0 U	1.0 U									
12/3/2019	1.0 U	0.19 J	16	1.0 U	1.0 U	21				1.0 U	0.17 J	1.0 U									
3/19/2020	1.0 U	1.0 U	1.6	1.0 U	1.0 U	2				1.0 U	1.0 U	1.0 U									
12/6/2021	2.0 U	2.0 U	3.7	2.0 U	2.0 U	6.4				2.0 U	2.0 U	2.0 U									
5/11/2022	1.0 U	1.0 U	4.1	1.0 U	1.0 U	5.2				1.0 U	1.0 U	1.0 U									
10/4/2023	1.0 U	1.0 U	9.9	1.0 U	1.0 U	18				1.0 U	1.0 U	1.0 U									
4/24/2024	1.0 U	1.0 U	4.3	1.0 U	1.0 U	11				1.0 U	1.0 U	1.0 U									

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-14A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/30/2007	5 U	5 U	1.6 J	5 U	5 U	2.4				5 U	5 U	5 U									
4/24/2008	5 U	5 U	1.5 J	5 U	5 U	1.6 J	0.64 J	1 U	15	5 U	5 U	5 U		2 U	18.8	5.38	68	118	1 U	0.05 U	0.05 U
10/29/2009	5 U	5 U	1.4 J	5 U	5 U	2.7 J	5 U	5 U	17	5 U	5 U	5 U		1.4 U	21 J	4.2	63.9	150 J	0.16 U	0.28	0.05 U

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-14B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/30/2007	5 U	5 U	56	0.42 J	5 U	49	2 U	2 U	110	5 U	0.6 J	5 U		2 U	6.58 J	4.07	119	263	1 U		
4/24/2008	5 U	5 U	120	0.81 J	5 U	90	1 U	1.5 J	170	5 U	0.41 J	5 U		2 U	10.1	2.95	136	222	1 U	0.05 U	0.05 U
10/29/2009	5 U	5 U	64	5 U	5 U	86	5 U	2.2 J	130	5 U	5 U	5 U		2.1 U	23.3 J	3.5	133	310 J	0.5	0.1 U	0.05 U
5/13/2010	5 U	5 U	16	5 U	5 U	33	100 U	170	3400	5 U	5 U	5 U		53.6	137	14.6	143	103	46.9	0.1 U	0.05 U
10/24/2011	5 U	5 U	4.1 J	5 U	5 U	5.4	5 U	66	690	5 U	5 U	5 U	0.0264 J	5.2 U	36 J	7	260	274	3	0.1 U	0.05 U
6/13/2012	5 U	5 U	1.5 J	5 U	5 U	5.4	2.2 J	91	9100	5 U	5 U	5 U	0.027 J	33	117	10.2	241	126	48.2	0.1 U	0.05 U
8/29/2013	5 U	5 U	5 U	5 U	5 U	1.5 J				5 U	5 U	5 U									
4/3/2014	1 U	1 U	0.67 J	1 U	1 U	1.2				1 UJ	1 U	1 U									
11/18/2015	1 U	1 U	0.95 J	1 U	1 U	1.5				1 U	0.53 J	1 U									
4/21/2016	1.0 U	1.0 U	0.94 J	1.0 U	1.0 U	1.2				1.0 U	1.0 U	1.0 U									
9/14/2017	1.0 U	1.0 U	0.92 J	1.0 U	1.0 U	2.9				1.0 U	0.43 J	1.0 U									
4/24/2018	1.0 U	1.0 U	0.72 J	1.0 U	1.0 U	1.3				1.0 U	0.34 J	1.0 U									
12/5/2019	1.0 U	1.0 U	0.37 J	1.0 U	1.0 U	0.7 J				1.0 U	0.19 J	1.0 U									
3/18/2020	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1				1.0 U	0.24 J	1.0 U									
12/7/2021	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.9				1.0 U	1.0 U	1.0 U									
5/11/2022	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1				1.0 U	1.0 U	1.0 U									
10/4/2023	1.0 U	1.0 U	0.6 J	1.0 U	1.0 U	2.2				1.0 U	1.0 U	1.0 U									
4/24/2024	1.0 U	1.0 U	0.75 J	1.0 U	1.0 U	1.9				1.0 U	1.0 U	1.0 U									

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-15

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/30/2007	5 U	5 U	170	1.7 J	5 U	86				5 U	0.66 J	5 U									
4/23/2008	5 U	5 U	190	1.5 J	5 U	93				5 U	0.58 J	0.38 J									
11/3/2009	5 U	5 U	56	1.1 J	5 U	82				5 U	2 J	5 U									
5/12/2010	5 U	5 U	5.9	5 U	5 U	17	1.1 J	140	1300	5 U	1.3 J	5 U									
10/21/2011	5 U	5 U	32	1.3 J	5 U	52				5 U	1.4 J	5 U									
6/14/2012	5 U	5 U	5 U	5 U	5 U	1.8 J				5 U	1.2 J	5 U									
8/29/2013	5 U	5 U	5 U	5 U	5 U	2 J				5 U	5 U	5 U									
6/14/2018	1.0 U	1.0 UJ	5.2	0.62 J	1.0 U	16				1.0 U	1.1	1.0 U									
4/24/2024	1.0 U	1.0 U	16	0.56 J	1.0 UJ	20	8.1	20	5300	1.0 U	1.6	1.0 U	200 U	6.7	22	3.2	170 J+	220	4	0.10 UJ	0.10 UJ

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-16A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	0.39 J	12	5 U	5 U	160	0.87 J	15	18	5 U	5 U	5 U		2 U	23.2 J	6.93	278	981	1.2		
4/25/2008	5 U	0.39 J	9	5 U	5 U	53	1 U	0.62 J	4.5	5 U	5 U	5 U		2 U	20.4	6.5	209	1020	1 U	0.05 U	0.05 U
10/27/2009	5 U	5 U	8.2	5 U	5 U	75	5 U	4.7 J	11 J	5 U	5 U	5 U		1.7 U	41.6 J	7.2	247 J	1060	0.16 U	0 R	0.05 U
5/11/2010	5 U	5 U	10	5 U	5 U	180	5 U	20	20	5 U	5 U	5 U		2 U	40.7 J	7	260	1040	0.16 U	0.1 U	0.05 U
10/27/2011	5 U	5 U	11	5 U	5 U	340	5 U	44	33	5 U	5 U	5 U	0.0424 J		31.5 J	6.9	266	1130	0.16 U	0.1 U	0.05 UJ
3/14/2012																					
3/15/2012	5 U	5 U	7.2	5 U	5 U	12	5 U	1.3 J	15 U	5 U	5 U	5 U	0.044 J			8.1	245	1110			
6/14/2012	5 U	5 U	8.4	5 U	5 U	110	5 U	11	8.7 J	5 U	5 U	5 U	0.2 U	5.4	26.5 J	9.5	237	1100			
11/29/2012	5 U	5 U	10	5 U	5 U	330	1.2 J	79	40	5 U	5 U	5 U	0.2 U			7.7	255	1100			
8/29/2013	5 U	5 U	8.5	5 U	5 U	300	1.1 J	72	29	5 U	5 U	5 U		3.8 U	31.5 J	8.2	252	1080	0.16 U	0.1 U	0.05 U
1/15/2014	5 U	5 U	9	5 U	5 U	78	5 U	6.4	5 U	5 U	5 U	5 U	0.4 U			9.5	190 J+	812 J+	0.16 U		
4/2/2014	1 U	1 U	5.9	1 U	1 U	140	5 U	20	5 U	1 U	1 U	1 U	0.4 U	4.4 U	24.1 J	7.3	214	898	0.16 U	0.1 U	0.14
10/14/2014	1 U	1 U	8.6	1 U	1 U	350	5 U	52	9.5	1 UJ	1 U	1 U	0.491			9.1	221	958	0.16 U		
11/20/2015	1 U	1 U	9.1	1 U	1 U	250	1.2 J	95	49	1 U	1 U	1 U	0.4 U	5.2 U	33.6 J	6.5	290	1080	0.16 U	0.1 U	0.05 U
4/20/2016	1.0 U	1.0 U	6.5	1.0 U	1.0 U	18	5.0 U	1.1 J	5.0 U	1.0 U	1.0 U	1.0 U	0.400 U	2.9 U	33.6 J	6.2	907	1140	0.10 U	0.14	0.050 U
9/12/2017	10 U	10 U	7.3 J	10 U	10 U	190	0.47 J	33	28	10 U	10 U	10 U	0.100 U	2.0 U	28	6.4	250	1000	1.0 U	0.50 U	0.050 UJ
4/26/2018	1.0 U	1.0 U	1.4	1.0 U	1.0 U	33	1.0 U	13	12	1.0 U	1.0 U	1.0 U	0.026 J	2.0 U	17 J	5.8	48	190	1.0 U	0.21 J	0.050 U
12/3/2019	4.0 U	0.6 J	3.6 J	4.0 U	4.0 U	120	1	49	77	4.0 U	4.0 U	4.0 U	0.20 U	2.0 U	18	6.1	170	810	1.0 U	0.50 U	
3/20/2020	13 U	13 U	8.7 J	13 U	13 U	560	3.1	270	290	13 U	13 U	13 U	0.43	2.0 U	17	6.7	210	1000	1.0 U	1.0 U	0.10 U
12/7/2021	5.0 U	5.0 U	8.2	5.0 U	5.0 U	260	7.5 U	77	160	5.0 U	5.0 U	5.0 U	0.024 J	2.0 U	52	11	190	930	1.0 U	0.42	0.050 U
5/11/2022	1.0 U	1.0 U	8.1	1.0 U	1.0 U	290 D	2.6	160	320	1.0 U	1.0 U	1.0 U	0.2 U	6.0 U	18	6.4	160	850	1.0 U	0.10 UJ	0.050 UJ
10/5/2023	1.0 U	1.0 U	0.98 J	1.0 U	1.0 U	37	1.8	170	370	1.0 U	1.0 U	1.0 UJ	490	2.0 U	18	5	40	190	1.0 U	1.3	0.25 U
4/22/2024	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	17	1.1	82	200	1.0 U	1.0 U	1.0 U	880	2.1	8.5 J	4.6	59 J+	270	1.0 U	0.25 U	0.25 U

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J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-16B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	210	0.88 J	5 U	63	1 U	3.7	190	5 U	5 U	5 U		2 U	5 UJ	3.7	114	269			
11/29/2007																			1 U		
4/25/2008	5 U	0.25 J	280	1.4 J	0.33 J	86	0.7 J	3.1	220	5 U	0.22 J	5 U		2 U	10.1	3.81	106	264	1.1	0.05 U	0.05 U
10/27/2009	5 U	5 U	510	1.8 J	5 U	130	5 U	3.2 J	150	5 U	5 U	5 U		1.8 U	18.8 J	3.7	120 J	286	0.22	0 R	0.05 U
5/11/2010	5 U	5 U	81	5 U	5 U	48	5 U	2.3 J	150	5 U	5 U	5 U		2.1 U	15.6 J	3.8	105	247	0.3	0.1 U	0.05 U
11/8/2010	5 U	5 U	320	1.4 J	5 U	110	5 U	5 U	120	5 U	5 U	5 U				3.7	114	264			
10/25/2011	5 U	5 U	27	5 U	5 U	43	5 U	3.8 J	140	5 U	5 U	5 U	0.2 U	2.6 U	50 U	3.5	134 J	303 J	0.38	0.1 U	0.05 U
3/15/2012	50 U	45 J	9000	36 J	23 J	830	3.1 J	73	2400	50 U	50 U	50 U	0.0585 J			17.5	78.4	96.6			
6/13/2012	10 U	74	4700	19	15	600	2.5 J	74	2600	10 U	4 J	2.6 J	0.2 U	24.6	65.1	4.1	81.5	165	33.1	0.1 U	0.05 U
11/27/2012	50 U	430	6800	24 J	29 J	820	5.6	190	3600	50 U	50 U	50 U	0.0908 J			3.5	82.8	191			
8/28/2013	5 U	2.2 J	600	5.2	2.4 J	610	5 U	75	670	5 U	1 J	5 U		5.1 U	15.6 J	3.8	90.1 J	219	1.1	0.1 U	0.05 U
1/14/2014	25 U	25 U	8800	53	17 J	5500	15	1500	18000	25 U	15 J	25 U	0.214 J			194	44.8	5 U	50.9		
4/3/2014	5 U	5 U	2300	16	5.5	2000	11	700	16000	5 U	3.4 J	5 U	0.0956 J	140	253	69.2	26.9	17.7	38.3	0.1 UJ	0.05 U
10/13/2014	1 U	1 U	17	8.8	1 U	22	13	610	21000	1 U	2.9	1 U	0.372 J			211	43.3	21.6	17.2		
11/20/2015	1 U	4.8	1100	22	2.2	780	40	920	24000	1 U	6.6	1 U	0.4 U	105	215	47.3	70.6	4.2	36.5	0.1 U	0.05 UJ
4/20/2016	1.0 U	1.0 U	1.0 U	6.8	1.0 U	4.3	17	300	31000 D	1.0 U	2	1.0 U	0.400 U	62.4	201	26.5	73.8	8.2	50.5	0.10 U	0.050 U
9/12/2017	1.0 U	1.0 U	1.0 U	0.44 J	1.0 U	2.6	15	34	8200 D	1.0 U	0.39 J	1.0 U	0.100 U	39	99	6.8	120	120	29	0.25 U	0.050 UJ
4/26/2018	1.0 U	1.0 U	0.63 J	1.0 U	1.0 U	4.6	1.0 U	2.8	9900 D	1.0 U	1.0 U	1.0 U	0.200 U	13	49	5.7	120	230	6.9	0.25 U	0.050 U
12/3/2019	1.0 U	1.0 U	1	1.0 U	1.0 U	6.7	4.2	17	9300 D	1.0 U	1.0 U	1.0 U	0.20 U	14	25	4	110	220	9.5	0.25 U	
3/20/2020	1.0 U	1.0 U	0.6 J	1.0 U	1.0 U	2.9	1.5	1.1	14000 D	1.0 U	1.0 U	1.0 U	0.048 J	17	32	3.4	120	250	13	0.50 U	0.10 U
12/7/2021	1.0 U	1.0 U	2.1	1.0 U	1.0 U	6.5	170 U	150 U	8000	1.0 U	1.0 U	1.0 U	0.54	6.4	16	7.2	130	230	4.8	0.050 U	0.050 U
5/11/2022	1.0 U	1.0 U	13	1.0 U	1.0 U	23	5.9	24	11000 D	1.0 U	1.0 U	1.0 U	0.2 U	16	36	4	130	250	7.3	0.10 UJ	0.050 UJ
10/5/2023	1.0 U	1.0 U	2.5	1.0 U	1.0 U	7.1	1.3	4.4	12000	1.0 U	1.0 U	1.0 U	200 U	8.1	32	4.2	140	230	7.9	0.25 U	0.25 U
4/22/2024	1.0 U	1.0 U	3.4	1.0 U	1.0 U	6	0.82 J	2.3	7700	1.0 U	1.0 U	1.0 U	230	3	25	5.5	99 J+	160 J+	4.2	0.25 U	0.25 U

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UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-17A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	38	160	1.9 J	10	12	1 U	0.42 J	60	5 U	19	5 U		2 U	11.4 J	2.51	1400	134	1 U		
4/28/2008	5 U	29	200	1.5 J	9.1	28	1 U	1.5	77	5 U	20	5 U		2 U	11	2.2	1120	153	1 U	0.05 U	0.05 U
8/12/2008	5 U	40	190	2.5 J	11	24	5 U	1.5 J	120	5 U	21					2.4	1250	168			
10/7/2008	5 U	43	200	3.5 J	13	23	5 U	1.3 J	120 J	5 U	23	5 U				2.2	1270 J	165			
12/10/2008	5 U	39	210	2.2 J	12	27	5 U	1.1 J	65	5 U	25	5 U				2.2	1070	161			
1/26/2009	5 U	32	210	2.1 J	11	29	5 U	1.4 J	88	5 U	23	5 U									
3/16/2009	5 U	29	210	2.5 J	12	28	5 U	1.4 J	78	5 U	20	5 U				2.3	1220	170			
10/20/2009	5 U	24	200	2.2 J	14	24	5 U	5 U	120	5 U	29	5 U				3.1	1080 J	198 J			
10/28/2009	5 U	22	180	1.6 J	14	25	5 U	5 U	97	5 U	30	5 U		1.9 U	59.9 J	2.9	1130 J	192	0.16 U	0 R	0.05 U
12/11/2009	5 U	11	200	1.4 J	13	29	5 U	5 U	100	5 U	28	5 U				3.1	1060 J	217 J			
2/9/2010	5 U	14	210	1.3 J	11	34	5 U	5 U	110	5 U	24	5 U				3.7 J	962	194			
3/30/2010	5 U	11	180	1.7 J	10	24				5 U	20	5 U									
5/6/2010	5 U	15	210	1.4 J	11	27	5 U	5 U	15 U	5 U	20	5 U		3.6 U	29.3 J	2.9	729 J	196 J	0.16 U	0.1 U	0.05 U
11/11/2010	5 U	16	200	1.9 J	13	28	1.5 J	8.5	2100	5 U	27	5 U				3.1	661	195			
10/24/2011	5 U	11	160	1.2 J	12	30	11	3.2 J	4900	5 U	26	5 U	0.2 U	5.1	33.8 J	3.9	1010	189	0.16 U	0.1 U	0.05 U
6/12/2012	5 U	5.3	140	1.2 J	8.1	25	12	3.1 J	8500	5 U	21	5 U	0.2 U	5.9	28.8 J	4.4	484	172	0.16 U	0.1 U	0.05 U
8/28/2013	5 U	3.1 J	180	5 U	6.3	45	11	8.8	12000	5 U	22	5 U		9.8	27 J	3.8	318 J	151	0.16 U	0.1 U	0.05 U
4/3/2014	1 U	0.62 J	150	1 U	3.6	49	14	17	18000	1 UJ	16	1 U	2.14	8.5	49.3 J	5.1	277	145	0.16 U	0.1 UJ	0.05 U
11/18/2015	1 U	1 U	160	1 U	1 U	86	12	11	15000	1 U	18	1 U	1.45	7.3	15.2 J	3	167	114	0.16 U	0.1 U	0.05 U
4/20/2016	1.0 U	1.0 U	110	1.0 U	1.0 U	89	7.4	11	15000 D	1.0 U	15	1.0 U	0.955	7.8	26.7 J	3.2	161	131	0.10 U	0.10 U	0.050 U
9/12/2017	5.0 U	5.0 U	120	5.0 U	5.0 U	120	5.5	8.4	3700 D	5.0 U	17	5.0 U	0.92	3.4	17	3	82	97	1.0 U	0.25 U	0.050 UJ
4/25/2018	5.0 U	5.0 U	59	5.0 U	5.0 U	91	10 U	10 U	13000	5.0 U	11	5.0 U	1	4.8 J	19	3.7	92	100	1.0 U	0.25 U	0.050 U
12/5/2019	2.0 U	2.0 U	50	2.0 U	2.0 U	83	11	17	9400 D	2.0 U	13	2.0 U	0.55	4.2	10 U	2.8	57	67	1.0 U	0.25 U	
3/19/2020	2.0 U	2.0 U	38	2.0 U	2.0 U	78	17	21	17000 D	2.0 U	12	2.0 U	0.7		7.6 J	2.7	53	70	1.0 U	0.50 UJ	0.10 UJ
12/8/2021	4.0 U	4.0 U	48	4.0 U	4.0 U	110	9.4	14	12000	4.0 U	13	4.0 U	0.69	6.0 U	52	4.1	32	55	1.0 U	0.25 U	0.25 U
5/12/2022	1.0 U	1.0 U	36	1.0 U	1.0 U	83 D	15	20	16000 D	1.0 U	11	1.0 U	0.72	5.5	8.8 J	2.4	31	56	1.0 U	0.10 UJ	0.050 UJ
10/5/2023	1.0 U	1.0 U	30	1.0 U	1.0 U	73 DJ	8.9	21	13000	1.0 U	11	1.0 UJ	540	4.4	9.5 J	2.8	16	41	1.0 U	0.25 U	0.25 U
4/23/2024	2.0 U	2.0 U	23	2.0 U	2.0 U	69	11	22	14000	2.0 U	11	2.0 U	680	6.3		2	23 J+	49 J+	1.0 U	0.10 U	0.10 U

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J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-17B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	4 J	440	3.4 J	3.4 J	64	0.66 J	2.8	180	5 U	9.3	5 U		2 U	9.7 J	3.31	431	209	1 U		
4/28/2008	5 U	4.6 J	630	8.5	5.5	82	0.53 J	4	160	5 U	17	5 U		2 U	10.4	3.06	475	211	1 U	0.05 U	0.05 U
10/8/2008	5 U	3.3 J	600	5.9	4.4 J	120	5 U	6.6	170 J	5 U	22	5 U				55.7	561 J	169			
12/10/2008	5 U	2.6 J	260	3.1 J	2.9 J	170	5 U	33	120	5 U	28	5 U				3	802	180			
1/26/2009	5 U	2.1 J	280	4.2 J	3.1 J	210	5 U	61	130	5 U	24	5 U									
3/17/2009	5 U	1.6 J	270	3.6 J	3.2 J	180	5 U	71	180	5 U	22	5 U				3.5	631	275			
10/20/2009	5 U	4.2 J	280 J	2.4 J	4.5 J	73	3 J	22	120	5 U	29	5 U				3	768 J	204 J			
10/28/2009	5 U	3.1 J	280	2.2 J	3.1 J	69	2 J	14	89	5 U	26	5 U		2.2 U	53.1 J	3.1	720 J	195	0.1 J	0 R	0.05 U
12/11/2009	5 U	2.2 J	170	2.4 J	5 U	160	2.4 J	130	300	5 U	8.4	5 U				264	171 J	18.3 J			
2/9/2010	5 U	1.2 J	31	1.8 J	5 U	52	4.2 J	190	4400	5 U	31	5 U				122 J	727	32.2			
3/30/2010	5 U	5 U	5.9	1.7 J	5 U	10				5 U	37	5 U									
5/6/2010	5 U	5 U	8.5	1.4 J	5 U	9.6	5 U	5 U	15 U	5 U	45	5 U		157 J	219	12.7	883 J	49.7 J	14.3	0.1 U	0.05 U
11/10/2010	5 U	5 U	8.1	0.86 J	5 U	8.8	16	110	4200	5 U	40	5 U				4.5	981	118			
10/26/2011	5 U	5 U	19	0.82 J	5 U	27	70	81	15000	5 U	48	1.4 J	0.102 J	5.7	45.1 J	3.2	966	154 J	4.5	0.1 U	0.05 U
3/13/2012	5 U	5 U	14	1.1 J	5 U	15	44	83	18000	5 U	46	1.3 J	0.0442 J			10.9	682	118			
6/12/2012	5 U	5 U	20	0.82 J	5 U	18	45	72	23000	5 U	43	1.5 J	0.19 J	9.6	49.2 J	3.8	739	116	11.6	0.1 U	0.05 U
11/27/2012	5 U	5 U	28 J	5 U	5 U	31	41	79	19000	5 U	35 J	5 U	0.172 J			3.2	669	130			
8/28/2013	5 U	5 U	35	5 U	5 U	40	29	56	19000	5 U	38	5 U		12.7	40.6 J	3.6	521 J	138	1.2	0.1 U	0.05 U
1/15/2014	5 U	5 U	1.8 J	1.5 J	5 U	2.9 J	7.2	52	19000	5 U	7.9	11	54.8			454	351 J+	5 U	6.3		
4/1/2014	1 U	1 U	1.3	0.73 J	1 U	2.1	13	34	20000	1 U	8.2	7.4	16.6	139	228	55.1	288	6.9	8.2 J-	0.1 U	0.016 J
10/14/2014	1 U	1 U	0.52 J	0.71 J	1 U	1.1	8.3	17	16000	1 UJ	3.3	8.2	15.5			38.4	386	5 U	4.1		
11/18/2015	1 U	1 U	1 U	1 U	1 U	0.8 J	8.5	8.9	14000	1 U	1.5	7.9	13.4	17.6	102	18.8	374	2.5 J	1.4	0.1 U	0.05 U
4/21/2016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.88 J	8	7	18000 D	1.0 U	1.7	6.7	17.3	20.4	103	25	327	7.2	1	0.10 U	0.050 U
9/12/2017	1.0 U	0.68 J	10	0.45 J	1.0 U	12	3.5	4.6	6800	1.0 U	6.3 J	7.6	5.3	6.2	78	17	210	47	0.73 J	0.50 U	0.050 UJ
4/25/2018	1.0 U	1.0 U	4.9	0.39 J	1.0 U	7.9	19	27	22000	1.0 U	4.5	3.7	4.7	6.8	89	20	170	45	2.1	0.25 U	0.039 J
12/5/2019	1.0 U	1.0 U	11	0.28 J	1.0 U	14	24	17	27000 D	1.0 U	4.3	6.6	3.1	9.7 J-	19	5.9	140	67	2.3	0.25 U	
3/19/2020	1.0 U	1.0 U	1.4	1.0 U	1.0 U	2.6	23	6.5	33000 D	1.0 U	4.5	8.9	4.1		21	5.4	110	39	2.9	0.50 UJ	0.10 UJ
12/8/2021	4.0 U	4.0 U	31	4.0 U	4.0 U	20	170 U	150 U	26000	4.0 U	7.3	2.9 J	0.94	16	13	12	130	90	5.6	0.25 U	0.25 U
5/12/2022	1.0 U	1.0 U	28	1.0 U	1.0 U	23	31	21	29000 D	1.0 U	8.2	2.2	0.42	8.9	26	4.5	120	130	6.7	0.10 UJ	0.050 U
10/5/2023	1.0 U	1.0 U	0.9 J	1.0 U	1.0 U	2.2	34	5.5	26000	1.0 U	11	2.7	160 J	11	16	3.6	88	69	4.5	0.25 U	0.25 U
4/25/2024	1.0 U	1.0 U	5.9	1.0 U	1.0 UJ	5.8	36	11	27000	1.0 U	7.7	2.2	130 J	17 J	22	3.9	120 J+	120 J+	4	0.10 U	0.10 U

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MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-18A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	22	25	0.46 J	0.58 J	6.7	0.38 J	1 U	17	5 U	4.1 J	5 U		2 U	5 UJ	1.79	74.2	125	1 U		
4/28/2008	5 U	25	31	0.44 J	0.8 J	2.1 J	1 U	1 U	16	5 U	3.8 J	5 U		2 U	5 U	1.56	79.6	133	1 U	0.05 U	0.05 U
10/27/2009	5 U	25	43	5 U	0.93 J	7	5 U	5 U	23	5 U	4.7 J	5 U		1.4 U	14.2 J	1.5	90.2 J	130	0.16 U	0 R	0.05 U
5/12/2010	5 U	25	51	5 U	1.1 J	2.6 J	5 U	5 U	13 J	5 U	4.2 J	5 U		1.6 U	50 U	2.1	104 J	132	0.16 U	0.1 U	0.05 U
10/24/2011	5 U	23	42	5 U	0.9 J	8.4	5 U	5 U	19	5 U	4.7 J	5 U	0.0478 J	2.1 U	50 U	1.8	293	156	0.16 U	0.1 U	0.05 U
6/12/2012	5 U	21	56	0.94 J	1.1 J	2.4 J	5 U	5 U	11 J	5 U	4.2 J	5 U	0.2 U	3.1 U	50 U	1	108	129	0.16 U	0.1 U	0.05 U
8/27/2013	5 U	25	58	0.87 J	0.98 J	3.4 J	5 U	5 U	10	5 UJ	4.9 J	5 U		6.2	50 U	2.1	118	138	0.16 U	0.1 U	0.05 U
4/2/2014	1 U	27	43	0.76 J	0.9 J	0.86 J	5 U	5 U	3.4 J	1 UJ	3.6	1 U	0.89	3.3 U	50 U	2.4	106 J-	124 J+	0.16 U	0.1 U	0.05 U
11/18/2015	1 U	38	51	0.73 J	1.1	2.3	5 U	5 U	11 J	1 U	4.5	1 U	1.5	2.8 U	50 U	1.2	113	118	0.16 U	0.1 U	0.05 U
4/20/2016	1.0 U	37	51	0.83 J	0.99 J	0.62 J	5.0 U	5.0 U	5.2	1.0 U	4.3	1.0 U	0.463	4.2 U	19.8 J	1.4	233	144	0.10 U	0.10 U	0.050 U
9/13/2017	2.0 U	29	58	0.8 J	1 J	1.8 J	0.50 U	0.50 U	5.3	2.0 U	5	2.0 U	1.2	2.0 U	12	1.3	86	120	1.0 U	0.25 U	0.050 U
4/26/2018	1.0 U	36	42	0.61 J	0.88 J	1.1	1.0 U	1.0 U	13	1.0 U	3.7	1.0 U	0.99	2.0 U	12	1.5	81	130	1.0 U	0.25 U	0.050 U
12/4/2019	2.0 U	32	43	0.66 J	0.93 J	0.97 J	0.36 J	1.0 U	9.2	2.0 U	3.6	2.0 U	0.9	2.0 U	10 U	1.3	67	130	1.0 U	0.25 U	
3/19/2020	2.0 U	34	46	0.81 J	0.87 J	1.1 J	1.0 U	1.0 U	17	2.0 U	3.7	2.0 U	0.99		4.1 J	1.3	65	130	1.0 U	0.50 UJ	0.10 UJ
12/7/2021	1.0 UJ	23 J-	43 J-	1.0 UJ	0.49 J-	2.3 J-	7.5 U	7.0 U	4000	1.0 UJ	3.3 J-	1.0 UJ	1.4	2.0 U	45	2.2	53	120	1.0 U	0.050 U	0.050 U
5/11/2022	1.0 U	34	54	0.87 J	1.2	5.7	1.5	1.4	5800 D	1.0 U	4.1	1.0 U	1.9	2.4	6.8 J	1.1	51	130	1.0 U	0.10 UJ	0.050 UJ
10/5/2023	1.0 U	39	57	0.86 J	1.4	3.5	0.79 J	0.66 J	3400	1.0 U	4	1.0 UJ	1900	2.0 U	7.2 J	1.4	37	120	1.0 U	0.25 U	0.25 U
4/23/2024	1.0 U	41	39	0.77 J	0.99 J	3.6	0.89 J	0.49 J	2800	1.0 U	4.2	1.0 U	2800	2.0 U		0.96 J	38 J+	130 J+	1.0 U	0.25 U	0.25 U

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-18B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
11/1/2007	5 U	5 U	160	0.9 J	5 U	140		2.1	120	5 U	5 U	5 U		2 U	5 UJ	4.09	80.9	261			
11/29/2007																			1 U		
4/28/2008	5 U	5 U	120	0.73 J	5 U	180	0.74 J	2.4	150	5 U	5 U	5 U		2 U	9.86	3.74	88.1	270	1 U	0.05 U	0.05 U
10/27/2009	5 U	5 U	62	5 U	5 U	220	5 U	2.3 J	120	5 U	5 U	5 U		1.7 U	23.3 J	4.1	93.8 J	296	0.16 U	0 R	0.05 U
5/12/2010	5 U	5 U	69	5 U	5 U	190	5 U	2.4 J	130	5 U	5 U	5 U									
10/25/2011	5 U	5 U	150	0.9 J	5 U	220	5 U	4 J	120	5 U	5 U	5 U	0.0657 J	2.4 U	50 U	3.9	114 J	305 J	0.16 U	0.1 U	0.05 U
3/14/2012	5 U	5 U	59	5 U	5 U	170	5 U	2.3 J	96	5 U	5 U	5 U	0.0423 J			3.5	102	281			
6/12/2012	5 U	5 U	110	5 U	5 U	140	5 U	3.6 J	110	5 U	5 U	5 U	0.2 U	3.5 U	50 U	4	102	268	0.16 U	0.1 U	0.05 U
11/28/2012	5 U	5 U	89	5 U	5 U	180	5 U	5.2	150	5 U	5 U	5 U	0.2 U			4.2	106	284			
8/15/2013	0.96 J	5 U	120	5 U	5 U	190				5 U	5 U	5 U							0.16 U		
8/27/2013	5 U	5 U	110	5 U	5 U	190	5 U	5.3	170	5 UJ	5 U	5 U		2.8 U	17.9 J	4.9	106	284	0.16 U	0.1 U	0.05 U
1/17/2014	5 U	5 U	28	5 U	5 U	56	3.2 J	41	5000	5 U	5 U	5 U	5.97			941	91.1	55.1	17.3		
1/21/2014																					
4/2/2014	1 U	1 U	43	1 U	1 U	71	3.8 J	33	13000	1 UJ	1 U	1 U	2.91	889 J	1340	427	79.3 J-	86.1 J+	7.7	0.1 U	0.05 U
10/13/2014	1 U	1 U	1.1	1 U	1 U	4.6	4 J	11	18000	1 U	1 U	1 U	8.37			166	34.9	3.8 J	2.8		
11/18/2015	1 U	1 U	35	1 U	1 U	40	3.5 J	15	18000	1 U	1 U	1 U	2.54	35.7	167	41.5	62.2	70.9	1.5	0.1 U	0.05 U
4/21/2016	1.0 U	1.0 U	90	1.0 U	1.0 U	120	2.8 J	16	19000 D	1.0 U	1.0 U	1.0 U	0.893	22.1	88.7	21.7	122	189	4.8	0.10 U	0.050 U
9/13/2017	20 U	20 U	380	20 U	20 U	210	6.8	38	5000 D	20 U	20 UJ	20 U	0.52	23	99	11	110	140	7.3	0.50 U	0.050 U
4/26/2018	2.5 U	2.5 U	69	2.5 U	2.5 U	92	2	12	17000 D	2.5 U	2.5 U	2.5 U	0.41	17	71	12	97	130	10	0.25 U	0.050 U
12/4/2019	2.0 U	2.0 U	56	2.0 U	2.0 U	70	2.3	9.9	24000 D	2.0 U	2.0 U	2.0 U	0.35	35 J-	49	8.8	96	130	13	0.25 U	
3/19/2020	2.0 U	2.0 U	32	2.0 U	2.0 U	51	2.5	29	24000 D	2.0 U	2.0 U	2.0 U	0.23		53	7.2	100	170	16	0.50 UJ	0.10 UJ
12/7/2021	2.0 U	2.0 U	47	2.0 U	2.0 U	80	170 U	150 U	13000	2.0 U	2.0 U	2.0 U	0.32	14	39	6	98	190	8	0.050 U	0.050 U
5/11/2022	1.0 U	1.0 U	38	1.0 U	1.0 U	59	3.2	15	21000 D	1.0 U	1.0 U	1.0 U	0.17 J	16	39	4.5	100	220	9.9	0.10 UJ	0.050 UJ
10/5/2023	1.0 U	1.0 U	120 DJ	0.53 J	1.0 U	61	2.3	5	22000	1.0 U	1.0 U	1.0 UJ	170 J	17	35	5	100	180	7.7	0.25 U	0.25 U
4/24/2024	1.0 U	1.0 U	29	1.0 U	1.0 UJ	56	2.8	14	22000	1.0 U	1.0 U	1.0 U	200 U	4.4	40	4.4	120 J+	190	9.6	0.10 UJ	0.10 UJ

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-19A

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	4.2 J	5 U	5 U	4				5 U	5 U	5 U									
4/24/2008	5 U	5 U	3.2 J	5 U	5 U	1.2 J				5 U	5 U	5 U									
11/2/2009	5 U	5 U	3.7 J	5 U	5 U	2.8 J				5 U	5 U	5 U									

J Indicates an estimated value.
U Analyte was not detected above the reporting limit.
UJ The analyte was not detected. The reporting limit is an approximate value.
J- Indicates estimated value, biased low.
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

MONITORING WELL GROUNDWATER ANALYTICAL RESULT SUMMARY
HYDE PARK FACILITY
NIAGARA, NEW YORK

Well ID: MW-19B

Date	PCE (µg/L)	TCE (µg/L)	Cis-1,2-DCE (µg/L)	Trans-1,2-DCE (µg/L)	1,1-DCE (µg/L)	Vinyl Chloride (µg/L)	Ethane (µg/L)	Ethene (µg/L)	Methane (µg/L)	1,1,1-Trichloroethane (µg/L)	1,1-Dichloroethane (µg/L)	Chloroethane (µg/L)	Dissolved Iron (mg/L)	BOD (mg/L)	COD (mg/L)	TOC (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Sulfide (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)
10/31/2007	5 U	5 U	12	5 U	5 U	3.4				5 U	5 U	5 U									
4/24/2008	5 U	5 U	24	5 U	5 U	5.8				5 U	5 U	5 U									
11/2/2009	5 U	5 U	68	5 U	5 U	7.2				5 U	5 U	5 U									
5/12/2010	5 U	5 U	2.1 J	5 U	5 U	2.1 J	5 U	5 U	160	5 U	5 U	5 U									
10/20/2011	5 U	5 U	8.7	5 U	5 U	3.3 J				5 U	5 U	5 U									
6/12/2012	5 U	5 U	2.3 J	5 U	5 U	1.6 J				5 U	5 U	5 U									
8/28/2013	5 U	5 U	2.1 J	5 U	5 U	1.2 J				5 U	5 U	5 U									
4/2/2014	1 U	1 U	2.9	1 U	1 U	0.65 J				1 U	1 U	1 U									
11/17/2015	1 U	1 U	1.8	1 U	1 U	1				1 U	1 U	1 U									
4/19/2016	1.0 U	1.0 U	1.1	1.0 U	1.0 U	1.1				1.0 U	1.0 U	1.0 U									
9/13/2017	1.0 U	1.0 U	1.6	1.0 U	1.0 U	1.5				1.0 U	1.0 UJ	1.0 U									
4/23/2018	1.0 U	1.0 U	24	1.0 U	1.0 U	5				1.0 U	1.0 U	1.0 U									
12/4/2019	1.0 U	1.0 U	1.4	1.0 U	1.0 U	1.2				1.0 U	1.0 U	1.0 U									
3/20/2020	1.0 U	1.0 U	11	1.0 U	1.0 U	2.3				1.0 U	1.0 U	1.0 U									
12/7/2021	1.0 U	1.0 U	1.8	1.0 U	1.0 U	1.5				1.0 U	1.0 U	1.0 U									
5/12/2022	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.1				1.0 U	1.0 U	1.0 U									
10/5/2023	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.4				1.0 U	1.0 U	1.0 UJ									
4/22/2024	1.0 U	1.0 U	21	1.0 U	1.0 U	4.4				1.0 U	1.0 U	1.0 U									

J Indicates an estimated value.
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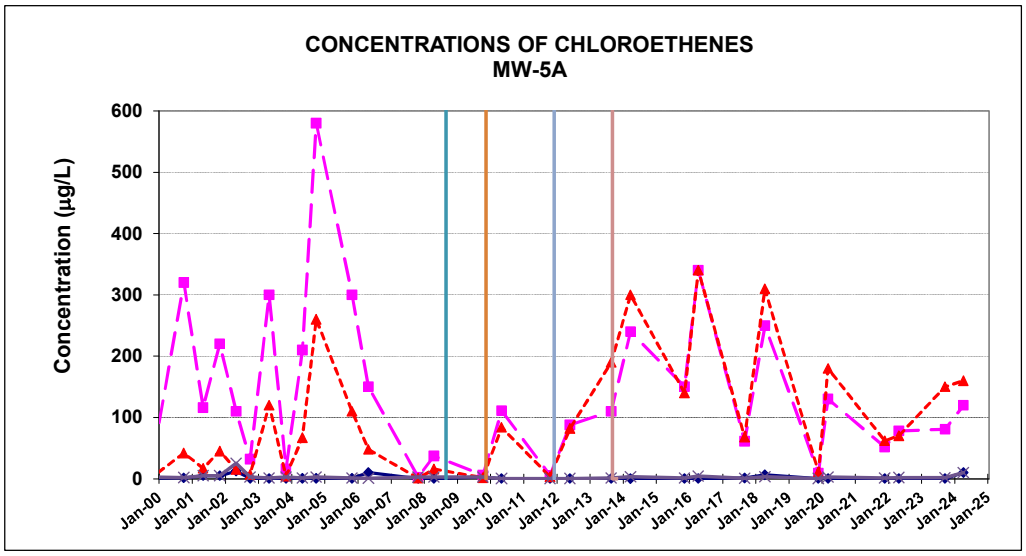
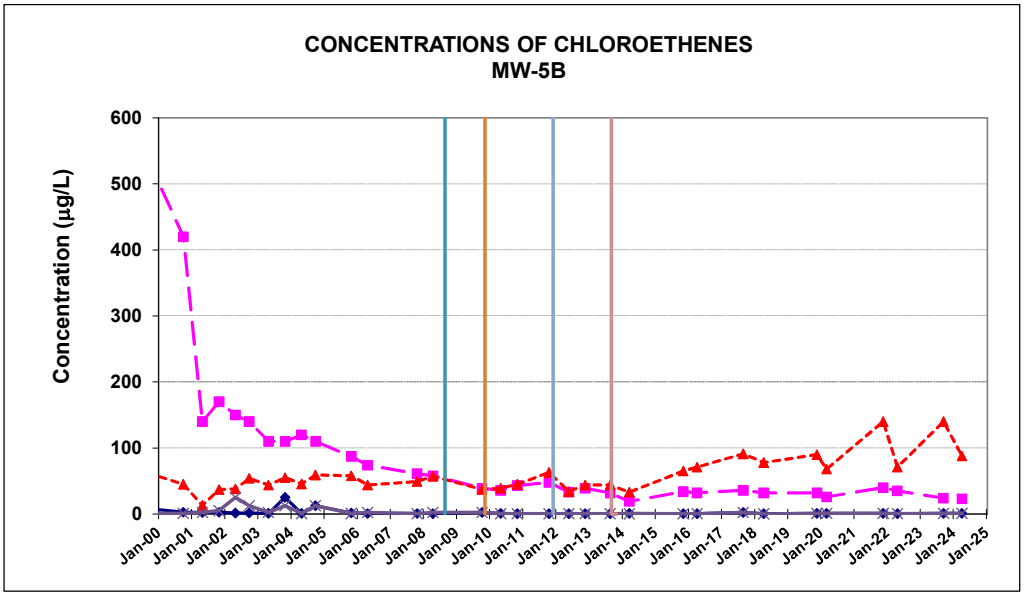
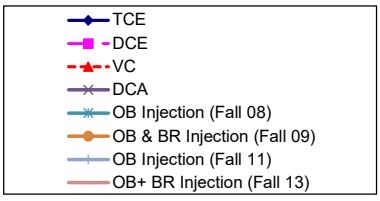
J+ Indicates estimated value, biased high.
D Result reported from a secondary dilution analysis.
R The sample results are rejected.

Appendix F

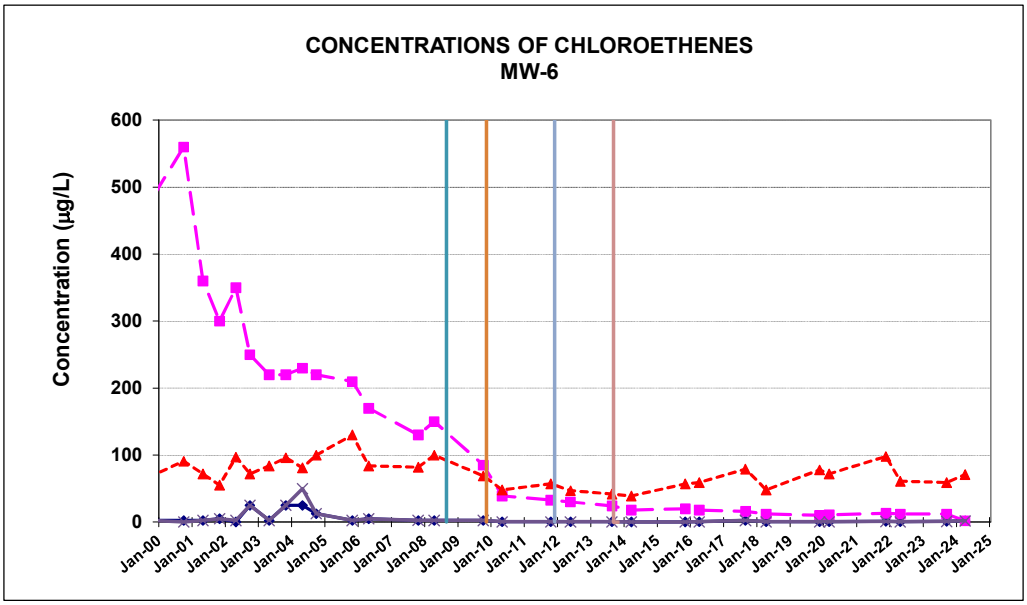
Long-Term Trend Graphs of Chlorinated Ethenes in Monitoring Wells, 2000-2024







FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELLS MW-5A AND MW-5B
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.



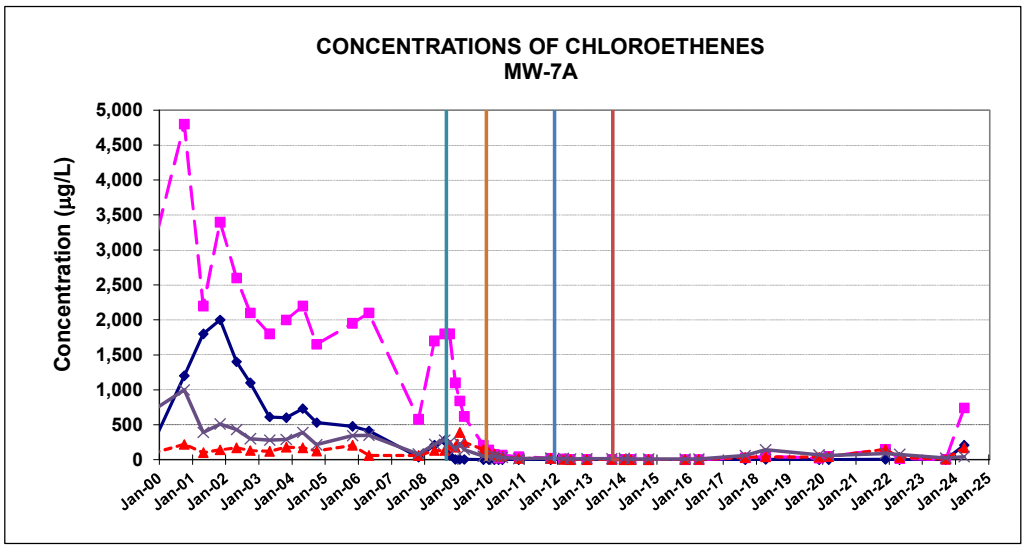
TCE
DCE
VC
DCA
OB Injection (Fall 08)
OB & BR Injection (Fall 09)
OB Injection (Fall 11)
OB+ BR Injection (Fall 13)

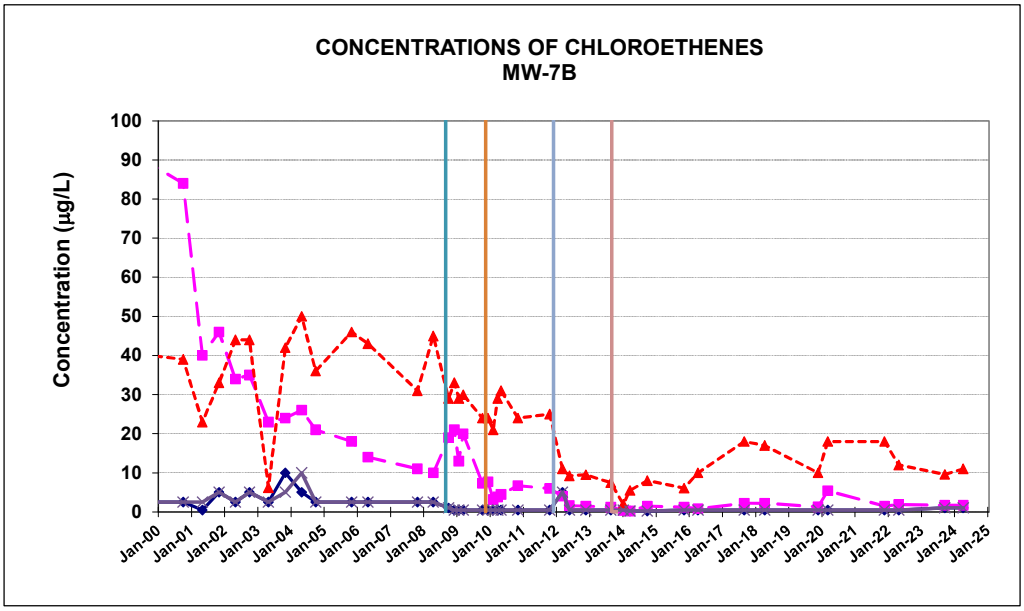
FORMER CARBORUNDUM COMPANY

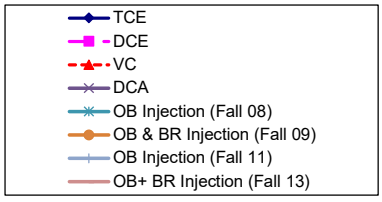
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELL MW-6

AECOM

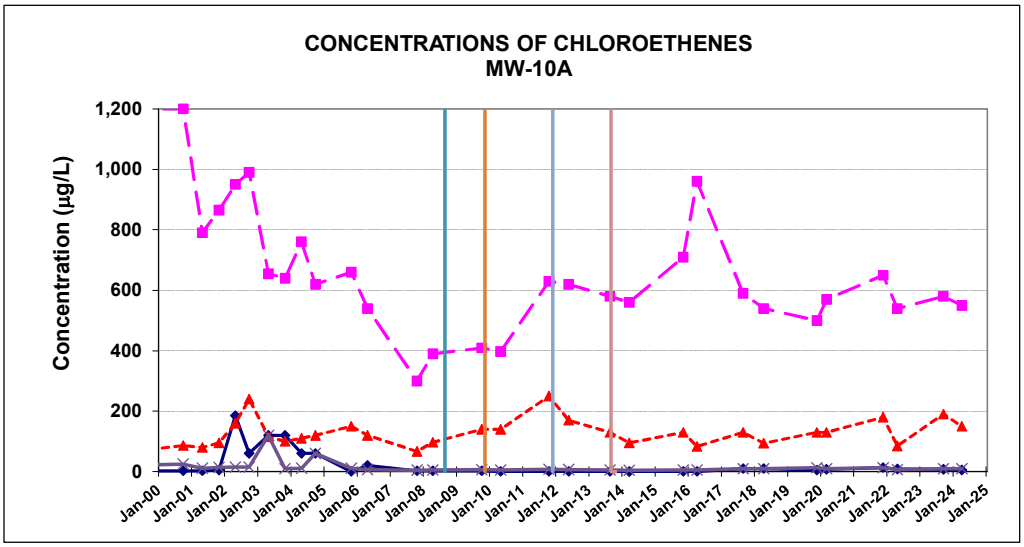
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.

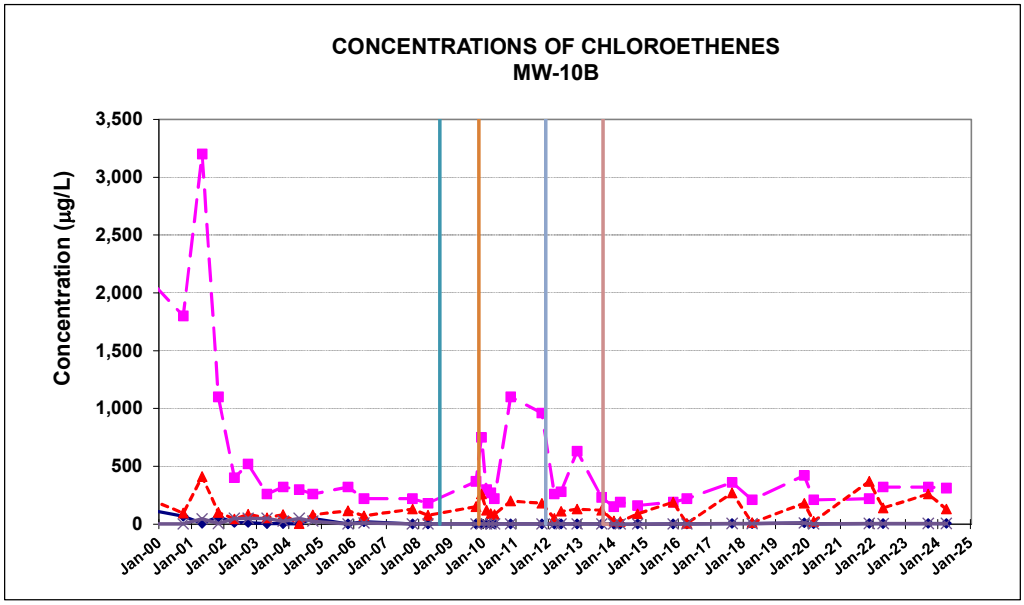


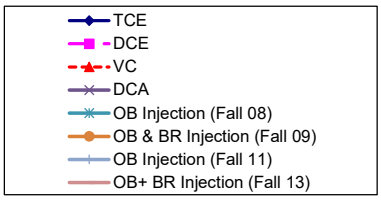




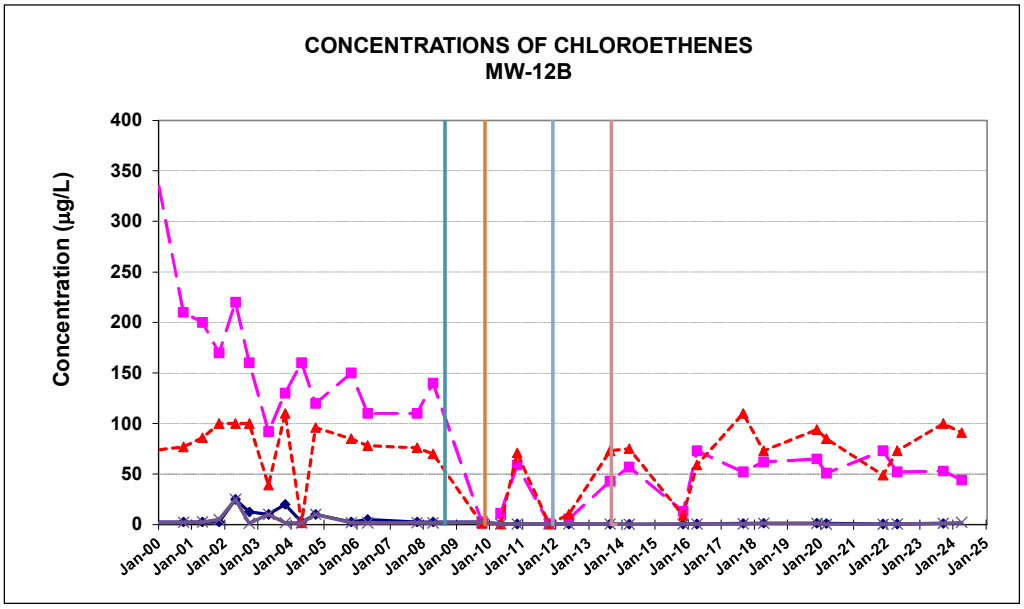
FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELLS MW-7A AND MW-7B
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.







FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELLS MW-10A AND MW-10B
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.



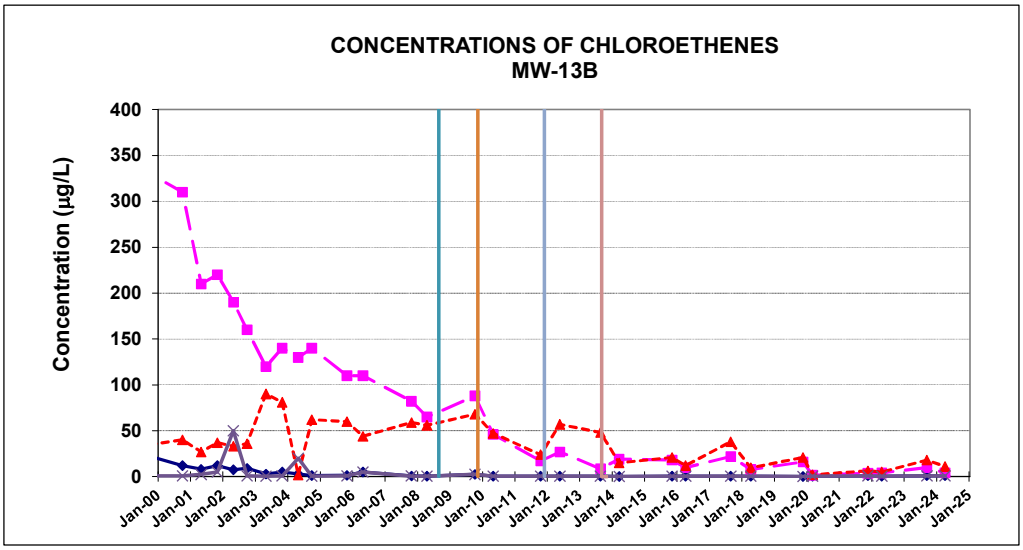
TCE
DCE
VC
DCA
OB Injection (Fall 08)
OB & BR Injection (Fall 09)
OB Injection (Fall 11)
OB+ BR Injection (Fall 13)

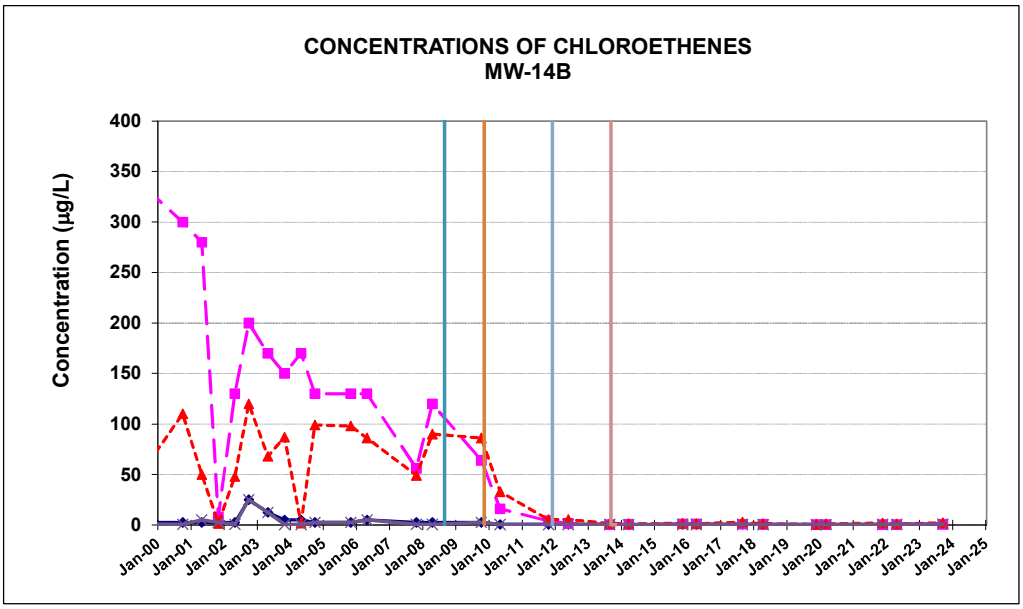
FORMER CARBORUNDUM COMPANY

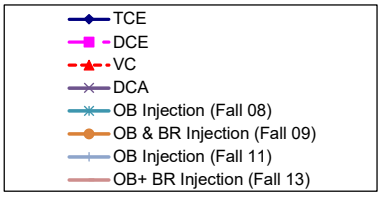
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELL MW-12B

AECOM

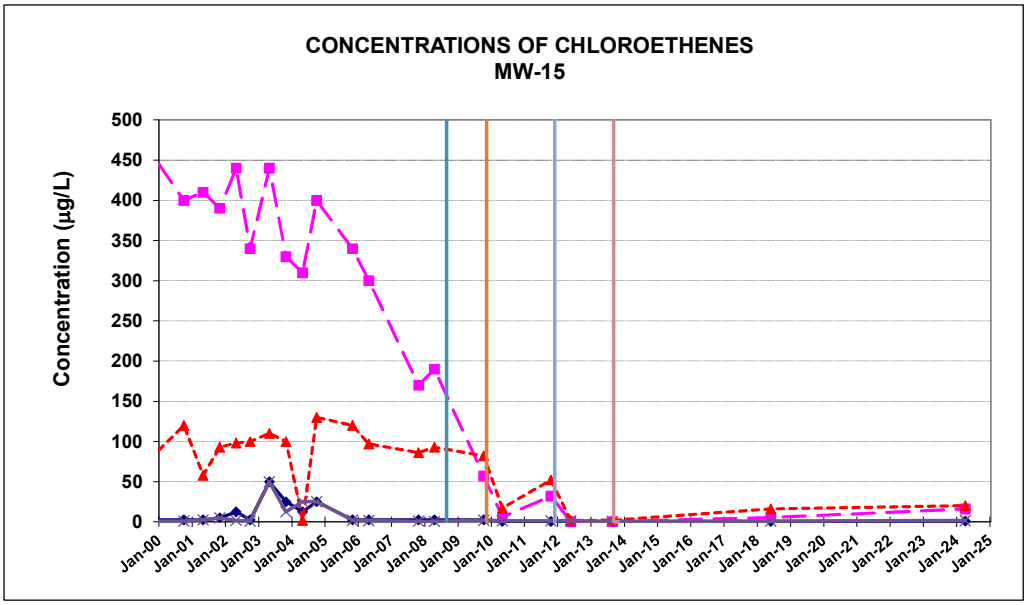
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.







FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELLS MW-13B AND MW-14B
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.



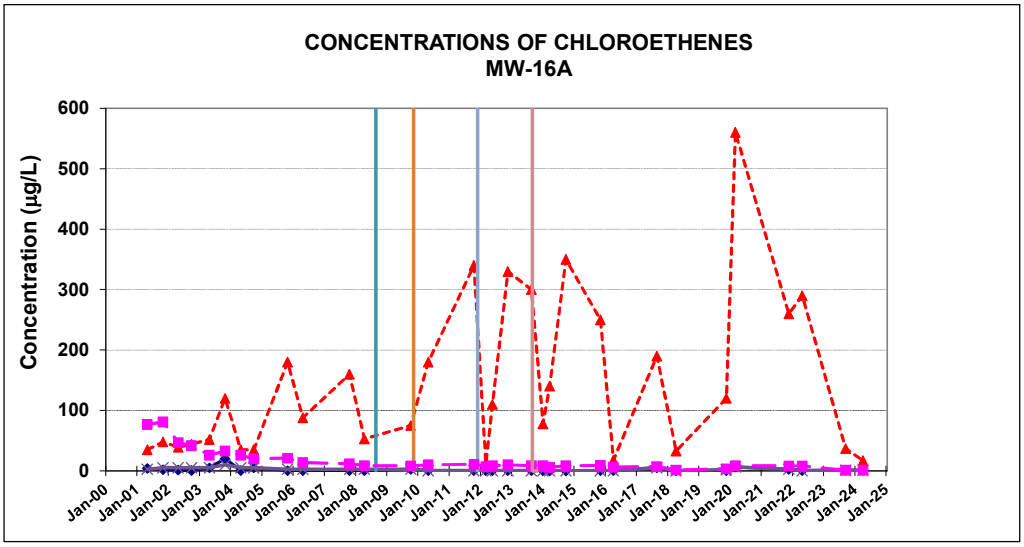
TCE
DCE
VC
DCA
OB Injection (Fall 08)
OB & BR Injection (Fall 09)
OB Injection (Fall 11)
OB+ BR Injection (Fall 13)

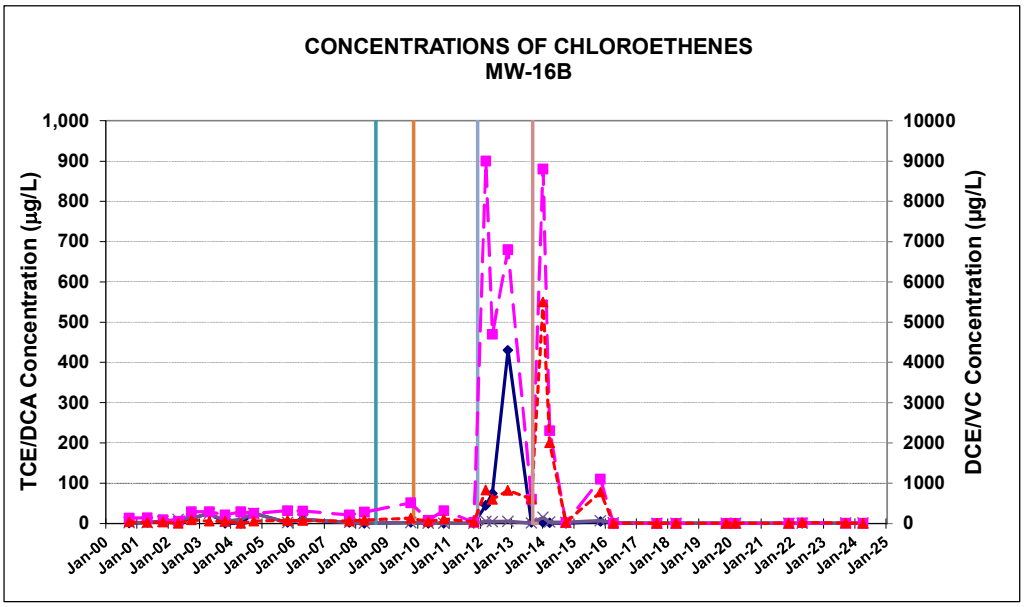
FORMER CARBORUNDUM COMPANY

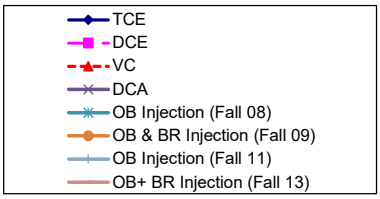
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELL MW-15

AECOM

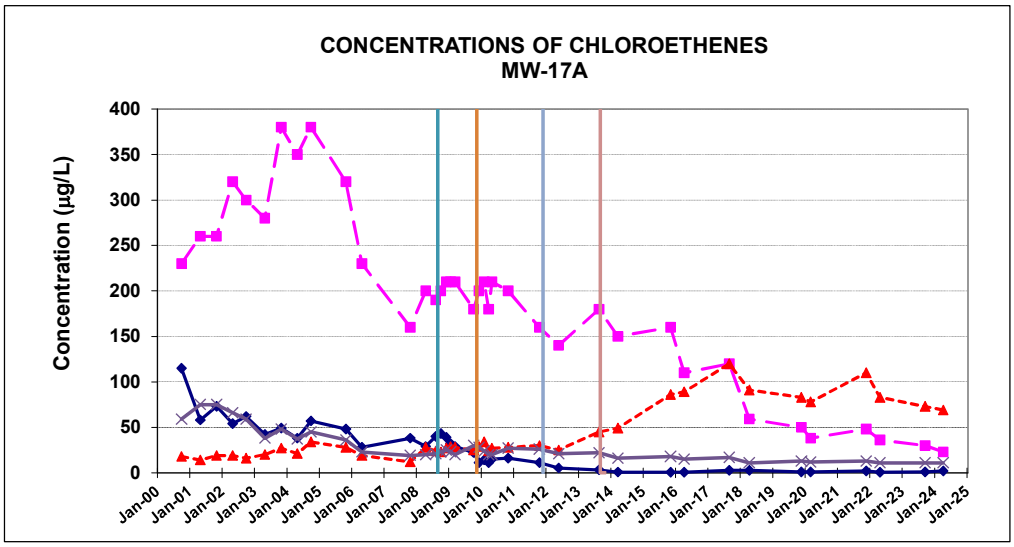
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.

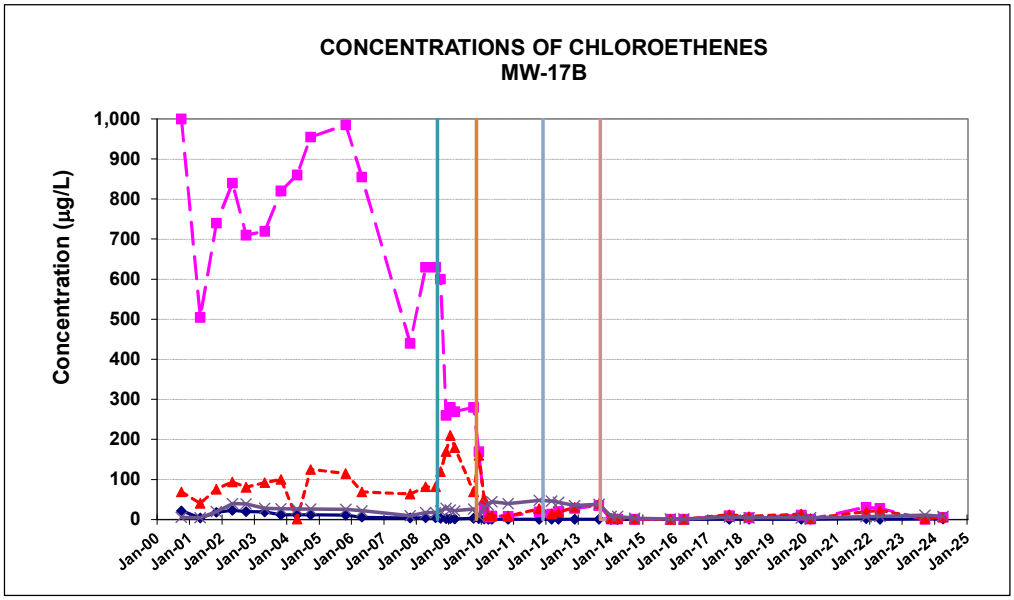


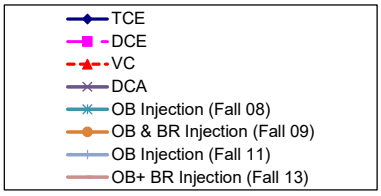




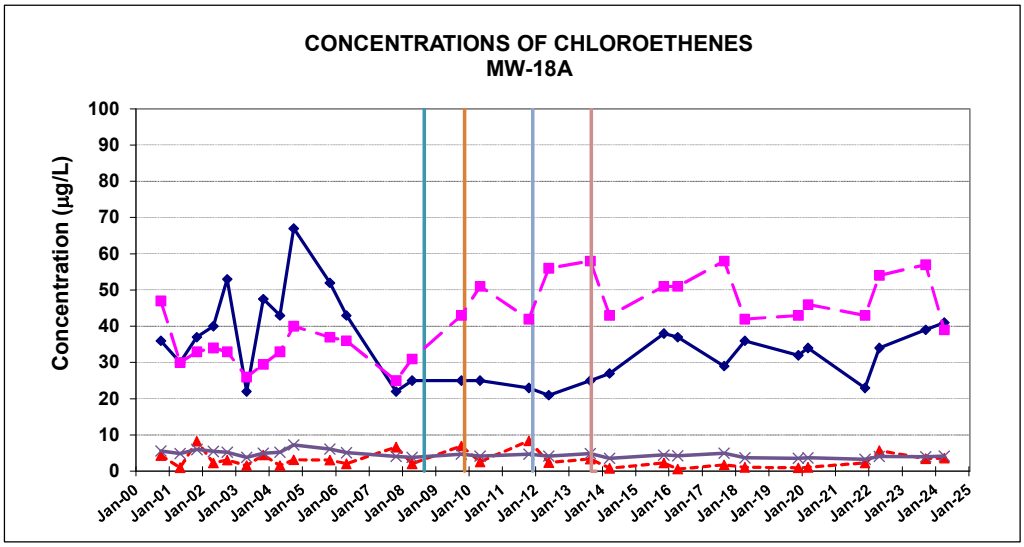
FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELLS MW-16A AND MW-16B
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.

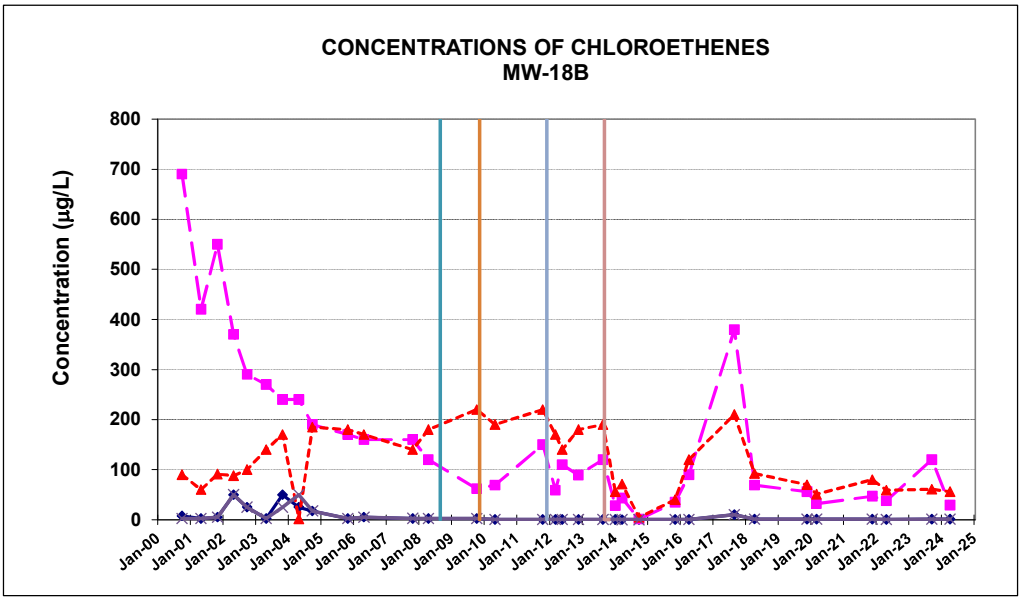


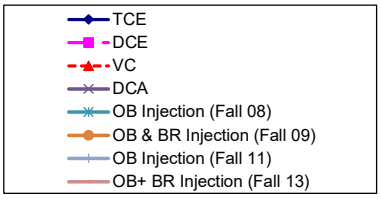




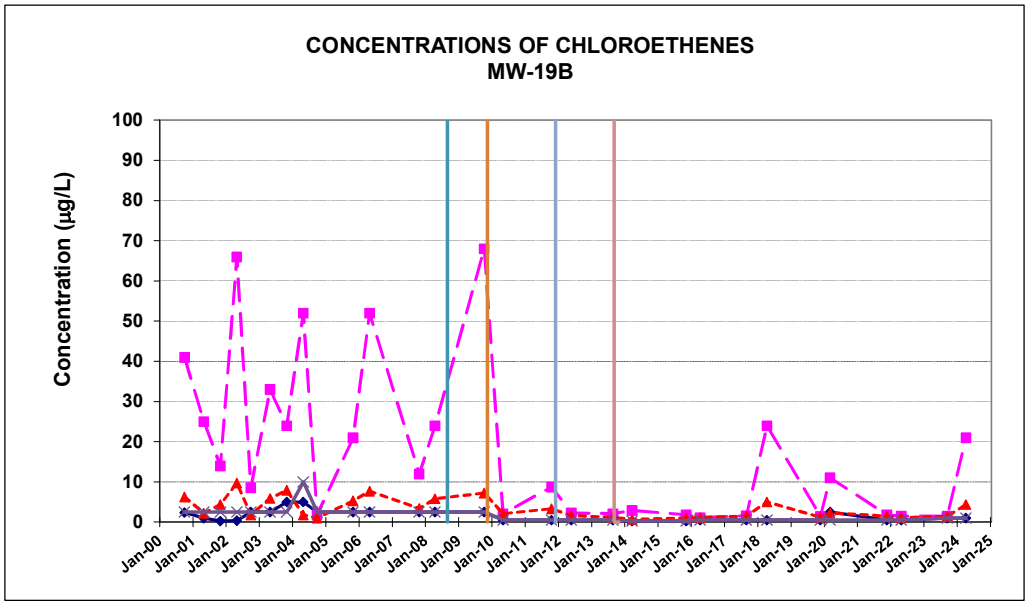
FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELLS MW-17A AND MW-17B
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.







FORMER CARBORUNDUM COMPANY
LONG TERM TRENDS OF CHLORINATED ETHENES IN WELLS MW-18A AND MW-18B
AECOM
50 Lakefront Boulevard, Suite 111, Buffalo, New York 14202.



TCE
DCE
VC
DCA
OB Injection (Fall 08)
OB & BR Injection (Fall 09)
OB Injection (Fall 11)
OB+ BR Injection (Fall 13)

FORMER CARBORUNDUM COMPANY

LONG TERM TRENDS OF CHLORINATED ETHENES IN WELL MW-19B

AECOM

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