# PERIODIC REVIEW REPORT
# April 2018 – August 2024

## MAHOPAC BUSINESS DISTRICT WELLS SITE
## TOWN OF CARMEL, PUTNAM COUNTY, NEW YORK 10512

**NYSDEC Site No. 340013**
**Work Assignment No. D009812-31**




Prepared for:

NEW YORK STATE | Department of Environmental Conservation

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## Executive Summary

| Category | Summary/Results |
|---|---|
| Recommendations | 1. Perform Site inspections in accordance with the Site Management Plan (SMP).<br>2. A Periodic Review Report (PRR) should be completed and certified every three years. The Certification Period will begin August 2024 and end July 2027, with the next PRR covering the reporting period beginning on August 1, 2024, and ending July 31, 2027.<br>3. Collect and analyze groundwater samples from monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I for volatile organic compounds (VOCs) in accordance with the SMP.<br>4. Water level measurements should be collected at monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I during groundwater monitoring to evaluate the groundwater flow direction.<br>5. Monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I should be surveyed during the next monitoring period in order to develop a groundwater surface elevation contour map for the Site. |
| Engineering Controls | • Engineering Controls are not installed at the Site. |
| Institutional Controls | • Record of Decision (ROD) - 1990<br>• Monitoring Plan - 2004<br>• SMP - 2024 |
| Site Classification | Class 4 Inactive Hazardous Waste Disposal Site (IHWDS) |
| Site Management Plan | SMP – 2024 |
| Certification/Reporting Period | This PRR has been prepared to document site investigation activities related to groundwater contamination. The reporting period for this PRR is April 1, 2018 to August 1, 2024. The SMP certified in November 2024 requires a PRR to be completed every three years. |
| **Inspection** | **Frequency** |
| 1. Site Inspection | Annually and after severe weather events. |
| **Monitoring** | **Frequency** |
| 1. Groundwater | Annually on a 15-month (5 quarter) rotation |
| Prior PRR/SMR Recommendations | A previous PRR is not available. The Draft Site Management Report prepared by TRC Engineers, Inc, (TRC) in 2020 (Draft 2020 SMR) recommended the following:<br>• No further action required for chlorinated VOCs in groundwater;<br>• No further action required for 1,4-dioxane in groundwater;<br>• Groundwater monitoring for perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) to continue at a frequency determined by the NYSDEC;<br>• Replace or repair monitoring well covers at MW-02S, MW-02I, MW-02D, MW-03I, and MW-06S; and<br>• Complete a survey on monitoring wells to establish ground surface and top of casing (TOC) elevations to determine groundwater flow directions. |

| Category | Summary/Results |
|---|---|
| Site Management Activities | Three Site inspections, two rounds of groundwater level measurements, monitoring well repair and redevelopment, two groundwater sampling events (summarized below), and investigation-derived waste (IDW) removal were completed during this reporting period (April 2018 – August 2024).<br>• 10/21/20-10/23/20: Daily Site inspection reports were completed during groundwater level gauging and groundwater sampling. Monitoring wells were not redeveloped prior to sampling in October 2020. Groundwater samples were collected from five monitoring wells (MW-02S, MW-02I, MW-02D, MW-03I, and MW-06I) for analysis of VOCs and emerging contaminants. Monitoring well MW-06S could not be accessed to complete sampling. Water samples were collected at locations MW-04S, MW-08S, MW-09S, MW-10S, and MW-11S for analysis of VOCs. Refer to the Significant Findings or Concerns section below for a discussion of sampling at these locations. Groundwater samples were submitted to Eurofins TestAmerica for laboratory analyses.<br>• 09/28/22-09/30/22: Daily Site inspection reports were completed during repairs of groundwater monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S, and MW-06I. New curb boxes were installed, well casings were shaved, new J-Plugs were installed, and grout was placed between the well casings and outer steel casings at each monitoring well.<br>• 10/13/22-11/03/22: Daily Site inspection reports were completed during groundwater level gauging and groundwater sampling. Monitoring wells were redeveloped prior to sampling in November 2022. Groundwater samples were collected from six monitoring wells (MW-02S, MW-02I, MW-02D, MW-03I, MW-06S, and MW-06I) for analysis of VOCs and per- and polyfluoroalkyl substances (PFAS). Groundwater samples were submitted to Con-Test, a Pace Analytical® Laboratory (Con-Test).<br>• 4/7/2023: A daily Site inspection report was completed during IDW removal. Waste was characterized as PFAS contaminated liquid waste and was transported by AARCO Environmental Services to Dale Transfer Corporation located in Babylon, NY, where it was bulked with other sources and transported to Clear Flo Technologies located in Lindenhurst, NY for treatment. |
| Significant Findings or Concerns | 1. The Draft 2020 SMR and the October 2020 field sampling records indicate that groundwater samples were collected at sewer trench wells MW-04S, MW-08S, MW-09S, MW-10S, and MW-11S from sewer manholes with bailers. Information on monitoring wells was limited at the time of sampling. Field staff went to well locations as indicated on site maps but did not locate well covers. Storm grates were located in close proximity to the mapped well locations and it was decided to sample from those locations. Pictures of storm grate sampling locations were provided in daily reports. No groundwater quality parameters were collected at these locations during sampling. The 1990 Remedial Investigation (RI) Report indicates that MW-04S was installed as a shallow monitoring well and MW-08S, MW-09S, MW-10S, and MW-11S were installed as shallow sewer trench monitoring wells. Based on this information, it appears that monitoring well MW-04S and sewer trench wells MW-08S, MW-09S, MW-10S, and MW-11S were not located in 2020 and the October 2020 samples identified at these locations are most likely stormwater samples collected from storm drains located in the general area of the historical wells. VOC results reported in the Draft 2020 SMR as groundwater samples collected at locations MW-04S, MW-08S, MW-09S, MW-10S, and MW-11S are not presented or discussed in this PRR or the SMP.<br>2. There are no records of monitoring wells being abandoned. It is likely that sewer trench wells MW-08S, MW-09S, MW-10S, and MW-11S and monitoring wells |

| Category | Summary/Results |
|---|---|
| | MW-01S, MW-01I, MW-03S, MW-04S, and MW-05I have been destroyed or paved over.<br>3. In the last two groundwater monitoring events that were completed in October 2020 and November 2022, no VOCs were detected at concentrations above Class GA Values in groundwater collected from monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S, and MW-06I. In October 2020 and November 2022, PFAS were detected in groundwater collected from monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S, and MW-06I with concentrations of PFOA and PFOS above the Class GA Values. Note that MW-06S was not sampled in October 2020. |
| Cost Evaluation | The total cost of Site management activities for this PRR reporting period was $109,356. This cost includes engineering (e.g., labor and expense), subcontractor costs (i.e., waste disposal), and Call-Out contractors (e.g., laboratory, driller). The direct costs incurred by New York State Department of Environmental Conservation (NYSDEC) in support of the project (i.e., Call-Out contractors) is estimated. The total cost does not include the PFAS source investigation. |
| Green Remediation Metrics | Presented in **Appendix A**. |

## 1.0 Introduction

This Periodic Review Report (PRR) has been prepared for the Mahopac Business District Wells Site, Town of Carmel, Putnam County, New York (the "Site") and covers the period from April 1, 2018 through August 1, 2024. This PRR was prepared in accordance with New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Work Assignment (WA) No. D009812-04 Notice to Proceed dated February 27, 2020, NYSDEC WA No. D009812-31 Notice to Proceed dated April 8, 2022, NYSDEC-approved Scope of Work dated July 20, 2020, NYSDEC-approved amended Scope of Work dated July 21, 2022, NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation (NYSDEC DER-10), and NYSDEC DER-31, Green Remediation (NYSDEC DER-31). TRC Engineers, Inc., (TRC) began Site management activities for this Site in July 2020. This PRR presents the Site management activities performed by TRC and others during the referenced reporting period, however there are no site management documents available between April 2018 and October 2020. A Site summary and applicable remedial program information are presented below.

| Site Information | | | |
|---|---|---|---|
| **Site Name:** | Mahopac Business District Wells | **NYSDEC Site No:** | 340013 |
| **Site Location:** | Intersection of Routes 6 and 6N, Hamlet of Mahopac, Town of Carmel, Putnam County, New York | **Remedial Program:** | Inactive Hazardous Waste Disposal Site |
| **Site Type:** | Commercial and Residential | **Classification:** | 04 |
| **Parcel Identification(s):** | 75.44-1-44, 75.44-1-45, 75.44-1-46, 75.44-1-47, 75.44-1-48, 75.44-1-49, 75.44-1-50, 75.44-1-51, 75.44-1-53, 76.9-1-12 and 76.9-1-13, Putnam County Tax Map | **Parcel Acreage / EE Acreage:** | 6 / Not applicable |
| **Selected Remedy:** | Removal of contaminated sanitary sewer sediments, provide individual water supply carbon treatment systems, provide alternate water supply from Lake Mahopac, and long-term monitoring | **Site COC(s):** | • Volatile Organic Compounds (VOCs) |
| **Current Remedial Program Phase:** | Post Remedial Action Site Monitoring; Site Management | **Institutional Controls:** | • Record of Decision (ROD) - 1990<br>• Monitoring Plan - 2004<br>• Site Management Plan (SMP) - 2024 |

| Site Information | | | |
|---|---|---|---|
| **Site Name:** | Mahopac Business District Wells | **NYSDEC Site No:** | 340013 |
| **Monitoring Locations:** | Two overburden groundwater monitoring wells (MW-02S and MW-06S), and four bedrock groundwater monitoring wells (MW-02I, MW-02D, MW-03I, and MW-06I); refer to Figure 2. | **Required Reporting:** | PRR – Every three years |

## 1.1 Recommendations

- Annual Site inspections will continue to observe any future development of the Site. One Site inspection report will also be completed following the inspection event.
- Per the ROD, the following four principal VOCs were identified in monitoring wells and in potable: tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and trans-1,2-DCE (t-1,2-DCE). Vinyl chloride was also detected in private wells at concentrations below New York State Department of Health (NYSDOH) drinking water standards.
- A Site survey with monitoring well elevation information from 1989 is available, however the survey points are from ground surface. Site monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S, and MW-06I should be surveyed during the next reporting period to establish ground surface, TOC, and top of riser (TOR) elevations to determine the groundwater flow direction.
- Groundwater monitoring wells should be sampled annually on a 15-month (5 quarter) rotation as required by the SMP. In accordance with the SMP groundwater samples will be collected from six monitoring wells (MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I) and analyzed for VOCs.
- Synoptic water level measurements should be collected at monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I during the annual groundwater monitoring events to evaluate the groundwater flow direction.
- A PRR should be completed and certified every three years. The Certification Period will begin August 2024 and end July 2027, with the next PRR covering the reporting period beginning on August 1, 2024, and ending July 31, 2027.

## 1.2 Site Location, Ownership, and Description

The Site is located in the Town of Carmel, Putnam County, New York and is identified as Tax Map Numbers 75.44-1-44 through 51, 75.44-1-53, 76.9-1-12, and 76.9-1-13 on the Putnam County Tax Map. The Site is approximately six (6) acres and is bounded by South Lake Boulevard/US Route 6N to the north, US Route 6 to the south and east, and Cherry Lane to the west. The Site consists of multiple commercial buildings, a residential building, and paved parking areas. The Site is zoned commercial and residential and is currently utilized for commercial and residential uses. The properties adjoining the Site and in the neighborhood surrounding the Site primarily include commercial, residential, and recreational uses. A Site Location Map and Site Plan are shown on **Figure 1** and **Figure 2**, respectively.

## 1.3 Investigation/Remedial History

Following a gasoline spill in the Mahopac business district in the Fall of 1978, the Putnam County Department of Health (PCDOH) sampled several private wells in the area to determine if the spill had impacted groundwater. Analytical results indicated that gasoline constituents did not enter the private water supply wells, but groundwater was contaminated with PCE and TCE, which are common dry-cleaning agents. Boil water orders were issued, and several point-of-entry treatment (POET) systems were installed by the NYSDEC. A Monitoring Plan (NYSDEC, 2004) which requires maintenance of the POET systems, groundwater monitoring, and inspections, was subsequently established for the Site.

In 1983, NYSDEC completed a Phase I Investigation, which concluded there was a potential for harm to human health and the environment from groundwater and surface water. The Site was nominated for the United States Environmental Protection Agency (USEPA) National Priorities List for federal led action. The USEPA declined and referred the Site back to the NYSDEC for remedial action.

In 1987, the NYSDEC completed Remedial Investigation/Feasibility Study (RI/FS) as the first step towards corrective action under the State Superfund Program (Wehran Envirotech, 1990).

The ROD was issued by NYSDEC in August 1990 with the following remedies: 1) provide individual carbon treatment units at affected wells; 2) provide alternative water supply from Lake Mahopac; 3) remove contaminated sanitary sewer sediments; 4) review sanitary sewer evaluation survey and proposed work to determine if any additional work is necessary; 5) long-term monitoring; and, 6) consideration of pump and treat systems on new or existing wells to contain the plume after a new water supply is installed.

PCE is the primary chlorinated solvent historically used within the Mahopac Business District. The source of observed groundwater contamination has been attributed to historical discharges from three dry cleaning establishments located on East Boulevard and Cherry Lane. Prior to the installation of distillation and recycling equipment at these dry-cleaning establishments, spent solvent was typically discharged into sanitary sewers. Since the disposal activity stopped, a significant decrease in groundwater contamination has been observed. In the early 2000s, VOC contaminated sediments were removed from the sanitary sewer line to reduce exposure and prevent migration of contaminants off-Site.

The 2004 Monitoring Plan indicated that groundwater samples were collected from Site monitoring wells in December 1998, February 1999, April 1999, June 1999, October 1999, July 2001, March 2002, December 2002 and July 2004. The Monitoring Plan indicated quarterly sampling was required for the next two years to determine if the Site could be delisted. Groundwater samples were also collected from Site monitoring wells in March 2002, May 2005, October 2005, and October 2009. Additional sampling data is not available in the historical records for the Site.

A field inspection was completed in August 2020 to document the general Site conditions and evaluate the status of the environmental sampling network.

A PFAS source investigation was completed in June 2023 and the draft PFAS Source Investigation Report was completed in December 2024. The PFAS source investigation is not part of the SMP and is not discussed further in this PRR. Refer to the NYSDEC Environmental Site Remediation Database document repository (https://extapps.dec.ny.gov/data/DecDocs/340013/) for files related to the PFAS source investigation.

A detailed Site history including the dates and descriptions of significant events, a custodial record of known and available Site reports, monitoring well construction records, and the completed Engineering Control/Institutional Control Certification Form are included in **Appendix B**.

## 1.4 Remaining Contamination

Remedial actions at the Site are complete. Site management activities consisting of Site inspections and groundwater monitoring are ongoing. Remaining contamination is managed under the SMP.

## 1.5 Regulatory Requirements/Cleanup Goals

The remediation goals included in the ROD to address VOC groundwater contamination are as follows:

- Provide a safe water supply.
- Prevent migration of the contaminants and remediate the aquifer by reducing contaminant levels in potable water to the standards (5 microgram per liter [µg/L] for primary contaminants).
- Prevent future releases of such contaminants to the environment.

Further, the cleanup goals for the Site include attaining to the extent practicable the following Class GA Values:

- NYSDEC "Ambient Water Quality Standards and Guidance Values" (Class GA Values) and Part 5 of the New York State Sanitary Code.

## 2.0 Institutional Control Plan Compliance

Since remaining contamination exists at the Site, Institutional Controls (ICs) are required to protect human health and the environment. The IC Plan documented in the SMP describes the procedures for the implementation and management of all ICs at the Site.

### 2.1 Institutional Controls

- Per the ROD, the Site requires long-term groundwater monitoring. Adherence to the IC on the Site will be implemented under the SMP;
- Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the ROD; and
- An evaluation will be performed to determine the need for further investigation and remediation should large scale redevelopment occur, if any of the existing structures are demolished, or if the subsurface is otherwise made accessible.

ICs may not be discontinued without approval of NYSDEC.

## 3.0 Monitoring and Sampling Plan Compliance

The table below shows the most recent sampling activities for the Site and the dates those activities were completed:

| Summary of Recent Site Monitoring | | | | |
|---|---|---|---|---|
| **Site Management Activity** | **Frequency** | **Location** | **Analytical Method** | **Completion Date(s)** |
| Groundwater Gauging and Sampling | As needed | • MW-02S<br>• MW-02I<br>• MW-02D<br>• MW-03I<br>• MW-06S (not sampled in October 2020)<br>• MW-06I | PFAS by USEPA Draft Method 1633 and VOCs by USEPA Method 8260 | 10/23/2020 and 11/03/2022 |
| Site Inspection | As needed | Mahopac Business District Wells Site | Not Applicable | 10/23/2020, 09/28/2022, and 11/03/2022 |
| PRR | Not Applicable | Not Applicable | Not Applicable | November 2024 |

### 3.1 Site Inspection

TRC conducted daily Site inspections between October 2020 to November 2022 during groundwater sampling events and monitoring well repairs and redevelopment. The Site inspections included an evaluation of the current Site use and condition of Site monitoring wells. Site inspection logs for the groundwater sampling events from October 2020 through November 2022 are included as **Appendix C**.

A summary of the Site inspections for the period of April 2018 to August 2024 is included below:

| Summary of Site Activities and Site Monitoring and Sampling<br>April 2018 to August 2024 | | |
|---|---|---|
| **Site Management Activity** | **Summary of Results** | **Maintenance/Corrective Measure** |
| Groundwater Gauging and Sampling (October 21 to 23, 2020) | See Section 3.2 | Unbolted manholes and loose gripper plugs, which could lead to surface water infiltration, were identified at all monitoring well locations. Additionally, dedicated groundwater sampling materials including bailers, rope, and tubing were found in all wells. The installation date of these materials is unknown Recommendations were made to repair monitoring well flush-mount covers and to complete a survey of all monitoring wells. |
| Monitoring Well Repairs (September 28 to 30, 2022) | TRC implemented the Community Air Monitoring Plan (CAMP) and provided oversight to the NYSDEC Call-Out Contractor, Precision Environmental Services, Inc. (Precision), during the repair of six groundwater monitoring wells (MW-02I, MW-02D, MW-02S, MW-03I, MW-06I and MW-06S). | No routine maintenance or corrective measures needed at this time. |
| Monitoring Well Gauging, Redevelopment and Sampling (October 13 and 14, 2022 and November 1 to 3, 2022) | See Section 3.2 | No routine maintenance or corrective measures needed at this time. |

## 3.2 Groundwater Monitoring Summary

### 3.2.1 Groundwater Gauging

In October 2020, Site monitoring wells MW-02S, MW-02I, MW-02D, MW-03I and MW-06I were gauged for depth to groundwater. Monitoring wells MW-02S and MW-06S are screened in the overburden hydrogeologic unit and monitoring wells MW-02I, MW-02D, MW-03I, and MW-06I are screened in the bedrock hydrogeologic unit. During the October 2020 gauging event, the depth to groundwater ranged from 3.87 feet below TOC (MW-06I) to 4.86 feet below TOC (MW-02D). In October and November 2022, Site monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I were redeveloped and gauged for depth to groundwater. During the November 2022 gauging event, depth to groundwater ranged from 2.91 feet below TOC (MW-06I) to 6.15 feet below TOC (MW-02D). Groundwater elevations and apparent potentiometric surface contours could not be

determined as the relevant TOC and TOR elevations are unknown. A summary of groundwater gauging measurements is presented in **Table 1.**

### 3.2.2 Groundwater Monitoring Well Repair and Redevelopment

Existing Site monitoring wells MW-2S, MW-2I, MW-2D, MW-3I, MW-6S and MW-6I were repaired in September 2022. Existing curb boxes were removed and replaced, grout was placed between well casings and outer steel casings, and well casings were shaved to improve the seal with new locking J-plugs/covers that were installed. The six monitoring wells were redeveloped in October 2022 and November 2022. Purged redevelopment water was containerized in DOT-approved 55-gallon steel drums that were located in a locking storage container staged on the asphalt parking lot at 903 South Lake Boulevard pending receipt of laboratory waste characterization analyses. Upon receipt of laboratory analytical results, waste was characterized as PFAS contaminated liquid waste and was transported by AARCO Environmental Services to Dale Transfer Corporation located in Babylon, NY, where it was bulked with other sources and transported to Clear Flo Technologies located in Lindenhurst, NY for treatment.

### 3.2.3 Groundwater Sampling

From October 21 to 23, 2020, TRC collected groundwater samples from five monitoring wells MW-02S, MW-02I, MW-02D, MW-03I and MW-06I (MW-06S could not be accessed and was not sampled). Groundwater samples were collected utilizing USEPA low-flow sampling techniques. Purged groundwater was discharged to the ground surface. The five groundwater samples, in addition to standard quality assurance/quality control (QA/QC) samples collected at the frequencies specified in TRC's July 2020 Generic Quality Assurance Project Plan (QAPP), were submitted to the NYSDEC Call-Out laboratory, Eurofins TestAmerica Laboratories of Amherst, New York (Eurofins TestAmerica), for the following analyses:

- TCL VOCs + 10 TICs by USEPA Method 8260;
- PFAS by USEPA Method 537 modified; and
- 1,4-Dioxane by USEPA Method 8270 SIM.

From November 1 to November 3, 2022, TRC collected groundwater samples from six Site monitoring wells (MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I) utilizing USEPA low-flow sampling techniques. Purged groundwater was containerized in DOT-approved 55-gallon steel drums that were located in a locking storage container staged on the asphalt parking lot at 903 South Lake Boulevard pending receipt of laboratory waste characterization analyses. Upon receipt of laboratory analytical results, waste was characterized as PFAS contaminated liquid waste and was transported by AARCO Environmental Services to Dale Transfer Corporation located in Babylon, NY, where it was bulked with other sources and transported to Clear Flo Technologies located in Lindenhurst, NY for treatment. The six groundwater samples, in addition to standard QA/QC samples collected at the frequencies specified in TRC's July 2020 Generic QAPP, were submitted to the NYSDEC Call-Out laboratory, Con-Test of East Longmeadow, Massachusetts, (Con-Test subcontracted PFAS analysis to ALS Environmental) for the following analyses:

- TCL VOCs by USEPA Method 8260D; and
- PFAS by USEPA Draft Method 1633.

| Summary of Groundwater Monitoring and Sampling Activities for Site Wells – October 2020 | | | | | | |
|---|---|---|---|---|---|---|
| | Monitoring Well Details | | | | 2020 Groundwater Sampling Event | |
| Well ID | Latitude | Longitude | Screen Zone (ft. bgs) | Unit Screened | DTW (ft. below TOC) | Analytes |
| MW-02S | 41.37223496 | -73.73621233 | 11 – 21 | Overburden | 4.79 | VOCs and emerging contaminants (1,4-Dioxane and PFAS) |
| MW-02I | 41.37225253 | -73.73620407 | 45 – 65 | Bedrock | 4.38 | VOCs and emerging contaminants (1,4-Dioxane and PFAS) |
| MW-02D | 41.37224017 | -73.73620066 | 315 – 335 | Bedrock | 4.86 | VOCs and emerging contaminants (1,4-Dioxane and PFAS) |
| MW-03I | 41.37262378 | -73.73518508 | 47 – 67 | Bedrock | 4.02 | VOCs and emerging contaminants (1,4-Dioxane and PFAS) |
| MW-06I | 41.37165675 | -73.73672423 | 27 – 47 | Bedrock | 3.87 | VOCs and emerging contaminants (1,4-Dioxane and PFAS) |

**Notes:**
DTW – Depth to water.
ft. bgs – Feet below ground surface.
ID – Identification.
TOC – Top of casing.
Groundwater elevations and apparent potentiometric surface contours could not be determined as the relevant TOC and TOR elevations are unknown.

| Summary of Groundwater Monitoring and Sampling Activities for Site Wells – November 2022 | | | | | | |
|---|---|---|---|---|---|---|
| | Monitoring Well Details | | | | 2022 Groundwater Sampling Event | |
| Well ID | Latitude | Longitude | Screen Zone (ft. bgs) | Unit Screened | DTW (ft. below TOC) | Analytes |
| MW-02S | 41.37223496 | -73.73621233 | 11 – 21 | Overburden | 5.39 | VOCs and PFAS |
| MW-02I | 41.37225253 | -73.73620407 | 45 – 65 | Bedrock | 4.98 | VOCs and PFAS |
| MW-02D | 41.37224017 | -73.73620066 | 315 – 335 | Bedrock | 6.15 | VOCs and PFAS |
| MW-03I | 41.37262378 | -73.73518508 | 47 – 67 | Bedrock | 4.31 | VOCs and PFAS |
| MW-06S | 41.37165675 | -73.73672423 | 5.5 – 9.5 | Overburden | 3.72 | VOCs and PFAS |
| MW-06I | 41.37367328 | -73.73591504 | 27 – 47 | Bedrock | 2.91 | VOCs and PFAS |

**Notes:**
DTW – Depth to water.
ft. bgs – Feet below ground surface.
ID – Identification.
TOC – Top of casing.
Groundwater elevations and apparent potentiometric surface contours could not be determined as the relevant TOC and TOR elevations are unknown.

Site monitoring well and sewer trench well locations are shown on **Figure 2**. A complete table with well construction details is included in **Appendix B**. Daily field inspection reports, monitoring well development logs, groundwater sampling logs, and investigation derived waste (IDW) manifests can be found in **Appendix C**.

### 3.2.4 Groundwater Analytical Results

#### 3.2.4.1. Volatile Organic Compounds in Groundwater

Groundwater analytical data for VOCs are summarized in **Table 2.** The laboratory analytical reports are included in **Appendix D** and the Data Usability Summary Reports (DUSRs) are included in **Appendix E**. VOCs were not detected at concentrations greater than the applicable Class GA Values in the groundwater samples collected from the monitoring wells in October 2020 or November 2022.

#### 3.2.4.2. 1,4-Dioxane in Groundwater

Groundwater analytical data for 1,4-dioxane are summarized in **Table 2**. The laboratory analytical reports are included in **Appendix D** and the DUSRs are included in **Appendix E**. 1,4-Dioxane was not detected at concentrations greater than the Class GA Value in the groundwater samples collected from the monitoring wells in October 2020. In addition, 1,4-dioxane analytical results were reported as VOCs under USEPA Method 8260D in samples collected in November 2022. Although Method 8260D does not allow for comparison to the Class GA Values since the reporting limits exceed criteria, it is notable that results were below the laboratory reporting limits.

#### 3.2.4.3. PFAS in Groundwater

Groundwater analytical data for PFAS are summarized in **Table 3**. The laboratory analytical reports are included in **Appendix D** and the DUSRs are included in **Appendix E**. Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were detected at concentrations greater than the applicable Class GA Values in all groundwater samples in October 2020 and November 2022. Detected concentrations of PFAS above Class GA Values are shown on **Figure 3**. A summary of the October 2020 and November 2022 groundwater analytical results exceeding the Class GA Values for PFAS is presented below:

**Exceedance Summary of Laboratory Analytical Results in Groundwater**

| Constituent | Class GA Values | Concentration | Location with Highest Detection | Frequency Exceeding Class GA Value |
|---|---|---|---|---|
| **October 2020 – PFAS** | | | | |
| PFOA | 6.7 ng/L | 26-78 ng/L | MW-02I | 5/5 |
| PFOS | 2.7 ng/L | 11-46 ng/L | MW-02S | 5/5 |
| **November 2022 – PFAS** | | | | |
| PFOA | 6.7 ng/L | 19-170 ng/L | MW-02I | 6/6 |
| PFOS | 2.7 ng/L | 5.5-52 ng/L | MW-06S | 6/6 |

**Notes:**
ng/L – Nanograms per liter

## 4.0 Cost Summary

The total estimated cost of the Site management activities under WAs D009812-04, Task 1, D009812-31, and NYSDEC Call-Out contracts between April 2018 and August 2024 is approximately $109,356. Site management activities during the reporting period included project management/administration; Site inspections; Site monitoring well repairs and redevelopment; sampling of Site monitoring wells; and preparation of a SMP and PRR. The total includes engineering and subcontractor costs, equipment and expenses, and NYSDEC Call-Out contractor services (i.e., laboratory and drilling) associated with the project. The total cost does not include the PFAS source investigation. A summary of the April 2018 through August 2024 Site management costs is presented below:

| Summary of Site Management Costs | | |
|---|---|---|
| **Cost Item** | **Amount Expended** | **Percent of Total Cost** |
| **WA D009812-04, Task 1** | | |
| TRC Engineering Support - April 2018 through December 2022 | $47,996 | 44% |
| TRC Expenses - April 2018 through December 2022 | $7,186 | 6% |
| TRC Subcontractor (waste hauling) | $3,000 | 3% |
| **WA D009812-31** | | |
| TRC Engineering Support - January 2023 through August 2024 | $36,674 | 34% |
| TRC Expenses - January 2023 through August 2024 | $1,500 | 1% |
| **NYSDEC Call-Out Contracts** | | |
| Precision Environmental Services Inc. | $10,000 | 9% |
| Eurofins TestAmerica and Con-Test | $3,000 | 3% |
| **Total Cost Site Management - October 2020 through August 2024** | **$109,356** | ---- |

The following provides a review of each cost item:

- Engineering support includes labor costs associated with project management (e.g., WA Package preparation, monthly invoicing, project scheduling and coordination, etc.), Site inspections, groundwater sampling, SMP preparation, and reporting (e.g., DUSR, and PRR).
- Expense costs include travel, equipment, and supplies in support of the Site inspection, groundwater sampling event, subcontractor supervision and routine Site maintenance activities.
- Reporting costs include data validation, and preparation of the DUSRs, EDDs and PRR.

# 5.0 Conclusions

## 5.1 Monitoring Wells

- There are no records of monitoring wells being abandoned. It is likely that monitoring wells MW-01S, MW-01I, MW-03S, MW-04S, and MW-05I have been destroyed or paved over. These wells should be removed from the monitoring well network.
- VOCs were either not detected at concentrations above laboratory quantitation limits or were detected at concentrations below the applicable Class GA Values in groundwater samples collected from the monitoring wells in October 2020 and November 2022.
- The primary Site contaminant of concern (COC), PCE, was detected at a concentration below the Class GA Value in MW-06S in November 2022, while daughter compounds (TCE, cis-1,2-dichloroethene, and vinyl chloride), were reported as not detected in any sample submitted for analysis in October 2020 and November 2022. The PCE daughter compound t-1,2-DCE was detected at a concentration below the laboratory reporting limit in sample MW-02I in November 2022 but was reported as not detected in its associated field duplicate. This is consistent with results found in limited available historical groundwater sampling records.
- 1,4-Dioxane was not detected at concentrations above laboratory quantitation limits in the groundwater samples collected from the monitoring wells in October 2020.
- PFOA and PFOS were detected at concentrations greater than applicable Class GA Values in all five groundwater samples collected from the monitoring wells in October 2020 and all six groundwater samples collected from the monitoring wells in November 2022.
    - Prior to sampling monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I in November 2022, monitoring well protective collars and curb boxes were repaired and secured, well caps were replaced with new J-plugs, existing sampling equipment was removed from inside wells, and wells were redeveloped.

  The October 2020 and November 2022 analytical results exhibit similar groundwater PFAS concentrations.

## 5.2 Sewer Trench Wells

The Draft 2020 SMR and the October 2020 field sampling records indicate that groundwater samples were collected at sewer trench wells MW-04S, MW-08S, MW-09S, MW-10S, and MW-11S from sewer manholes with bailers. Information on monitoring wells was limited at the time of sampling. Field staff went to well locations as indicated on site maps but did not locate well covers. Storm grates were located in close proximity to the mapped well locations and it was decided to sample from those locations. Pictures of storm grate sampling locations were provided in daily reports. No groundwater quality parameters were collected at these locations during sampling. The 1990 Remedial Investigation (RI) Report indicates that MW-04S was installed as a shallow monitoring well and MW-08S, MW-09S, MW-10S, and MW-11S were installed as shallow sewer trench monitoring wells. Based on this information, it appears that monitoring well MW-04S and sewer trench wells MW-08S, MW-09S, MW-10S, and MW-11S were not located and the samples collected at these locations in October 2020 are most likely stormwater samples collected from storm drains located in the general area of the well locations. VOC results reported in the Draft 2020 SMR as groundwater

samples collected at locations MW-04S, MW-08S, MW-09S, MW-10S, and MW-11S are not presented or discussed in this PRR or the SMP.

There are no records of the sewer trench wells being abandoned. It is likely that monitoring wells MW-08S, MW-09S, MW-10S, and MW-11S have been destroyed or paved over. These wells should be removed from the monitoring well network.

## 6.0 Green and Sustainable Remediation

Green remediation/sustainability metrics were implemented as applicable during this reporting period. Staff were utilized from the TRC Clifton Park, NY office (located within approximately 125 miles of the Site) and the TRC New York, NY office (located within approximately 60 miles of the Site). Eurofins TestAmerica, Buffalo, the laboratory utilized for the groundwater sampling event in October 2020, is located in Amherst, New York, approximately 390 miles from the Site. Con-Test, the laboratory utilized for the groundwater sampling event for VOC analysis in November 2022, is located in East Longmeadow, Massachusetts, approximately 105 miles from the Site. ALS, the laboratory utilized for the groundwater sampling event for PFAS analysis in November 2022, is located in Kelso, Washington, approximately 3,050 miles from the Site. Monitoring well repair and redevelopment was completed by Precision Environmental Services of Ballston Spa, NY, approximately 138 miles from the Site. Equipment delivery services were provided by Eco-Rental of Elmsford, NY, approximately 27 miles from the Site, and Pine Environmental of Long Island, NY, approximately 85 miles from the Site. Liquid waste was transported by AARCO Environmental Services to Dale Transfer Corporation located in Babylon, NY, approximately 80 miles from the Site. Approximately 910 miles were travelled during this reporting period by Standby Engineers and Contractors and approximately 7,500 miles were travelled by the laboratory and equipment delivery services. A summary of the green remediation metrics is included in **Appendix A**.

Future sampling at the Site will be completed using passive diffusion bags (PDBs) for VOC sampling, which will eliminate the low-flow sampling equipment, purge water, and IDW collection and disposal. Staff will be utilized from the TRC Clifton Park, NY office (located within approximately 125 miles of the Site) and the TRC New York, NY office (located within approximately 60 miles of the Site). Pace Analytical Services, the laboratory that will be utilized for future groundwater sampling events, is located in East Longmeadow, Massachusetts, approximately 105 miles from the Site.

## 7.0 Certification of Engineering and Institutional Controls

For each institutional control identified for the Site, I certify that all the following statements are true:

- The institutional control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document; and
- The information presented in this report is accurate and complete.

I certify that all information and statements in this certification form 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, Allen Zgaljardic, of TRC Engineers, Inc., am certifying as NYSDEC's Designated Site Representative for the Site.

I, Allen Zgaljardic, certify that I am currently a NYS registered professional engineer and that this Periodic Review Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and DER Green Remediation (DER-31) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.



Signature




NYS Professional Engineer No. 088344

5-27-25

Date

## 8.0 Future Site Activities

Based on the recommendations in Section 1.1, the following site management activities will be completed during the next PRR reporting period (August 2024 to July 2027):

- Site Inspections – Annual and after severe weather events (next scheduled: Q4 2024)
- Groundwater – Annual on a 15-month (5 quarter) rotation (next scheduled: Q4 2024)
- PRR – Every three years (next scheduled: Q3 2027)

# FIGURES




## LEGEND

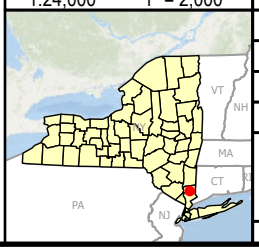
SITE BOUNDARY

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'




BASE MAP: USGS TOPOGRAPHIC MAP SERVICE
DATA SOURCES: TRC

PROJECT: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
MAHOPAC BUSINESS DISTRICT WELLS - SITE NO. 340013
ROUTE 6 AND ROUTE 6N, MAHOPAC, NEW YORK

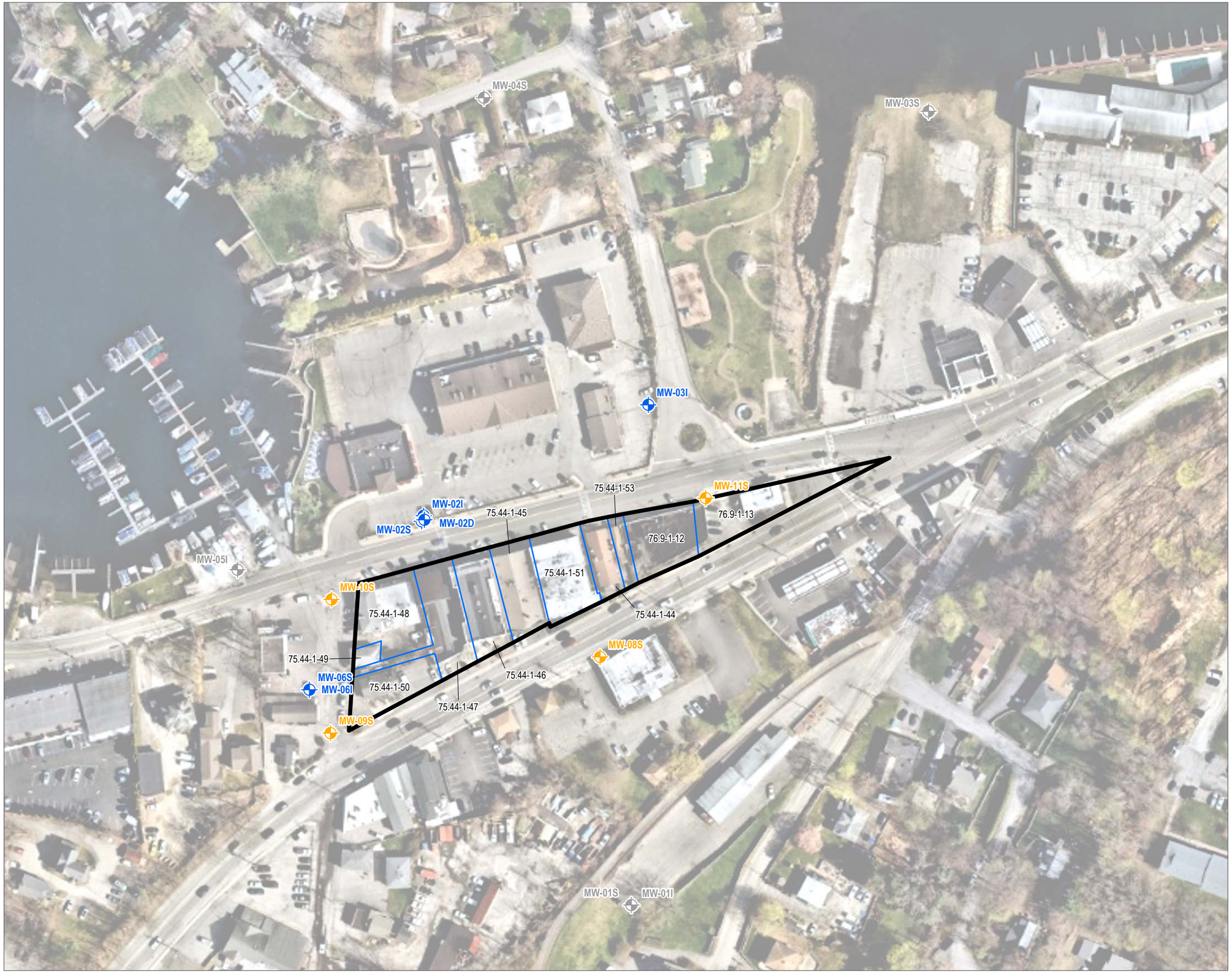
TITLE: **SITE LOCATION**

| | | | |
|---|---|---|---|
| DRAWN BY: | L. LILL | PROJ. NO.: | 490190 |
| CHECKED BY: | S. EZRA | | |
| APPROVED BY: | K. BOGER | | **FIGURE 1** |
| DATE: | SEPTEMBER 2024 | | |

TRC
3 CORPORATE DRIVE
SUITE 202
CLIFTON PARK, NY 12065
PHONE: 518.348.1190

FILE: PRR_2024

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET; MAP ROTATION: 0
-- SAVED BY: SMOTURI ON 9/9/2024, 13:43:35 PM; FILE PATH: T:\1-PROJECTS\NYSDEC\386552_01_MAHOPACBUSINESSDISTRICTWELLS\2-APRX\PRR_2024.APRX; LAYOUT NAME: FIG01_SITELOC




LEGEND

- SITE BOUNDARY
- PARCEL BOUNDARY
- MW-## MONITORING WELL AND IDENTIFICATION NUMBER
- MW-## MONITORING WELL NOT LOCATED AND IDENTIFICATION NUMBER
- MW-## SEWER TRENCH WELL NOT LOCATED AND IDENTIFICATION NUMBER
- 00.0-0.00 TAX MAP LOT NUMBER

NOTES:
1. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE UNLESS STATED OTHERWISE.
2. MONITORING AND SEWER TRENCH WELL LOCATIONS FROM FEBRUARY 1990 REMEDIAL INVESTIGATION REPORT PREPARED BY WEHRAN-NEW YORK, INC.
3. MONITORING WELLS MW-02S, MW-02I, MW-02D, MW-03I, MW-06S, AND MW-06D ARE A PART OF THE MONITORING WELL NETWORK.




1:1,440
1" = 120'
0 60 120 FEET

BASE MAP: NEARMAP, APRIL 2022

PROJECT: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
MAHOPAC BUSINESS DISTRICT WELLS - SITE NO. 340013
ROUTE 6 AND ROUTE 6N, MAHOPAC, NEW YORK

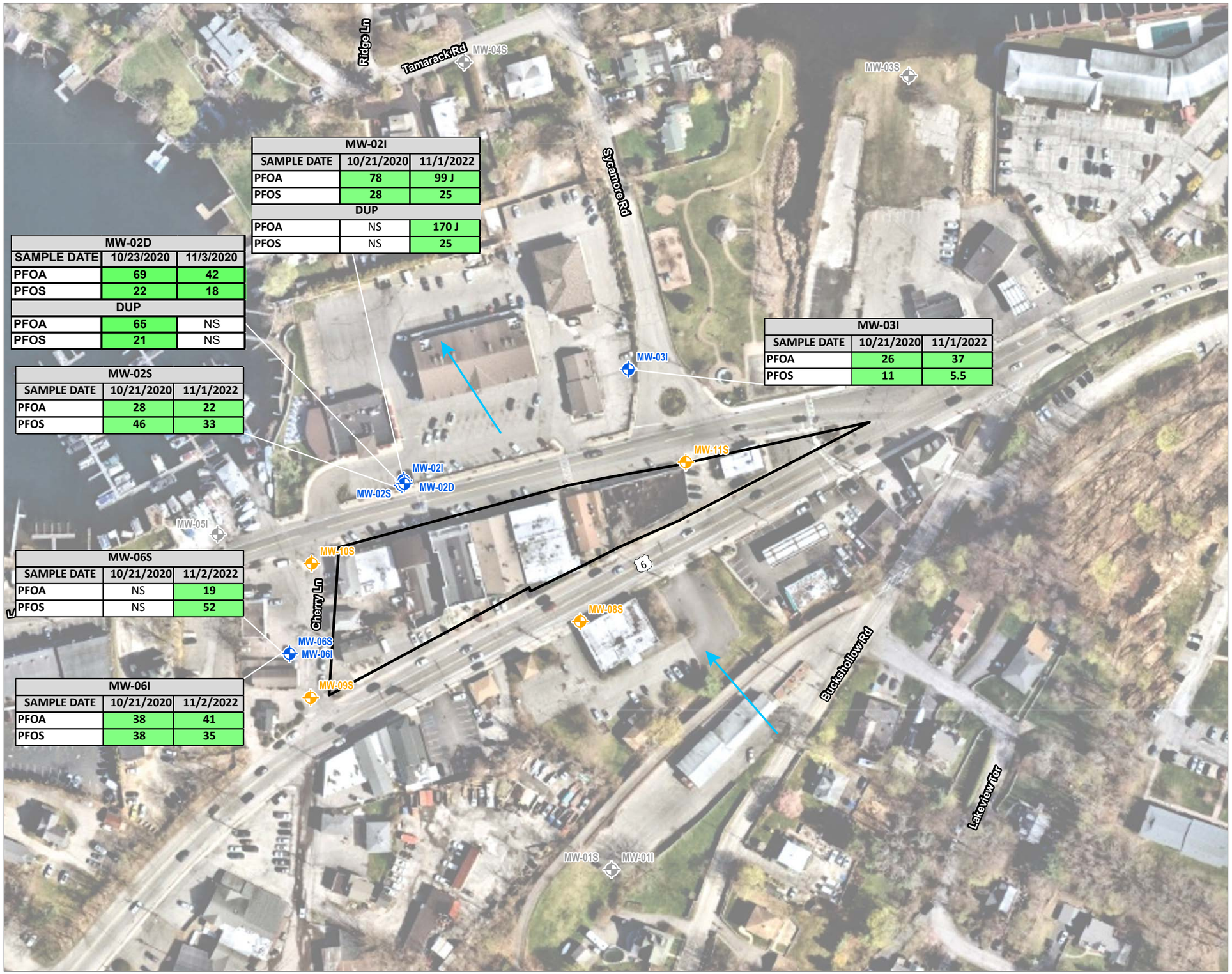
TITLE: **SITE LAYOUT MAP**

| | | | |
|---|---|---|---|
| DRAWN BY: | S. MOTURI | PROJ. NO.: | 490193 |
| CHECKED BY: | S. EZRA | | |
| APPROVED BY: | K. BOGER | | **FIGURE 2** |
| DATE: | SEPTEMBER 2024 | | |

TRC
3 CORPORATE DRIVE
SUITE 202
CLIFTON PARK, NY 12065
PHONE: 518.348.1190

FILE: SMP_PRR_2024.aprx

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet; Map Rotation: 0
Saved By: SMOTURI on 9/9/2024 14:52:32 PM; File Path: T:\PROJECTS\WSDEC\365552_01_MahopacBusinessDistrictWells\2-APRX\SMP_PRR_2024.aprx; Layout Name: Fig02 Existing Monitoring Well Locations_20240909




| MW-02D | | |
|---|---|---|
| SAMPLE DATE | 10/23/2020 | 11/3/2020 |
| PFOA | 69 | 42 |
| PFOS | 22 | 18 |
| DUP | | |
| PFOA | 65 | NS |
| PFOS | 21 | NS |

| MW-02I | | |
|---|---|---|
| SAMPLE DATE | 10/21/2020 | 11/1/2022 |
| PFOA | 78 | 99 J |
| PFOS | 28 | 25 |
| DUP | | |
| PFOA | NS | 170 J |
| PFOS | NS | 25 |

| MW-02S | | |
|---|---|---|
| SAMPLE DATE | 10/21/2020 | 11/1/2022 |
| PFOA | 28 | 22 |
| PFOS | 46 | 33 |

| MW-03I | | |
|---|---|---|
| SAMPLE DATE | 10/21/2020 | 11/1/2022 |
| PFOA | 26 | 37 |
| PFOS | 11 | 5.5 |

| MW-06S | | |
|---|---|---|
| SAMPLE DATE | 10/21/2020 | 11/2/2022 |
| PFOA | NS | 19 |
| PFOS | NS | 52 |

| MW-06I | | |
|---|---|---|
| SAMPLE DATE | 10/21/2020 | 11/2/2022 |
| PFOA | 38 | 41 |
| PFOS | 38 | 35 |

## LEGEND

- SITE BOUNDARY
- MW-## MONITORING WELL AND IDENTIFICATION NUMBER
- MW-## MONITORING WELL NOT LOCATED AND IDENTIFICATION NUMBER
- MW-## SEWER TRENCH WELL NOT LOCATED AND IDENTIFICATION NUMBER

| GROUNDWATER RESULTS ARE IN NANOGRAMS PER LITER (ng/L) | |
|---|---|
| **BOLD AND HIGHLIGHTED RESULT EXCEEDS CLASS GA VALUE.** | |
| COMPOUND | CLASS GA VALUE* (ng/L) |
| PERFLUOROOCTANOIC ACID (PFOA) | 6.7 |
| PERFLUOROOCTANESULFONIC ACID (PFOS) | 2.7 |

NOTES:

1. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES AND BOUNDARIES ARE APPROXIMATE.
2. IN OCTOBER 2020, GROUNDWATER SAMPLES WERE COLLECTED FROM MONITORING WELLS MW-02D, MW-02I, MW-02S, MW-03I, AND MW-06I FOR ANALYSIS OF PFAS.
3. IN NOVEMBER 2022, GROUNDWATER SAMPLES WERE COLLECTED FROM MONITORING WELLS MW-02D, MW-02I, MW-02S, MW-03I, MW-06S, AND MW-06I FOR ANALYSIS OF PFAS.
4. ONLY PFAS WHICH EXCEEDED CLASS GA VALUES DURING THE OCTOBER 2020 AND NOVEMBER 2022 GROUNDWATER SAMPLING EVENTS ARE SHOWN IN THE DATA BOXES.
5. SAMPLE DUP IS A DUPLICATE SAMPLE COLLECTED FROM MW-02I.
6. MONITORING WELLS MW-01S, MW-01I, MW-03S, AND MW-05I COULD NOT BE LOCATED AND WERE NOT SAMPLED DURING THE OCTOBER 2020 AND NOVEMBER 2022 GROUNDWATER SAMPLING EVENTS.

ACRONYMS:
ng/L - NANOGRAMS PER LITER
J - ESTIMATED VALUE
NS - NOT SAMPLED
PFAS - PER-POLYFLUOROALKYL SUBSTANCES
* - NYSDEC AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES FOR CLASS GA WATER, JUNE 1998 WITH THE FEBRUARY 2023 ADDENDUM

BASE MAP: NEARMAP DATED APRIL, 2022
DATA SOURCES: TRC

1:1,440
1" = 120'
0 60 120 FEET

INFERRED GROUNDWATER FLOW DIRECTION

PROJECT: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
MAHOPAC BUSINESS DISTRICT WELLS - SITE NO. 340013
ROUTE 6 AND ROUTE 6N, MAHOPAC, NEW YORK

TITLE: EMERGING CONTAMINANTS IN GROUNDWATER ABOVE CLASS GA VALUES

| | | | |
|---|---|---|---|
| DRAWN BY: | S. MOTURI | PROJ. NO.: | 490193 |
| CHECKED BY: | S. EZRA | | |
| APPROVED BY: | K. BOGER | | FIGURE 3 |
| DATE: | OCTOBER 2024 | | |

TRC
3 CORPORATE DRIVE
SUITE 202
CLIFTON PARK, NY 12065
PHONE: 518.348.1190

FILE: SMP_PRR_2024.aprx

Coordinate System: NAD 1983 StatePlane New York East FIPS 3101 Feet; Map Rotation: 0
Saved By: SMOTURI on 10/15/2024, 09:23:40 AM; File Path: T:\PROJECTS\WSECS\385652_01_MahopacBusinessDistrictWells\2-APRX\SMP_PRR_2024.aprx; Layout Name: PRR_Fig03_PFAS_In_Groundwater_Above_Class_GA_Values

# TABLES

**Table 1**
**New York State Department of Environmental Conservation**
**Mahopac Business District Wells Site - Site No. 340013**
**Carmel, Putnam County, New York**
**Summary of Depth to Water Measurements and Groundwater Elevations**

| Well ID | Screened Formation | Well Casing Elevation | Depth to Bottom (feet below TOC) | Gauge Date | Depth to Water (feet below TOC) | Groundwater Elevation |
|---|---|---|---|---|---|---|
| MW-01S | Overburden | NA | Unable to locate | | | |
| MW-01I | Bedrock | NA | Unable to locate | | | |
| MW-02S | Overburden | NA | 19.29 | 10/21/2020 | 4.79 | NA |
| MW-02I | Bedrock | NA | 48.06 | 10/21/2020 | 4.38 | NA |
| MW-02D | Bedrock | NA | 337.80 | 10/23/2020 | 4.86 | NA |
| MW-03S | Overburden | NA | Unable to locate | | | |
| MW-03I | Bedrock | NA | 65.49 | 10/21/2020 | 4.02 | NA |
| MW-04S | Overburden | NA | Unable to locate | | | |
| MW-05I | Bedrock | NA | Unable to locate | | | |
| MW-06I | Bedrock | NA | 45.10 | 10/21/2020 | 3.87 | NA |
| MW-08S | Overburden | NA | Unable to locate | | | |
| MW-09S | Overburden | NA | Unable to locate | | | |
| MW-10S | Overburden | NA | Unable to locate | | | |
| MW-11S | Overburden | NA | Unable to locate | | | |
| MW-02S | Overburden | NA | 19.01 | 11/1/2022 | 5.39 | NA |
| MW-02I | Bedrock | NA | 49.39 | 11/1/2022 | 4.98 | NA |
| MW-02D | Bedrock | NA | 339.70 | 11/3/2022 | 6.15 | NA |
| MW-03I | Bedrock | NA | 57.37 | 11/1/2022 | 4.31 | NA |
| MW-06S | Overburden | NA | 9.57 | 11/2/2022 | 3.72 | NA |
| MW-06I | Bedrock | NA | 47.36 | 11/2/2022 | 2.91 | NA |

**Notes**
NA - Not Applicable
ID - Identification
TOC - Top of Casing
Survey data for monitoring well elevations is not available.

**Table 2**
**New York State Department of Environmental Conservation**
**Mahopac Business District Wells Site - Site No. 340013**
**Carmel, Putnam County, New York**
**Summary of Volatile Organic Compounds in Groundwater**

| | | | | Sample Location: | MW-02D | | | MW-02I | | | MW-02S | | MW-03I | | MW-06I | | MW-06S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Sample Name: | MW-02D | DUP | MBDW-MW-2D | MW-02I | MBDW-MW-2I | DUP-01 | MW-02S | MBDW-MW-2S | MW-03I | MBDW-MW-3I | MW-06I | MBDW-MW-6I | MBDW-MW-6S |
| | | | | Lab Sample Identification: | 480-177077-3 | 480-177077-4 | 22K0850-07 | 480-177077-1 | 22K0850-01 | 22K0850-04 | 480-177077-2 | 22K0850-02 | 10 | 22K0850-03 | 480-177077-7 | 22K0850-06 | 22K0850-05 |
| | | | | Sample Date: | 10/23/2020 | 10/22/2020 | 11/3/2022 | 10/21/2020 | 11/1/2022 | 11/1/2022 | 10/21/2020 | 11/1/2022 | 10/21/2020 | 11/1/2022 | 10/21/2020 | 11/2/2022 | 11/2/2022 |
| Analysis | Analyte | Unit | Class GA Values* | | Results | Duplicate | Results | Results | Results | Duplicate | Results | Results | Results | Results | Results | Results | Results |
| **VOCs** | | | | | | | | | | | | | | | | | |
| | Acetone | ug/L | 50 | | **4.1 J** | **3.1 J** | 50 U | 10 U | 50 U | 50 U | 10 U | 50 U | **5.7 J** | 50 U | 10 U | 50 U | 50 U |
| | Benzene | ug/L | 1.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | Bromochloromethane | ug/L | 5.0 | | NA | NA | 1.0 U | NA | 1.0 U | 1.0 U | NA | 1.0 U | NA | 1.0 U | NA | 1.0 U | 1.0 U |
| | Bromodichloromethane | ug/L | 50 | | 1.0 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U |
| | Bromoform | ug/L | 50 | | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U |
| | Bromomethane | ug/L | 5.0 | | 1.0 U | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 2.0 UJ | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 2.0 UJ |
| | Carbon Disulfide | ug/L | 60 | | 1.0 U | 1.0 U | 5.0 UJ | 1.0 U | 5.0 UJ | 5.0 UJ | 1.0 U | 5.0 UJ | 1.0 U | 5.0 UJ | 1.0 U | 5.0 UJ | 5.0 UJ |
| | Carbon Tetrachloride | ug/L | 5.0 | | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U |
| | Chlorobenzene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | Chlorodibromomethane | ug/L | 50 | | 1.0 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U |
| | Chloroethane | ug/L | 5.0 | | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U |
| | Chloroform | ug/L | 7.0 | | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U |
| | Chloromethane | ug/L | 5.0 | | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U |
| | Cyclohexane | ug/L | NC | | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U |
| | 1,2-Dibromo-3-Chloropropane (DBCP) | ug/L | 0.04 | | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U |
| | 1,2-Dibromoethane | ug/L | 0.0006 | | 1.0 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U |
| | 1,2-Dichlorobenzene | ug/L | 3.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,3-Dichlorobenzene | ug/L | 3.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,4-Dichlorobenzene | ug/L | 3.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | Dichlorodifluoromethane (Freon 12) | ug/L | 5.0 | | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U |
| | 1,1-Dichloroethane | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,2-Dichloroethane | ug/L | 0.6 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,1-Dichloroethylene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | cis-1,2-Dichloroethylene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | trans-1,2-Dichloroethylene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **0.30 J** | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,2-Dichloropropane | ug/L | 1.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | cis-1,3-Dichloropropene | ug/L | 0.4 | | 1.0 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U |
| | trans-1,3-Dichloropropene | ug/L | 0.4 | | 1.0 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U |
| | Ethyl Benzene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 2-Hexanone (MBK) | ug/L | 50 | | 5.0 U | 5.0 UJ | 10 U | 5.0 U | 10 U | 10 U | 5.0 U | 10 U | 5.0 UJ | 10 U | 5.0 UJ | 10 U | 10 U |
| | Isopropylbenzene (Cumene) | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 2-Butanone (MEK) | ug/L | 50 | | 10 U | 10 UJ | 20 U | 10 U | 20 U | 20 U | 10 U | 20 U | 10 UJ | 20 U | 10 UJ | 20 U | 20 U |
| | Methyl Acetate | ug/L | NC | | 2.5 U | 2.5 UJ | 1.0 UJ | 2.5 U | 1.0 UJ | 1.0 UJ | 2.5 U | 1.0 UJ | 2.5 UJ | 1.0 UJ | 2.5 UJ | 1.0 UJ | 1.0 UJ |
| | Methylene Chloride | ug/L | 5.0 | | 1.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 1.0 U | 5.0 U | 5.0 U |
| | Methyl Cyclohexane | ug/L | NC | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 4-Methyl-2-pentanone (MIBK) | ug/L | NC | | 5.0 U | 5.0 U | 10 U | 5.0 U | 10 U | 10 U | 5.0 U | 10 U | 5.0 U | 10 U | 5.0 U | 10 U | 10 U |
| | Methyl tert-Butyl Ether (MTBE) | ug/L | 10 | | 1.0 U | 1.0 U | 1.0 U | **0.56 J** | **1.1 J** | **0.76 J** | 1.0 U | 1.0 U | **0.18 J** | **0.44 J** | 1.0 U | 1.0 U | 1.0 U |
| | Styrene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,1,2,2-Tetrachloroethane | ug/L | 5.0 | | 1.0 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 1.0 U | 0.5 U | 0.5 U |
| | 1,1,2-Trichlorotrifluoroethane | ug/L | 5.0 | | 1.0 U | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 2.0 UJ | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 2.0 UJ |
| | Tetrachloroethylene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **1.0** |
| | Toluene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,2,3-Trichlorobenzene | ug/L | 5.0 | | NA | NA | 5.0 U | NA | 5.0 U | 5.0 U | NA | 5.0 U | NA | 5.0 U | NA | 5.0 U | 5.0 U |
| | 1,2,4-Trichlorobenzene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,1,1-Trichloroethane | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | 1,1,2-Trichloroethane | ug/L | 1.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | Trichloroethylene | ug/L | 5.0 | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U |
| | Trichlorofluoromethane (Freon 11) | ug/L | 5.0 | | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 2.0 U |
| | Vinyl Chloride | ug/L | 2.0 | | 1.0 U | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 2.0 UJ | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 1.0 U | 2.0 UJ | 2.0 UJ |
| | Xylenes (total) | ug/L | 5.0 | | 2.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 2.0 U | 1.0 U | 1.0 U |
| | 1,4-Dioxane | ug/L | 0.35 | | 0.20 U | 0.20 U | 50 U | 0.20 U | 50 U | 50 U | 0.20 U | 50 U | 0.20 U | 50 U | 0.20 U | 50 U | 50 U |
| **TICs** | | | | | | | | | | | | | | | | | |
| | Tentatively Identified Compound | ug/L | NC | | None | None | NA | None | NA | NA | None | NA | None | NA | None | NA | NA |

**Notes:**
ug/L - micrograms per liter.
J - Estimated value.
NA - Sample not analyzed for the listed analyte.
NC - No NYSDEC standards exist for this analyte.
Sample DUP is a duplicate of sample MW-02D.
Sample DUP-01 is a duplicate sample of sample MBDW-MW-2I.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in bold indicate the analyte was detected.
VOCs - Volatile Organic Compounds.
TICs- Tentatively Identified Compounds.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the February 2023 Addendum.

**Table 3**
**New York State Department of Environmental Conservation**
**Mahopac Business District Wells Site - Site No. 340013**
**Carmel, Putnam County, New York**
**Summary of PFAS in Groundwater**

| Sample Location: | | | MW-02D | | | | | MW-02I | | | | | MW-02S | | | | MW-03I | | | | MW-06I | | | | MW-06S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Name: | | | MW-02D | | DUP | | MBDW-MW-2D | MW-02I | | MBDW-MW-2I | | DUP-01 | MW-02S | | MBDW-MW-2S | | MW-03I | | MBDW-MW-3I | | MW-06I | | MBDW-MW-6I | | MBDW-MW-6S |
| Lab Sample Identification: | | | 480-177077-3 | | 480-177077-4 | | 22K0850-07 | 480-177077-1 | | 22K0850-01 | | 22K0850-04 | 480-177077-2 | | 22K0850-02 | | 480-177077- | | 22K0850-03 | | 480-177077-7 | | 22K0850-06 | | 22K0850-05 |
| Sample Date: | | | 10/23/2020 | | 10/232020 | | 11/3/2022 | 10/21/2020 | | 11/1/2022 | | 11/1/2022 | 10/21/2020 | | 11/1/2022 | | 10/21/2020 | | 11/1/2022 | | 10/21/2020 | | 11/2/2022 | | 11/2/2022 |
| Analyte | Unit | Class GA Values* | Results | | Duplicate | | Results | Results | | Results | | Duplicate | Results | | Results | | Results | | Results | | Results | | Results | | Results |
| Perfluorobutanoic Acid (PFBA) | ng/L | NC | **23** | | **23** | | **30** | **43** | | **42** | **J** | **62** | **J** | **12** | | **11** | | **6.3** | | **4.5** | | **15** | | **18** | | **7.9** | |
| Perfluoropentanoic Acid (PFPeA) | ng/L | NC | **59** | | **58** | | **41** | **180** | | **200** | | **260** | | **9.0** | | **6.2** | | **3.0** | | **4.0** | **J** | **43** | | **51** | | **7.7** | |
| Perfluorohexanoic Acid (PFHxA) | ng/L | NC | **48** | | **49** | | **49** | **85** | | **120** | | **140** | | **7.2** | | **5.6** | | **3.0** | | **4.2** | **J** | **32** | | **45** | | **7.1** | |
| Perfluoroheptanoic Acid (PFHpA) | ng/L | NC | **39** | | **37** | | **49** | **45** | | **69** | **J** | **93** | | **5.7** | | **3.8** | **J** | **5.5** | | **7.6** | | **15** | | **16** | | **5.1** | |
| Perfluorooctanoic Acid (PFOA) | ng/L | 6.7 | **69** | | **65** | | **42** | **78** | | **99** | **J** | **170** | **J** | **28** | | **22** | | **26** | | **37** | | **38** | | **41** | | **19** | |
| Perfluorononanoic Acid (PFNA) | ng/L | NC | **14** | | **15** | | **17** | **6.4** | | **8.4** | | **14** | | **8.5** | | **7.7** | | **8.5** | | **10** | | **4.4** | | **3.9** | **J** | **2.4** | **J** |
| Perfluorodecanoic Acid (PFDA) | ng/L | NC | **26** | | **27** | | **13** | **5.5** | | **9.4** | | **15** | | **2.3** | | **2.6** | **J** | **6.3** | | **22** | | **9.4** | | **1.1** | **J** | **1.8** | **J** |
| Perfluoroundecanoic Acid (PFUnA) | ng/L | NC | **5.6** | | **5.2** | | **14** | 1.7 | U | **1.5** | **J** | **2.7** | **J** | 1.6 | U | 4.5 | U | **0.95** | **J** | **3.0** | **J** | 1.8 | U | 4.5 | U | 4.5 | U |
| Perfluorododecanoic Acid (PFDoA) | ng/L | NC | **14** | | **14** | | **12** | **0.72** | **J** | **0.76** | **J** | **1.8** | **J** | **0.50** | **J** | **0.87** | **J** | **0.88** | **J** | **1.3** | **J** | **3.5** | | **0.97** | **J** | 4.5 | U |
| Perfluorotridecanoic Acid (PFTriA) | ng/L | NC | 1.7 | U | 1.7 | U | **6.2** | 1.7 | U | 4.5 | U | **0.90** | **J** | 1.6 | U | 4.5 | U | 1.7 | U | **0.65** | **J** | 1.8 | U | 4.5 | U | 4.5 | U |
| Perfluorotetradecanoic Acid (PFTeA) | ng/L | NC | **2.5** | | **1.7** | | **2.7** | **J** | 1.7 | U | 4.5 | U | 4.5 | U | 1.6 | U | 4.5 | U | 1.7 | U | 4.5 | U | 1.8 | U | 4.5 | U | 4.5 | U |
| Perfluorobutanesulfonic Acid (PFBS) | ng/L | NC | **5.4** | | **5.1** | | **5.3** | | **8.8** | | **7.5** | | **8.9** | | **9.5** | | **8.8** | | **4.0** | | **3.5** | **J** | **6.7** | | **8.4** | | **9.8** | |
| Perfluoropentanesulfonic Acid (PFPeS) | ng/L | NC | NA | | NA | | 4.5 | UJ | NA | | **0.89** | **J** | 4.5 | UJ | NA | | 4.5 | UJ | NA | | 4.5 | UJ | NA | | 4.5 | UJ | 4.5 | UJ |
| Perfluorohexanesulfonic Acid (PFHxS) | ng/L | NC | **3.6** | | **3.5** | | **2.0** | **J** | **3.9** | | **4.0** | **J** | **4.3** | **J** | **2.3** | | **2.3** | **J** | **2.8** | | **0.91** | **J** | **3.2** | | **3.9** | **J** | **2.6** | **J** |
| Perfluoroheptanesulfonic Acid (PFHpS) | ng/L | NC | **0.40** | **J** | **0.37** | **J** | 4.5 | U | **0.59** | **J** | 4.5 | U | 4.5 | U | **0.44** | **J** | 4.5 | U | 1.7 | U | 4.5 | U | **0.48** | **J** | 4.5 | U | 4.5 | U |
| Perfluorooctanesulfonic Acid (PFOS) | ng/L | 2.7 | **22** | | **21** | | **18** | | **28** | | **25** | | **25** | | **46** | | **33** | | **11** | | **5.5** | | **36** | | **35** | | **52** | |
| Perfluorononanesulfonic Acid (PFNS) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| Perfluorodecanesulfonic Acid (PFDS) | ng/L | NC | 1.7 | U | 1.7 | U | 4.5 | U | 1.7 | U | 4.5 | U | 4.5 | U | 1.6 | U | 4.5 | U | 1.7 | U | 4.5 | U | 1.8 | U | 4.5 | U | 4.5 | U |
| Perfluorododecane sulfonic acid (PFDoS) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| 4:2 Fluorotelomer Sulfonate (4:2 FTS) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| 6:2 Fluorotelomer Sulfonate (6:2 FTS) | ng/L | NC | 4.2 | U | 4.2 | U | **1.7** | **J** | 4.2 | U | 4.5 | U | 4.5 | UJ | 4.1 | U | 4.5 | UJ | 4.1 | U | 4.5 | UJ | 4.4 | U | 4.5 | UJ | 4.5 | UJ |
| 8:2 Fluorotelomer Sulfonate (8:2 FTS) | ng/L | NC | 1.7 | U | 1.7 | U | 4.5 | U | 1.7 | U | 4.5 | U | 4.5 | U | 1.6 | U | 4.5 | U | 1.7 | U | 4.5 | U | 1.8 | U | 4.5 | U | 4.5 | U |
| Perfluorooctane Sulfonamide (PFOSAm) | ng/L | NC | 1.7 | U | 1.7 | U | 4.5 | U | 1.7 | U | 4.5 | U | 4.5 | U | 1.6 | U | 4.5 | U | 1.7 | U | 4.5 | U | 1.8 | U | 4.5 | U | 4.5 | U |
| N-Methylperfluorooctane sulfonamide (NMeFOSA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | UJ | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| N-Ethylperfluorooctane sulfonamide (NEtFOSA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| N-Methyl perfluorooctane sulfonamido acetic acid (NMeFOSAA) | ng/L | NC | 4.2 | U | 4.2 | U | 4.5 | U | 4.2 | U | 4.5 | U | 4.5 | U | 4.1 | U | 4.5 | U | 4.1 | U | 4.5 | U | 4.4 | U | 4.5 | U | 4.5 | U |
| N-Ethyl perfluorooctane sulfonamido acetic acid (NEtFOSAA) | ng/L | NC | 4.2 | U | 4.2 | U | 4.5 | U | 4.2 | U | 4.5 | U | 4.5 | U | 4.1 | U | 4.5 | U | 4.1 | U | 4.5 | U | 4.4 | U | 4.5 | U | 4.5 | U |
| N-Methyl perfluorooctane sulfonamido ethanol (NMeFOSE) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| N-Ethyl perfluorooctane sulfonamidoethanol (NEtFOSE) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| Perfluoro-2-methyl-3-oxahexanoic acid (HFPO-DA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| 4,8-dioxa-3H-perfluorononanoic Acid (ADONA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F53B Major) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F53B Minor) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| 3:3 Fluorotelomer carboxylic acid (3:3 FTCA) | ng/L | NC | NA | | NA | | 180 | U | NA | | 180 | U | 180 | U | NA | | 180 | U | NA | | 180 | U | NA | | 180 | U | 180 | U |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ng/L | NC | NA | | NA | | 180 | U | NA | | 180 | U | 180 | U | NA | | 180 | U | NA | | 180 | U | NA | | 180 | U | 180 | U |
| 3-Perfluoroheptylpropanoic acid (7:3 FTCA) | ng/L | NC | NA | | NA | | 180 | U | NA | | 180 | U | 180 | U | NA | | 180 | U | NA | | 180 | U | NA | | 180 | U | 180 | U |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| Perfluoro-3-methoxypropanoic Acid (PFMPA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| Perfluoro(4-methoxybutanoic) Acid (PFMBA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |
| Perfluoro-3,6-dioxaheptanoic acid (NFDHA) | ng/L | NC | NA | | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | NA | | 4.5 | U | 4.5 | U |

**Notes:**
ng/L - nanograms per liter.
J - Estimated value.
NA - Sample not analyzed for the listed analyte.
NC - No NYSDEC standards exist for this analyte.
Sample DUP is a duplicate of sample MW-02D.
Sample DUP-01 is a duplicate of sample MBDW-MW-2I.
U - Analyte was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in bold indicate the analyte was detected.
**Values shown in bold and shaded type exceed the listed NYSDEC standards.**
PFAS - Per- and Polyfluoroalkyl Substances.
* - NYSDEC Ambient Water Quality Standards and Guidance Values for Class GA water, June 1998 with the February 2023 Addendum.

# APPENDIX A

# GREEN REMEDIATION METRICS

**Summary of Green Remediation Metrics for Site Management**

Site Name: Mahopac Business District Wells Site Code: 340013
Address: Intersection of Routes 6 and 6N City: Carmel
State: NY Zip Code: 10512 County: Putnam

**Initial Report Period (Start Date of period covered by the Initial Report submittal)**
Start Date: October 2020

**Current Reporting Period**
Reporting Period From: April 2018 To: August 2024

**Contact Information**
Preparer's Name: Brad LaForest Phone No.: 207-295-5981
Preparer's Affiliation: TRC Engineers, Inc.

**I. Energy Usage:** Quantify the amount of energy used directly on-site and the portion of that derived from renewable energy sources.

| | **Current Reporting Period** | **Total to Date** |
|---|---|---|
| Fuel Type 1 (e.g. natural gas (cf)) | NA | NA |
| Fuel Type 2 (e.g. fuel oil, propane (gals)) | NA | NA |
| Electricity (kWh) | NA | NA |
| **Of that Electric usage, provide quantity:** | | |
| Derived from renewable sources (e.g. solar, wind) | NA | NA |
| **Other energy sources** (e.g. geothermal, solar thermal (Btu)) | NA | NA |

*Provide a description of all energy usage reduction programs for the site in the space provided on Page 3.*

**II. Solid Waste Generation:** Quantify the management of solid waste generated on-site.

| | **Current Reporting Period (tons)** | **Total to Date (tons)** |
|---|---|---|
| **Total waste generated on-site** | 0 | 0 |
| OM&M generated waste | NA | NA |
| **Of that total amount, provide quantity:** | | |
| Transported off-site to landfills | 0 | 0 |
| Transported off-site to other disposal facilities | 0 | 0 |
| Transported off-site for recycling/reuse | 0 | 0 |
| Reused on-site | 0 | 0 |

*Provide a description of any implemented waste reduction programs for the site in the space provided on Page 3.*

**III. Transportation/Shipping:** Quantify the distances travelled for delivery of supplies and lab-supplied bottles, shipping of laboratory samples, and the removal of waste.

| | **Current Reporting Period (miles)** | **Total to Date (miles)** |
|---|---|---|
| Standby Engineer/Contractor | Approx. 830 | Approx. 830 |
| Laboratory Courier/Delivery Service (bottle and sample delivery) | Approx. 7330 | Approx. 7330 |
| Equipment Delivery Services | Approx. 170 | Approx 170 |
| Waste Removal/Hauling | Approx. 80 | Approx. 80 |

*Provide a description of all mileage reduction programs for the site in the space provided on Page 3. Include specifically any local vendor/services utilized that are within 50 miles of the site.*

**IV. Water Usage:** Quantify the volume of water used on-site from various sources.

| | **Current Reporting Period (gallons)** | **Total to Date (gallons)** |
|---|---|---|
| Total quantity of water used on-site (not including treated water) | 0 | 0 |
| **Of that total amount, provide quantity:** | | |
| Public potable water supply usage | 0 | 0 |
| Surface water usage | 0 | 0 |
| On-site groundwater usage | 0 | 0 |
| Collected or diverted storm water usage | 0 | 0 |

*Provide a description of any implemented water consumption reduction programs for the site in the space provided on Page 3.*

**V. Land Use and Ecosystems:** Quantify the amount of land and/or ecosystems disturbed and the area of land and/or ecosystems restored to a pre-development condition (i.e. Green Infrastructure).

| | **Current Reporting Period (acres)** | **Total to Date (acres)** |
|---|---|---|
| Land disturbed | 0 | 0 |
| Land restored | NA | NA |

*Provide a description of any implemented land restoration/green infrastructure programs for the site in the space provided on Page 3.*

| **Description of green remediation programs reported above**<br>(Attach additional sheets if needed) |
|---|
| Energy Usage:<br>Not applicable. |
| Waste Generation:<br>Not applicable. |
| Transportation/Shipping:<br>Generally, staff were utilized from the TRC Clifton Park, NY office (located within approximately 125 miles of the Site) and the TRC New York, NY office (located within approximately 60 miles of the Site). Eurofins TestAmerica, Buffalo, the laboratory utilized for the groundwater sampling event in October 2020, is located in Amherst, New York, approximately 390 miles from the Site. Con-Test, the laboratory utilized for the groundwater sampling event for VOC analysis in November 2022, is located in East Longmeadow, Massachusetts, approximately 105 miles from the Site. ALS, the laboratory utilized for the groundwater sampling event for PFAS analysis in November 2022, is located in Kelso, Washington, approximately 3,050 miles from the Site. Monitoring well repair and redevelopment was completed by Precision Environmental Services of Ballston Spa, NY, approximately 138 miles from the Site. Equipment delivery services were provided by Eco-Rental of Elsmford, NY, approximately 27 miles from the Site, and Pine Environmental of Long Island, NY, approximately 85 miles from the Site. Liquid waste was transported by AARCO Environmental Services to Dale Transfer Corporation located in Babylon, NY, approximately 80 miles from the Site. |
| Water usage:<br>Not applicable. |
| Land Use and Ecosystems:<br>Not applicable. |
| Recommendations/Other:<br>None. |

**CONTRACTOR CERTIFICATION**

I, Jenna Raup (**Name**) do hereby certify that I am Project Manager (**Title**) of TRC Engineers, Inc (**Contractor Name**), which is responsible for the work documented on this form. According to my knowledge and belief, all of the information provided in this form is accurate and the site management program complies with the DER-10, DER-31, and CP-49 policies.

**Date** 05/27/2025 **Contractor**



# APPENDIX B

## CUSTODIAL RECORD, SITE HISTORY, MONITORING WELL CONSTRUCTION SUMMARY, AND ENGINEERING CONTROL/INSTITUTIONAL CONTROL STANDBY CONSULTANT/CONTRACTOR CERTIFICATION FORM

**CUSTODIAL RECORD**
**KNOWN PERTINENT SITE DOCUMENTS**
**MAHOPAC BUSINESS DISTRICT WELLS (NYSDEC SITE NO. 340013)**


Ecological Analysts, Inc., *Preliminary Investigation of the Mahopac Business District Village of Mahopac, Putnam County, New York, Phase I, Summary Report*, November 1983.

Wehran Engineering, P.C., *Technical Proposal for a Remedial Investigation/Feasibility Study of the Mahopac Business District Site*, September 1986.

Wehran Engineering, P.C., *Contract for a Remedial Investigation/Feasibility Study of the Mahopac Business District Site*, January 1987.

Wehran Engineering, P.C., *Public Participation Plan for the Mahopac Business District Site*, July 1987.

Wehran Engineering, P.C., *Remedial Investigation Work Plan, Quality Control Plan and Health and Safety Plan for the Remedial Investigation of the Mahopac Business District Site*, November 1987.

Wehran Engineering, P.C., *Interim Report, Mahopac Business District RI/FS Sanitary Sewer and Water Supply Surveys and Sampling and Analysis of Private Well*, March 1989.

Wehran Engineering, P.C., *Remedial Investigation Report for the Mahopac Business District Site, Volumes I, II, III, IV.,* February 1990.

Wehran Engineering, P.C., *Feasibility Study Report for the Mahopac Business District Site*, March 1990.

NYSDEC, *Proposed Plan for Remediation of the Mahopac Business District Site*, July 1990.

NYSDEC, *New York State Superfund Record of Decision, Mahopac Business District Wells, Putnam County, New York, Site Number 3-40-013*. August 1990.

NYSDEC, *Monitoring Plan Mahopac Business District Wells, Putnam County, New York, Site Number 3-40-013*. December 2004.

## SITE HISTORY

## MAHOPAC BUSINESS DISTRICT WELLS (NYSDEC SITE NO. 340013)

| Date | Description |
|---|---|
| 1978 | Contamination of groundwater in the Mahopac business district was discovered following a gasoline spill at the former U.S. Gas Station (currently Carland Auto) during the Fall of 1978. The Putnam County Department of Health sampled several private wells in the business district to determine whether or not gasoline constituents had entered the groundwater. Results indicated the presence of tetrachloroethene and trichloroethene (common dry cleaning solvents) in several of the water samples. Boil water orders were issued, and several carbon filtration units have been installed by well owners. A Monitoring Plan, which requires maintenance of POET systems, groundwater monitoring, and inspections, was established for the Site. |
| 1983 | The NYSDEC completed a Phase I investigation. The Phase I study developed a preliminary Hazardous Ranking System (HRS) score (Sm=32) which shows a potential for harm to human health and the environment from groundwater or surface water migration. The Mahopac site was nominated for the United States Environmental Protection Agency's (EPA) National Priorities List for federal lead action. EPA declined and referred the site back to New York State for action. |
| January 1987 | NYSDEC selected the Mahopac site for a Remedial Investigation/Feasibility Study (RI/FS) as the first step towards corrective action under the State Superfund Program and contracted with Wehran Engineering in January 1987 to perform such a study. |
| August 1990 | A Record of Decision (ROD) was issued and included individual carbon treatment units at affected potable wells, an alternative water supply from Lake Mahopac, removal of contaminated sanitary sewer sediment, review a sanitary sewer evaluation survey, long-term groundwater monitoring, and consideration of pump and treat systems on new or existing wells to contain the plume after a new water supply installed. The source of the historic discharges were attributed to three former dry cleaning establishments. |
| 1998-2002 | PCE is the primary chlorinated solvent historically used within the Mahopac business district. The source of observed groundwater contamination has been attributed to historical discharges from three dry cleaning establishments located on East Boulevard and Cherry Lane. In the early 2000's, volatile organic compound (VOC) contaminated sediments were removed from the sanitary sewer line to reduce exposure and prevent migration of contaminants off-Site. Prior to the installation of distillation and recycling equipment at these dry-cleaning establishments, spent solvent was typically discharged into sanitary sewers. Since the disposal activity stopped, a significant decrease in groundwater contamination has been observed.. |
| December 2004 | A Monitoring Plan was prepared to initiate a groundwater monitoring and site inspection schedule. The 2004 Monitoring Plan indicated that groundwater samples were collected from Site monitoring wells in 12/98, 2/99, 4/99, 6/99, 10/99, 7/01, 3/02, 12/02, and 7/04 (NYSDEC, 2004). The report indicated quarterly sampling was needed for the next two years to determine if the Site could be delisted. |

August 2020

A field inspection was completed in August 2020 to document the general Site conditions and evaluate the status of the environmental sampling network. In October 2020, as part of the New York State's Emerging Contaminant Sampling Initiative to evaluate and address emerging contaminants in drinking water, groundwater samples were collected from five groundwater monitoring wells (MW-02S, MW-02I, MW-02D, MW-03I, and MW-06I) for target compound list (TCL) VOCs, 1,4-dioxane, and per- and polyfluoroalkyl substances (PFAS) analysis. Sewer samples were also collected from five sewer trench well locations (MW-04S, MW-08S, MW-09S, MW-10S, and MW-11S) for TCL VOCs. Locations MW-01S, MW-01I, MW-03S, and MW-05I could not be located during the field event. The cover of one well, assumed to be MW-06S at the MW-06 location, could not be removed and therefore, a sample could not be collected.

Site contaminants of concern, PCE and its breakdown products, were not detected in groundwater samples. 1,4-Dioxane was also not detected in groundwater samples. As a result, it was recommended that no further action be taken with respect to chlorinated solvents or 1,4-dioxane in the groundwater. Elevated concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were detected in all groundwater samples and it was recommended that the PFAS continue to be monitored at a frequency determined by the NYSDEC.

January 2021

In January 2021, under a program facilitated by NYSDEC under a separate contract, nearby residential water supply wells were sampled for six PFAS, including PFOA and PFOS. Each of the private water supply wells that were sampled in 2021 exhibited concentrations of PFOA and/or PFOS above the NYS Maximum Contaminant Levels (MCLs) of 10 parts per trillion (ppt or nanograms per liter [ng/L]). MCLs are also not criteria for private drinking water supplies, as NYS does not regulate PFAS in private wells, but again serve as screening criteria for evaluating potential PFAS exposure.

September 2022

Existing Site monitoring wells MW-02S, MW-02I, MW-02D, MW-03I, MW-06S and MW-06I were repaired in September 2022. Existing curb boxes were removed and replaced, grout was placed between well casings and outer steel casings, and well casings were shaved to improve the seal with new locking J-plugs that were installed. The six monitoring wells were gauged for depth to water and depth to bottom and were redeveloped in October 2022 and November 2022.

**New York State Department of Environmental Conservation**
**Mahopac Business District Wells Site (Site No. 340013)**
**Carmel, New York**
**Monitoring Well Construction Summary**

| Well ID | Installation Date | Well Dia. (inches) | Well Material | Total Depth (feet bgs) | Screened Formation | *Screen* | | | *Elevation (feet AMSL)* | | | | *Location* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Top (feet bgs) | Bottom (feet bgs) | Length (feet) | Casing Top | Ground Surface | Screen | | Latitude | Longitude |
| | | | | | | | | | | | Top | Bottom | | |
| MW-01S | 4/25/1988 | 2 | Steel | 28.5 | Overburden | 18.5 | 28.5 | 10 | N/A | 677.92 | 659.42 | 649.42 | N/A | N/A |
| MW-01I | 3/28/1988 | 2 | Steel | 130.25 | Bedrock | 124.0 | 130.25 | 6.25 | N/A | 677.74 | 553.74 | 547.49 | N/A | N/A |
| MW-02S | 4/28/1988 | 2 | Steel | 21.0 | Overburden | 11.0 | 21.0 | 10 | N/A | 666.00 | 655.0 | 645.0 | 41.37223496 | -73.73621233 |
| MW-02I | 8/18/1988 | 2 | Steel | 65.0 | Bedrock | 45.0 | 65.0 | 20 | N/A | 666.20 | 621.2 | 601.2 | 41.37225253 | -73.73620407 |
| MW-02D | 3/28/1988 | 2 | Steel | 335.0 | Bedrock | 315.0 | 335.0 | 20 | N/A | 666.10 | 351.1 | 331.1 | 41.37224017 | -73.73620066 |
| MW-03S | 6/26/1988 | 2 | Steel | 34.5 | Overburden | 24.5 | 34.5 | 10 | N/A | 660.90 | 636.4 | 626.4 | N/A | N/A |
| MW-03I | 8/23/1988 | 2 | Steel | 67.0 | Bedrock | 47.0 | 67.0 | 20 | N/A | 663.90 | 616.9 | 596.9 | 41.37262378 | -73.73518508 |
| MW-04S | 7/1/1988 | 2 | Steel | 20.5 | Overburden | 10.5 | 20.5 | 10 | N/A | 673.60 | 663.1 | 653.1 | 41.37367328 | -73.73591504 |
| MW-05I | 8/12/1988 | 2 | Steel | 65.0 | Bedrock | 45.0 | 65.0 | 20 | N/A | 663.50 | 618.5 | 598.5 | N/A | N/A |
| MW-06S | 6/29/1988 | 2 | Steel | 9.5 | Overburden | 5.5 | 9.5 | 4 | N/A | 666.43 | 660.93 | 656.93 | 41.37165675 | -73.73672423 |
| MW-06I | 8/16/1988 | 2 | Steel | 47.0 | Bedrock | 27.0 | 47.0 | 20 | N/A | 666.50 | 639.5 | 619.5 | 41.37165675 | -73.73672423 |
| MW-08S | 7/13/1988 | 2 | Steel | 9.5 | Overburden | 7.5 | 9.5 | 2 | N/A | 664.70 | 657.2 | 655.2 | 41.37176701 | -73.73541263 |
| MW-09S | 7/13/1988 | 2 | Steel | 10.0 | Overburden | 8.0 | 10.0 | 2 | N/A | 667.60 | 659.6 | 657.6 | 41.37151687 | -73.73663315 |
| MW-10S | 7/8/1988 | 2 | Steel | 6.75 | Overburden | 4.75 | 6.75 | 2 | N/A | 665.30 | 660.55 | 658.55 | 41.37197185 | -73.73662294 |
| MW-11S | 7/11/1988 | 2 | Steel | 9.5 | Overburden | 7.5 | 9.5 | 2 | N/A | 661.80 | 654.3 | 652.3 | 41.37230532 | -73.73492985 |

**Notes**
AMSL : above mean sea level
feet bgs : feet below ground surface
N/A : Not Available

Coordinate System: New York State Plane - East 3101; Vertical Datum: NAD 1983 (conus) through GPS observations

**Enclosure 1**
**Institutional and Engineering Controls - Property Owner Survey**

NEW YORK STATE | Department of Environmental Conservation

**Site Details** **Box 1**

**Site No.** **340013**

**Site Name Mahopac Business District Wells**

Site Address: Route 6 and Route 6N Zip Code: 10512
City/Town: Carmel
County: Putnam
Site Acreage: 6.0

Reporting Period: April 01, 2018 to August 01, 2024

| | YES | NO |
|---|---|---|
| 1. Is the information above correct? | ✓ | |
| 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? | | ✓ |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | | ✓ |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | | ✓ |
| **If you answered YES to questions 2, 3 or 4, include documentation with this form.** | | |
| 5. Is the site currently undergoing development? | | ✓ |

**Box 2**

| | YES | NO |
|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Unrestricted, Residential, Restricted-Residential, Commercial, and Industrial | ✓ | |
| 7. Are all Institutional Controls (ICs) in place and functioning as designed? | ✓ | |

Signature of Property Owner

Date 6/30/2024

**SITE NO. 340013** **Box 3**

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| Not Applicable/No IC's | | |

**Box 4**

**Description of Engineering Controls**

None Required

Not Applicable/No EC's

**Box 5**

**Periodic Review Report (PRR) Survey Statements**

For each Institutional or Engineering control listed in Boxes 3 and/or 4, by checking "YES" below I believe all of the following statements to be true:

(a) the Institutional Control(s) and/or Engineering Control(s) employed at this site remain 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; and

(d) if a Site Management Plan (SMP) exists, nothing has occurred that would constitute a violation or failure to comply with the SMP for this Control.

YES ✓ NO

Signature of Property Owner

Date 6/30/2024

G. Paul Vassallo
37 Reservoir Court
Carmel, NY 10512

**Enclosure 1**
**Institutional and Engineering Controls - Property Owner Survey**

NEW YORK STATE Department of Environmental Conservation

**Site Details** **Box 1**

**Site No.** **340013**

**Site Name Mahopac Business District Wells**

Site Address: Route 6 and Route 6N Zip Code: 10512
City/Town: Carmel
County: Putnam
Site Acreage: 6.0

Reporting Period: April 01, 2018 to August 01, 2024

| | YES | NO |
|---|---|---|
| 1. Is the information above correct? | ✓ | |
| 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? | | ✓ |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | | ✓ |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | | ✓ |
| **If you answered YES to questions 2, 3 or 4, include documentation with this form.** | | |
| 5. Is the site currently undergoing development? | | ✓ |

**Box 2**

| | YES | NO | |
|---|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Unrestricted, Residential, Restricted-Residential, Commercial, and Industrial | ✓ | | |
| 7. Are all Institutional Controls (ICs) in place and functioning as designed? | | | N/A |

Signature of Property Owner

6/29/24
Date

**SITE NO. 340013** **Box 3**

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| Not Applicable/No IC's | | |

**Box 4**

**Description of Engineering Controls**

None Required

Not Applicable/No EC's

**Box 5**

**Periodic Review Report (PRR) Survey Statements**

For each Institutional or Engineering control listed in Boxes 3 and/or 4, by checking "YES" below I believe all of the following statements to be true:

(a) the Institutional Control(s) and/or Engineering Control(s) employed at this site remain 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; and

(d) if a Site Management Plan (SMP) exists, nothing has occurred that would constitute a violation or failure to comply with the SMP for this Control.

YES ✓ NO

Signature of Property Owner

9/29/24
Date

**Enclosure 1**
**Engineering Controls - Standby Consultant/Contractor Certification Form**

**Site Details** **Box 1**

**Site No. 340013**

**Site Name Mahopac Business District Wells**

Site Address: Route 6 and Route 6N Zip Code: 10512
City/Town: Carmel
County: Putnam
Site Acreage: 6.0

Reporting Period: April 01, 2018 to August 01, 2024

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

**Box 2**

| | YES | NO | |
|---|---|---|---|
| 6. Is the current site use consistent with the use(s) listed below? Unrestricted, Residential, Restricted-Residential, Commercial, and Industrial | ☑ | ☐ | |
| 7. Are all ICs/ECs in place and functioning as designed? | ☐ | ☐ | NA |

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.**

_____ _____ Date
Signature of Standby Consultant/Contractor

**SITE NO. 340013** **Box 3**

**Description of Institutional Controls**

| Parcel | Owner | Institutional Control |
|---|---|---|
| **75.44-1-49** | S & M Properties | Site Management Plan<br>Monitoring Plan<br>O&M Plan |

Controls are listed to identify that there are 5 off-site residential GAC systems that are monitored and maintained by the DEC. None of the on-site properties have or require any institutional controls.

Controls are listed on this property as a place-holder only.

**Box 4**

**Description of Engineering Controls**

| Parcel | Engineering Control |
|---|---|
| **75.44-1-49** | Vapor Mitigation<br>Point-of-Entry Water Treatment |

There are 5 off-site residential GAC systems that are monitored and maintained by the DEC. None of the on-site properties have or require any engineering controls.

Engineering controls are listed on this property as a place-holder only.
One off-site SSDS was installed and is maintained by EPA.

**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 certification, including data and material prepared by previous contractors for the current certifying period, if any;

   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. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or 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) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

| YES | NO |
|---|---|
| ☑ | ☐ |

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.**

_____ _____

Signature of Standby Consultant/Contractor Date

**Box 6**

## IC/EC CERTIFICATIONS

### Qualified Environmental Professional Signature

I certify that all information in Boxes 2 through 5 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 Allen Zgaljardic at TRC Engineers, Inc,
print name

3 Corporate Drive, Suite 202

Clifton Park, New York 12065,
(print business address)

am certifying as a Qualified Environmental Professional.

Signature of Qualified Environmental Professional

Stamp (Required for PE)




Date 05/27/2025

# APPENDIX C

# SITE INSPECTION LOGS AND FIELD LOGS

Report No. 01 **Mahopac Business District Wells - NYSDEC Site No. 340013** Date: 10/21/2020

NYSDEC
Division of Environmental Remediation

**Site Location:** Mahopac, New York

**NYSDEC Contract No. D009812**

Superintendent: Lexie Lill

NYSDEC PM: Brianna Scharf

Consultant PM: Justin King

Consultant Site Inspectors: Lexie Lill and Sam Pereira

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Cloudy, mist | AM | Cloudy | PM |
| **Temperature** | 60's | AM | 60's | PM |
| **Wind** | 2-5 mph | AM | 2-5 mph | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | No X | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | No X | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | No X | NA |

**Health & Safety Comments**

No injuries or accidents to note. Main concerns include: Traffic hazards, uneven ground, and slips, trips and falls.

| **Summary of Work Performed** | Arrived at site: | 07:45 | Departed Site: | 15:00 |
|---|---|---|---|---|

TRC arrived on site and gauged/sampled monitoring wells MW-02S, MW-02I, MW-10S, MW-06I, MW-09S, MW-03I, MW-04S, and MW-11S. TRC will continue sampling remaining wells tomorrow.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | NA X |
| Were there any vehicles which were not tarped? | * Yes | No | NA X |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | * Yes | No | NA X |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Sam Pereira | TRC | Contractor | 7.25 |
| Lexie Lill | TRC | Contractor | 7.25 |
| | | | |
| | | | |
| | | |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| MiniRAE 3000 | Pine Services | 1 | 4 |
| Horiba U-52 | Pine Services | 1 | 4 |
| Peri Pump | Pine Services | 1 | 4 |
| Interface Probe | Pine Services | 1 | 4 |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| | |
| | |
| | |
| | |
| | |

**Project Schedule Comments**

**Issues Pending**

**Interaction with Public, Property Owners, Media, etc.**

**Include (insert) figures with markups showing location of work and job progress**

**Site Photographs (Descriptions Below)**



TRC sampling MW-02I.



TRC sampling MW-03I.



Photo of MW-10S.



Photo of MW-11S.

**Site Inspector(s):** Lexie Lill

**Date: 10/21/2020**

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments: | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☐ | No ☒ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |
| Comments: | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was turbidity checked at the Montauk Highway outfall? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☐ |
| Comments: | | | |

Report No. 02 **Mahopac Business District Wells - NYSDEC Site No. 340013** Date: 10/22/2020

NYSDEC
Division of Environmental Remediation

**Site Location:** Mahopac, New York

**NYSDEC Contract No. D009812**

Superintendent: Lexie Lill

NYSDEC PM: Brianna Scharf

Consultant PM: Justin King

Consultant Site Inspectors: Lexie Lill and Sam Pereira

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Cloudy | AM | Cloudy | PM |
| **Temperature** | 60's | AM | 60's | PM |
| **Wind** | 2-5 mph | AM | 2-5 mph | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | No X | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | No X | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | No X | NA |

**Health & Safety Comments**

No injuries or accidents to note. Main concerns include: Traffic hazards, uneven ground, and slips, trips and falls.

| **Summary of Work Performed** | Arrived at site: | 07:45 | Departed Site: | 13:00 |
|---|---|---|---|---|

TRC arrived on site and sampled monitoring well MW-08S. TRC could not locate monitoring wells MW-05I, MW-01S, MW-01I, and MW-03S. Additionally, TRC was not able to open one of the wells at location MW-06 (assumed MW-06S). Due to equipment malfunctions, low-flow sampling of MW-02D with a bladder pump could not be completed. TRC contacted Pine Equipment Services to resolve equipment malfunctions. TRC will re-attempt sampling of MW-02D, tomorrow.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | NA X |
| Were there any vehicles which were not tarped? | * Yes | No | NA X |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | * Yes | No | NA X |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Sam Pereira | TRC | Contractor | 5.25 |
| Lexie Lill | TRC | Contractor | 5.25 |
| | | | |
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| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|

| | | | |
|---|---|---|---|
| MiniRAE 3000 | Pine Services | 1 | 1 |
| Horiba U-52 | Pine Services | 1 | 1 |
| Bladder Pump | Pine Services | 1 | 1 |
| Interface Probe | Pine Services | 1 | 1 |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| | |
| | |
| | |
| | |
| | |

**Project Schedule Comments**

**Issues Pending**

**Interaction with Public, Property Owners, Media, etc.**

**Include (insert) figures with markups showing location of work and job progress**

**Site Photographs (Descriptions Below)**



TRC sampling set up at MW-02D.



Photo of MW-08S.



Photo of well at MW-06S. Tools used to try to open the well are pictured.



Photo of well at MW-06S.

**Site Inspector(s):** Lexie Lill

**Date: 10/22/2020**

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments: | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☐ | No ☒ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |
| Comments: | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was turbidity checked at the Montauk Highway outfall? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☐ |
| Comments: | | | |

Report No. 03 **Mahopac Business District Wells - NYSDEC Site No. 340013** Date: 10/23/2020

NYSDEC
Division of Environmental Remediation

**NYSDEC Contract No. D009812**

Superintendent: Lexie Lill

NYSDEC PM: Brianna Scharf

Consultant PM: Justin King

Consultant Site Inspectors: Lexie Lill and Sam Pereira

**Site Location:** Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Cloudy | AM | | PM |
| **Temperature** | 60's | AM | | PM |
| **Wind** | 2-5 mph | AM | | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | No X | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | No X | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | No X | NA |

**Health & Safety Comments**

No injuries or accidents to note. Main concerns include: Traffic hazards, uneven ground, and slips, trips and falls.

| **Summary of Work Performed** | Arrived at site: | 08:30 | Departed Site: | 11:45 |
|---|---|---|---|---|

TRC arrived on site and sampled monitoring well MW-02D. TRC attempted to sample MW-02D with a bladder pump at lower depths but couldn't due to equipment malfunctions. TRC then sampled MW-02D with a peristaltic pump.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | NA X |
| Were there any vehicles which were not tarped? | * Yes | No | NA X |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | * Yes | No | NA X |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Sam Pereira | TRC | Contractor | 3.25 |
| Lexie Lill | TRC | Contractor | 3.25 |
| | | | |
| | | | |
| | | |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| MiniRAE 3000 | Pine Services | 1 | 1 |
| Horiba U-52 | Pine Services | 1 | 1 |
| Bladder Pump | Pine Services | 1 | 1 |
| Interface Probe | Pine Services | 1 | 1 |
| Peristaltic Pump | Pine Services | 1 | 1 |
| | | | |
| | | | |
| | | |

**Equipment/Material Tracking Comments:**

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| | |
| | |
| | |
| | |
| | |

**Project Schedule Comments**

**Issues Pending**

**Interaction with Public, Property Owners, Media, etc.**

**Include (insert) figures with markups showing location of work and job progress**

**Site Photographs (Descriptions Below)**



TRC purging MW-02D with a bladder pump.



TRC purging MW-02D with a peristaltic pump.

**Site Inspector(s):** Lexie Lill

**Date: 10/23/2020**

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments: | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☐ | No ☒ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |
| Comments: | | |

# NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was turbidity checked at the Montauk Highway outfall? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☐ |
| Comments: | | | |

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009801-04 (Task 1)

**DEC Insp. –** N/A

**DEC PM –** Jasmine Stefansky

**Contractor Supt. –** Precision

**Engineer PM –** Jenna Raup

**Engineer Insp. –** Rich DePolo, Kevin Meazell

**Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Sunny | AM | Sunny | PM |
| **Temperature** | 50°F | AM | 65°F | PM |
| **Wind** | 0 – 5 mph S | AM | 0 – 5 mph S | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE.
- Parking cones were used to block off the work area.

| **Summary of Work Performed** | Arrived at site: | 7:45 | Departed Site: | 15:45 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) performed gauging, implementation of the Community Air Monitoring Plan (CAMP), and oversight during activities associated with the repair of 6 wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York. The objective is to provide direction to the call-out contractor (Precision) during the repair of all of the on-site wells (MBDW-MW-2I, MBDW-MW-2D, MBDW-MW-2S, MBDW-MW-3I, MBDW-MW-6I and MBDW-MW-6S) and confirm that well repair activities are not adversely affecting air quality of the surrounding community. The purpose of the work is to repair wells for continued use in site management groundwater monitoring and in the ongoing PFAS source investigation.

Upon arrival at the Site, monitoring wells MBDW-MW-2I, MBDW-MW-2D, MBDW-MW-2S, MBDW-MW-3I, and MBDW-MW-6S were gauged using a Heron Interface probe. Depth to water and depth to bottom values were recorded for each. Rust was observed in the interior steel casing of MBDW-MW-6I. MBDW-MW-6S was unable to be opened (rusted shut).

CAMP stations were set up at the upwind and downwind perimeter of the work area (MW-2 well cluster). Each CAMP station includes a Dust Trak II and a photoionization detector (PID) in an environmental enclosure and a tripod to monitor for particulates/fugitive dust and volatile organic compounds (VOCs).

Well repair activities included:

- Demolition of the old curb box and asphalt around the MW-2I and MW-2D, located in the parking lot at 903 South Lake Boulevard.
- At MW-2D and MW-2I, grout was placed between well casings and the outer steel casings.
- New curb boxes were set in Portland cement.
- The top of the each well casing was shaved, and new locking J-Plugs were installed.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 9 |
| Kevin Meazell | TRC Engineers | Geologist | 5 |
| | | | |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| MiniRAE 3000 PID | Eco Rental Solutions | 3 | 3 |
| TSI DustTrak II | Eco Rental Solutions | 2 | 2 |
| Heron Interface Probe, 500' | Eco Rental Solutions | 1 | 1 |
| | | | |
| | | | |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**
All material associated with well repairs was provided by Precision.

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

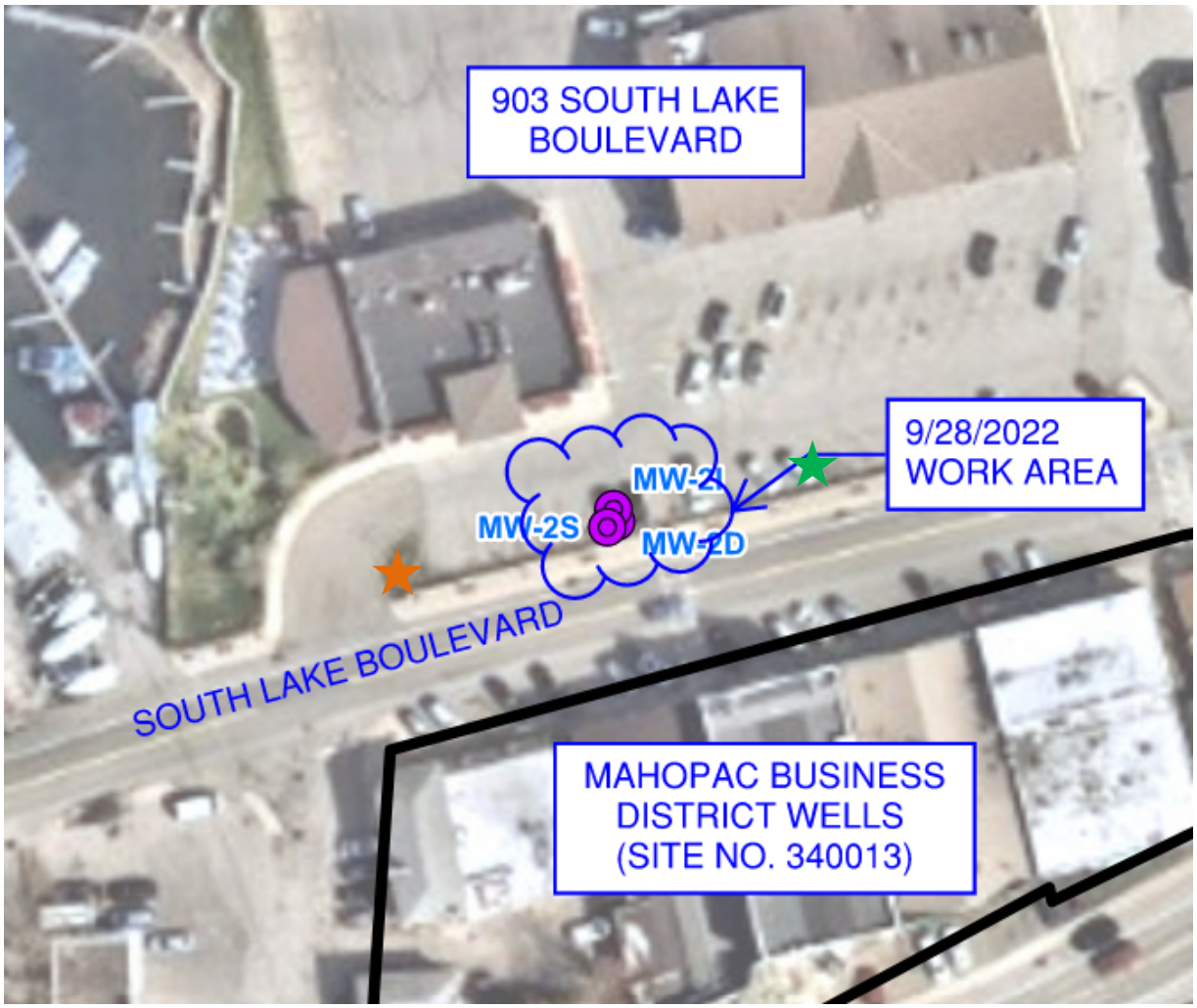
| Name | Representing |
|---|---|
| Not Applicable | |
| | |

**Project Schedule Comments**
Well repair activities scheduled for 9/28 through 9/30 of this week.

**Issues Pending**
None.

**Interaction with Public, Property Owners, Media, etc.**
Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization. In addition, property owners notified of planned work activities and schedule via phone call prior to performance of work.

**Include (insert) figures with markups showing location of work and job progress**




★ DOWNWIND CAMP STATION

★ UPWIND CAMP STATION

**Site Photographs (Descriptions Below)**



Photo 1: Photograph of MBDW-MW-2S, -2I and -2D during gauging activities, facing south.



Photo 2: Photograph of MBDW-6I and -6S during gauging activities, facing south.



Photo 3: Location of the upwind CAMP station during air monitoring, facing southwest.

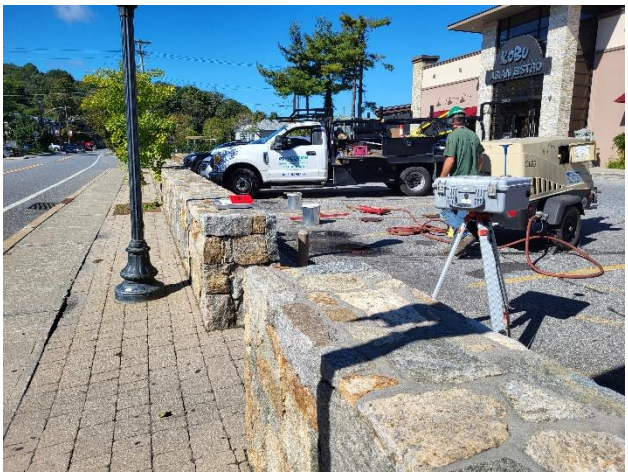


Photo 4: Photograph of the downwind CAMP station during air monitoring, facing west.



Photo 5: View of MW-2I and MW-2D during the installation of new curb boxes, facing north.



Photo 6: View of the regrouted wells, facing south.

| **Comments** | |
|---|---|
| None. | |
| **Site Inspector(s):** Rich DePolo, Keven Meazell | **Date: 9/28/2022** |

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments: | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

| |
|---|
| Comments:<br>None. |

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☐ | No ☐ | N/A☒ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☐ | No ☐ | N/A☒ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☐ | No ☐ | N/A☒ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☐ | No ☐ | N/A☒ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☐ | No ☐ | N/A☒ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |

| | | | |
|---|---|---|---|
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?<br>***There is no "site power" available for use. All power is supplied by portable generators.*** | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☒ | No ☐ | N/A☐ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☒ | No ☐ | N/A☐ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?<br>***Well repairs are designed to reduce infiltrations of surface runoff into wells.*** | Yes ☒ | No ☐ | N/A☐ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009801-04 (Task 1)

**DEC Insp. –** N/A

**DEC PM –** Jasmine Stefansky

**Contractor Supt. –** Precision

**Engineer PM –** Jenna Raup

**Engineer Insp. –** Rich DePolo

**Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Sunny | AM | Sunny | PM |
| **Temperature** | 45°F | AM | 60°F | PM |
| **Wind** | 5 – 10 mph S | AM | 0 – 5 mph S | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE.
- Parking cones were used to block off the work area.

| **Summary of Work Performed** | Arrived at site: | 8:00 | Departed Site: | 16:00 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) performed implementation of the Community Air Monitoring Plan (CAMP) and oversight during activities associated with the repair of 6 wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York. The objective is to provide direction to the call-out contractor (Precision) during the repair of all of the on-site wells (MBDW-MW-2I, MBDW-MW-2D, MBDW-MW-2S, MBDW-MW-3I, MBDW-MW-6I and MBDW-MW-6S) and confirm that well repair activities are not adversely affecting air quality of the surrounding community. The purpose of the work is to repair wells for continued use in site management groundwater monitoring and the ongoing PFAS source investigation.

CAMP stations were set up at the upwind and downwind perimeter of the work area (MW-2 and -6 well clusters). Each CAMP station includes a Dust Trak II and a photoionization detector (PID) in an environmental enclosure and a tripod to monitor for particulates/fugitive dust and volatile organic compounds (VOCs).

Well repair activities included:

- Demolition of the existing curb boxes and asphalt around MW-6I and MW-6S (918 South Lake Boulevard) and MW-2S (903 South Lake Boulevard).
- At MW-6S, MW-6I and MW-2S grout was placed between the well casings and the outer steel casings.
- New curb boxes were set in Portland cement.
- The top of the each well casing was shaved, and new locking J-Plugs were installed.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 9 |
| | | | |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| MiniRAE 3000 PID | Eco Rental Solutions | 3 | 3 |
| TSI DustTrak II | Eco Rental Solutions | 2 | 2 |
| Heron Interface Probe, 500' | Eco Rental Solutions | 1 | 1 |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**
All material associated with well repairs was provided by Precision.

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| Not Applicable | |
| | |
| | |
| | |

**Project Schedule Comments**
Well repair activities scheduled for 9/28 through 9/30 of this week.

**Issues Pending**
None.

**Interaction with Public, Property Owners, Media, etc.**
Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization. In addition, property owners notified of planned work activities and schedule via phone call prior to performance of work

**Include (insert) figures with markups showing location of work and job progress**




DOWNWIND CAMP STATIONS

UPWIND CAMP STATIONS

**Site Photographs (Descriptions Below)**

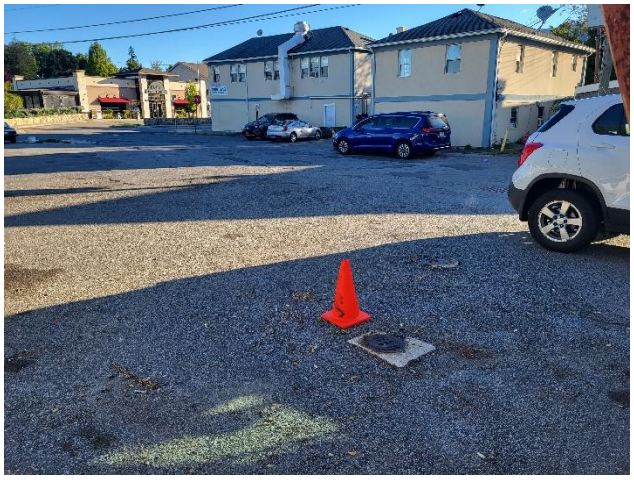


Photo 1: Photograph of MBDW-MW-6I and -6S during demo activities, facing north.



Photo 2: Photograph of the upwind CAMP station during air monitoring, facing south.



Photo 3: View of MW-2S after demo of the old curb box. Facing west.



Photo 4: Photograph of demo activities on MW-6S, facing north.



Photo 5: View of MW-6S after demo of the old curb box. Facing north.



Photo 6: View of MW-2I during demo activities. Facing North.

| | |
|---|---|
|  |  |
| Photo 7: View of MW-6S and MW-6I after grouting, facing west. | Photo 8: View of MW-2S after grouting, facing south. |

| **Comments** | |
|---|---|
| None. | |
| **Site Inspector(s):** Rich DePolo | **Date: 9/29/2022** |

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments: | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

| |
|---|
| Comments:<br>None. |

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☐ | No ☐ | N/A☒ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☐ | No ☐ | N/A☒ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☐ | No ☐ | N/A☒ |
| Complying with RCRA 90 day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☐ | No ☐ | N/A☒ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☐ | No ☐ | N/A☒ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |

| | | | |
|---|---|---|---|
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?<br>***There is no "site power" available for use. All power is supplied by portable generators.*** | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☒ | No ☐ | N/A☐ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☒ | No ☐ | N/A☐ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?<br>***Well repairs are designed to reduce infiltrations of surface runoff into wells.*** | Yes ☒ | No ☐ | N/A☐ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009801-04 (Task 1)

**DEC Insp. –** N/A

**DEC PM –** Jasmine Stefansky

**Contractor Supt. –** Precision

**Engineer PM –** Jenna Raup

**Engineer Insp. –** Rich DePolo,

**Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Sunny | AM | Sunny | PM |
| **Temperature** | 43°F | AM | 57°F | PM |
| **Wind** | 5 – 10 mph N | AM | 0 – 5 mph N | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE
- Parking cones were used to block off work area.

| **Summary of Work Performed** | Arrived at site: | 8:00 | Departed Site: | 11:30 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) implemented the Community Air Monitoring Plan (CAMP) and performed oversight during activities associated with the repair of 6 wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York. The objective is to provide direction to the call-out contractor (Precision) during the repair of all of the on-site wells (MBDW-MW-2I, MBDW-MW-2D, MBDW-MW-2S, MBDW-MW-3I, MBDW-MW-6I and MBDW-MW-6S) and confirm that well repair activities are not adversely affecting air quality of the surrounding community. The purpose of the work is to repair wells for continued use in site management groundwater monitoring and the ongoing PFAS source investigation.

CAMP stations were set up at the upwind and downwind perimeter of the work area (MW-3I). Each CAMP station includes a Dust Trak II and a photoionization detector (PID) in an environmental enclosure and a tripod to monitor for particulates/fugitive dust and volatile organic compounds (VOCs).

Repair activities at monitoring well MW-3I (945 South Lake Boulevard) included:

- Demolition of existing curb boxes and asphalt
- Placement of grout between the well casing and the outer steel casing
- Installation of a new curb box set in Portland cement
- Filing/shaving of the well casing and installation of a new locking J-Plug

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 4 |
| | | | |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| MiniRAE 3000 PID | Eco Rental Solutions | 3 | 3 |
| TSI DustTrak II | Eco Rental Solutions | 2 | 2 |
| Heron Interface Probe, 500' | Eco Rental Solutions | 1 | 1 |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**
All material associated with well repairs was provided by Precision.

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| Not Applicable | |
| | |
| | |
| | |

**Project Schedule Comments**
Well development will begin on 10/13.

**Issues Pending**
None.

**Interaction with Public, Property Owners, Media, etc.**
Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization. In addition, property owners notified of planned work activities and schedule via phone call prior to performance of work.

**Include (insert) figures with markups showing location of work and job progress**




DOWNWIND CAMP STATIONS

UPWIND CAMP STATIONS

**Site Photographs (Descriptions Below)**



Photo 1: Photograph of MW-3I prior demo activities, facing south.



Photo 2: Photograph of the downwind CAMP station during air monitoring, facing south.



Photo 3: Photograph of the upwind CAMP station during air monitoring, facing south.



Photo 4: Photograph of demo activities on MW-3I, facing south.



Photo 5: View of MW-3I after installation of a new curb box, facing west.



Photo 6: View of MW-3I after grouting, facing west.

| **Comments** | |
|---|---|
| None. | |
| **Site Inspector(s):** Rich DePolo | **Date: 9/30/2022** |

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments:<br>None. | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

| |
|---|
| Comments:<br>None. |

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☒ | No ☐ | N/A☐ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☐ | No ☐ | N/A☒ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☐ | No ☐ | N/A☒ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☐ | No ☐ | N/A☒ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☐ | No ☐ | N/A☒ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |

| | | | |
|---|---|---|---|
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☐ |
| Comments:<br>None. | | | |

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?<br>***There is no "site power" available for use. All power is supplied by portable generators.*** | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☒ | No ☐ | N/A☐ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☒ | No ☐ | N/A☐ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?<br>***Well repairs are designed to reduce infiltrations of surface runoff into wells.*** | Yes ☒ | No ☐ | N/A☐ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009801-04 (Task 1)

**DEC Insp. –** N/A

**DEC PM –** Jasmine Stefansky

**Contractor Supt. –** Precision

**Engineer PM –** Jenna Raup

**Engineer Insp. –** Rich DePolo

**Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Cloudy | AM | Rain | PM |
| **Temperature** | 50°F | AM | 65°F | PM |
| **Wind** | 0 – 5 mph S | AM | 10 – 15 mph S | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE.
- Parking cones were used to block off the work area.

| **Summary of Work Performed** | Arrived at site: | 7:45 | Departed Site: | 15:30 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) performed gauging and oversight during development of 5 wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York. The objective was to provide direction and technical guidance to the call-out contractor (Precision) during the development of on-site wells (MBDW-MW-2S, MBDW-MW-2I, MBDW-MW-3I, MBDW-MW-6S and MBDW-MW-6I) and confirm that the wells were thoroughly cleared of any silt or sandy debris prior to the next routine sampling event. The purpose of the work is to develop the wells for continued use for site management groundwater monitoring and in the ongoing PFAS source investigation.

Upon arrival at the Site, monitoring wells MBDW-MW-2S, MBDW-MW-2I, MBDW-MW-2D, MBDW-MW-3I, MBDW-MW-6S, and MBDW-MW-6I were gauged using a Heron Interface probe. Depth to water and depth to bottom values were recorded for each well.

MBDW-MW-2D was not developed because of equipment availability/limitations (total well depth of 330 feet bgs versus maximum pump length of 300 feet). An alternate plan for development and sampling is being prepared.

Well Development activities included:

- The usage of 2'' Grundfos MP1 pump into MBDW-MW-2S, MBDW-MW-2I, MBDW-MW-6I and MBDW-MW-6S for the purpose of agitating the silt and debris from the bottom of the well during purging.
- Observation and recording of water quality parameters with a YSI Pro water quality meter during purging to ensure key parameters (turbidity, oxidation-reduction potential [ORP], pH, conductivity, dissolved oxygen [DO], etc.) were stabilized prior to the completion of well development.
- The purged water from each of the wells was containerized in 55-gallon drums and stored in the northwest corner of 903 South Lake Boulevard Property following development activities. The drums were properly sealed and labeled.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 8 |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| Heron Interface Probe, 500' | Eco Rental Solutions | 1 | 1 |
| YSI Pro Water Quality Meter | Eco Rental Solutions | 1 | 1 |
| Grundfos MP1 Submersible Pump with VFD | Precision Environmental | 1 | 1 |
| Yamaha Portable Generator | Precision Environmental | 1 | 1 |
| | | | |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**

All material associated with well development (pumps, generator, IDW drums) was provided by Precision.

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| Not Applicable | |
| | |

**Project Schedule Comments**

Well development activities will continue on 10/14. Sampling will be scheduled at least two weeks following the completion of well development.

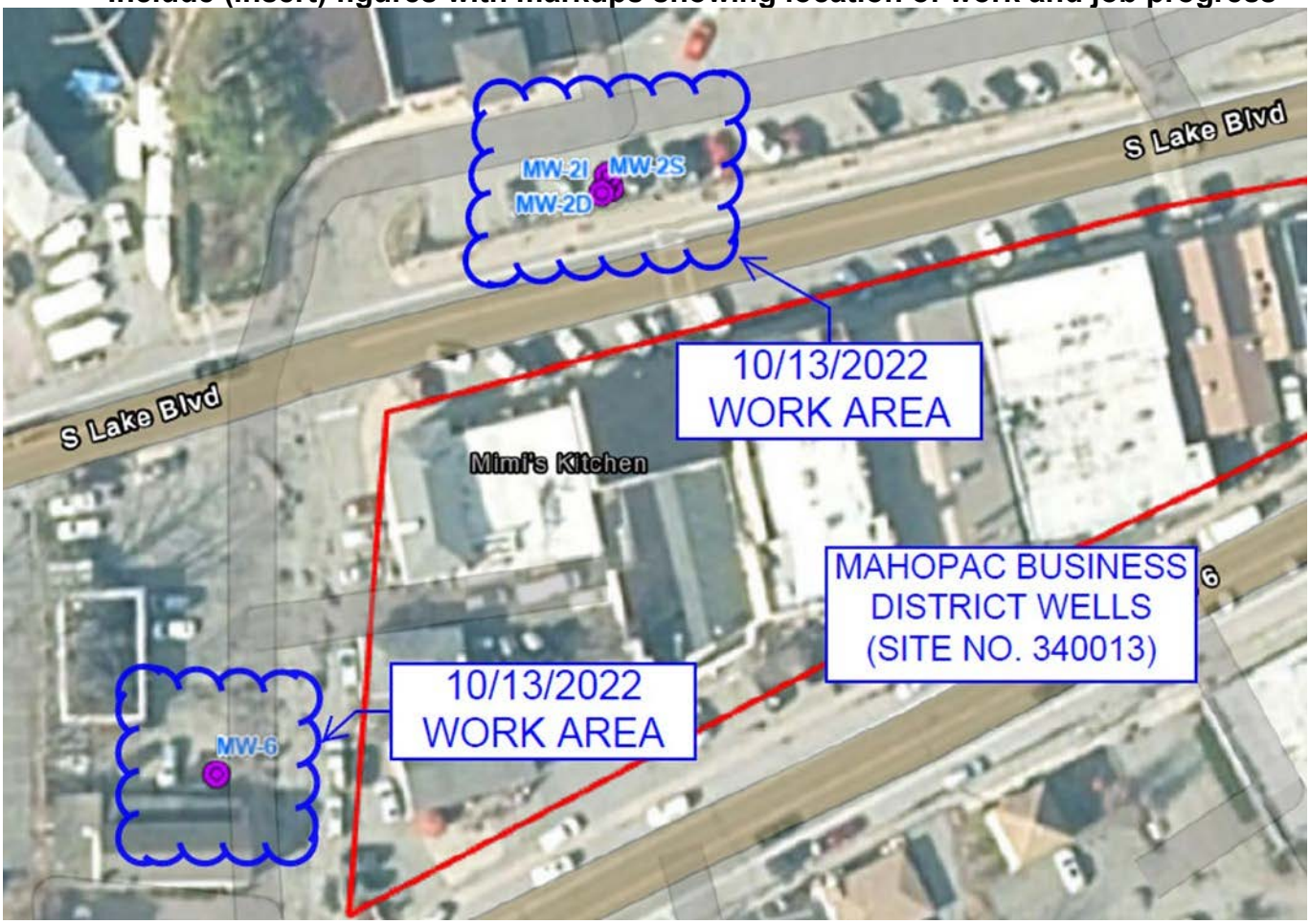
**Issues Pending**

None.

**Interaction with Public, Property Owners, Media, etc.**

Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization. In addition, property owners were notified of planned work activities and schedule via phone call prior to performance of work.

**Include (insert) figures with markups showing location of work and job progress**



**Site Photographs (Descriptions Below)**



Photo 1: Photograph of MBDW-MW-2I during development activities, facing south.




Photo 2: Photograph of groundwater purged from MBDW-MW-2I



Photo 3: Photograph of groundwater from MBDW-MW-2I toward end of development.



Photo 4: Photograph of groundwater purged from MBDW-MW-6I.

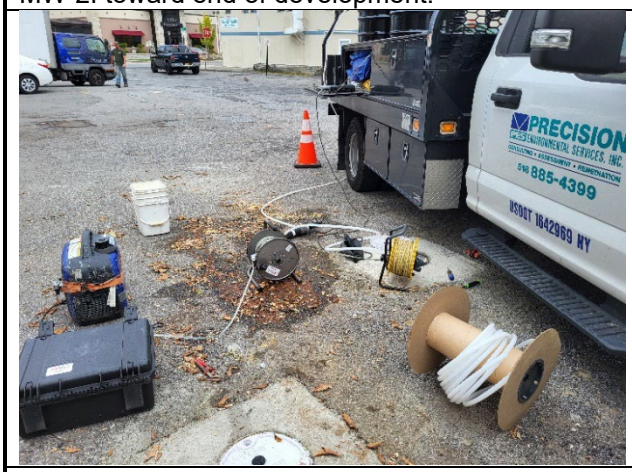



Photo 5: View of MBDW-MW-6S during development activities, facing north.



Photo 6: Photograph of the sealed and labeled drums containing investigation-derived waste (IDW) (i.e., purge water).

| **Comments** | |
|---|---|
| None. | |
| **Site Inspector(s):** Rich DePolo | **Date: 10/13/2022** |

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments: | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

Comments:
None.

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☒ | No ☐ | N/A☐ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☒ | No ☐ | N/A☐ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☒ | No ☐ | N/A☐ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☒ | No ☐ | N/A☐ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☒ | No ☐ | N/A☐ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☒ | No ☐ | N/A☐ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>Disposal sample for IDW drums to be collected 10/14/2022 for laboratory analysis. In addition, a locking storage container will be delivered on 10/14, which will be used to hold drums pending receipt of waste characterization analytical results. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |

Comments:
None.

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)? ***There is no "site power" available for use. All power is supplied by portable generators.*** | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☒ | No ☐ | N/A☐ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☐ | No ☐ | N/A☒ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009801-04 (Task 1)

**DEC Insp. –** N/A

**DEC PM –** Jasmine Stefansky

**Contractor Supt. –** Precision

**Engineer PM –** Jenna Raup

**Engineer Insp. –** Rich DePolo

**Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Partly Cloudy | AM | Sunny | PM |
| **Temperature** | 42°F | AM | 60°F | PM |
| **Wind** | 0 – 5 mph S | AM | 0 – 5 mph S | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE.
- Parking cones were used to block off the work area.

| **Summary of Work Performed** | Arrived at site: | 8:00 | Departed Site: | 13:30 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) performed gauging and oversight during development of 5 wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York. The objective was to provide direction and technical guidance to the call-out contractor (Precision) during the development of the on-site wells (MBDW-MW-2S, MBDW-MW-2I, MBDW-MW-3I, MBDW-MW-6S and MBDW-MW-6I) and confirm that the wells were thoroughly cleared of any silt or sandy debris prior to the next sampling event. The purpose of the work is to develop the wells for continued use for site management groundwater monitoring and in the ongoing PFAS source investigation.

Upon arrival at the Site, monitoring wells MBDW-MW-2I, MBDW-MW-2D, MBDW-MW-2S, MBDW-MW-3I, and MBDW-MW-6S were gauged using a Heron Interface probe. Depth to water and depth to bottom values were recorded for each well.

MBDW-MW-2D was not developed because of equipment availability/limitations (total well depth of approximately 330 feet versus maximum pump length of 300 feet). An alternate plan for development and sampling is being prepared.

Well Development activities included:

- The usage of 2'' Grundfos MP1 pump into MBDW-MW-3I for the purpose of agitating the silt and debris from the bottom of the well during purging.
- Observation and recording of water quality parameters with a YSI Pro water quality meter during purging to ensure key parameters (turbidity, oxidation-reduction potential [ORP], pH, conductivity, dissolved oxygen [DO], etc.) were stabilized prior to the completion of well development.
- The purged water from the well was containerized in 55-gallon drums and stored behind the 903 South Lake Boulevard Property after development activities were concluded. The drums were properly sealed and labeled.
- A composite sample of well development purge water was collected for waste characterization purposes in support of disposal. The sample was designated as MBDW-DS-1 and was delivered to Pace Analytical Laboratories (PACE) for analysis for turbidity, oxidation-reduction potential (ORP), pH, conductivity, and dissolved oxygen (DO). Disposal will be scheduled following well sampling.
- A 20-foot locking storage container was delivered to 903 South Lake Boulevard. Drums were secured within the storage container, pending laboratory results.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

## Personnel and Equipment

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 6 |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| Heron Interface Probe, 500' | Eco Rental Solutions | 1 | 1 |
| YSI Pro Water Quality Meter | Eco Rental Solutions | 1 | 1 |
| Grundfos MP-1 Pump with VFD | Precision Environmental | 1 | 1 |
| Yamaha Portable Generator | Precision Environmental | 1 | 1 |
| | | | |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**

All material associated with well development (pumps, generator, IDW drums) was provided by Precision.

## Visitors to Site

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| Not Applicable | |
| | |

## Project Schedule Comments

Sampling will be scheduled in at least two weeks.

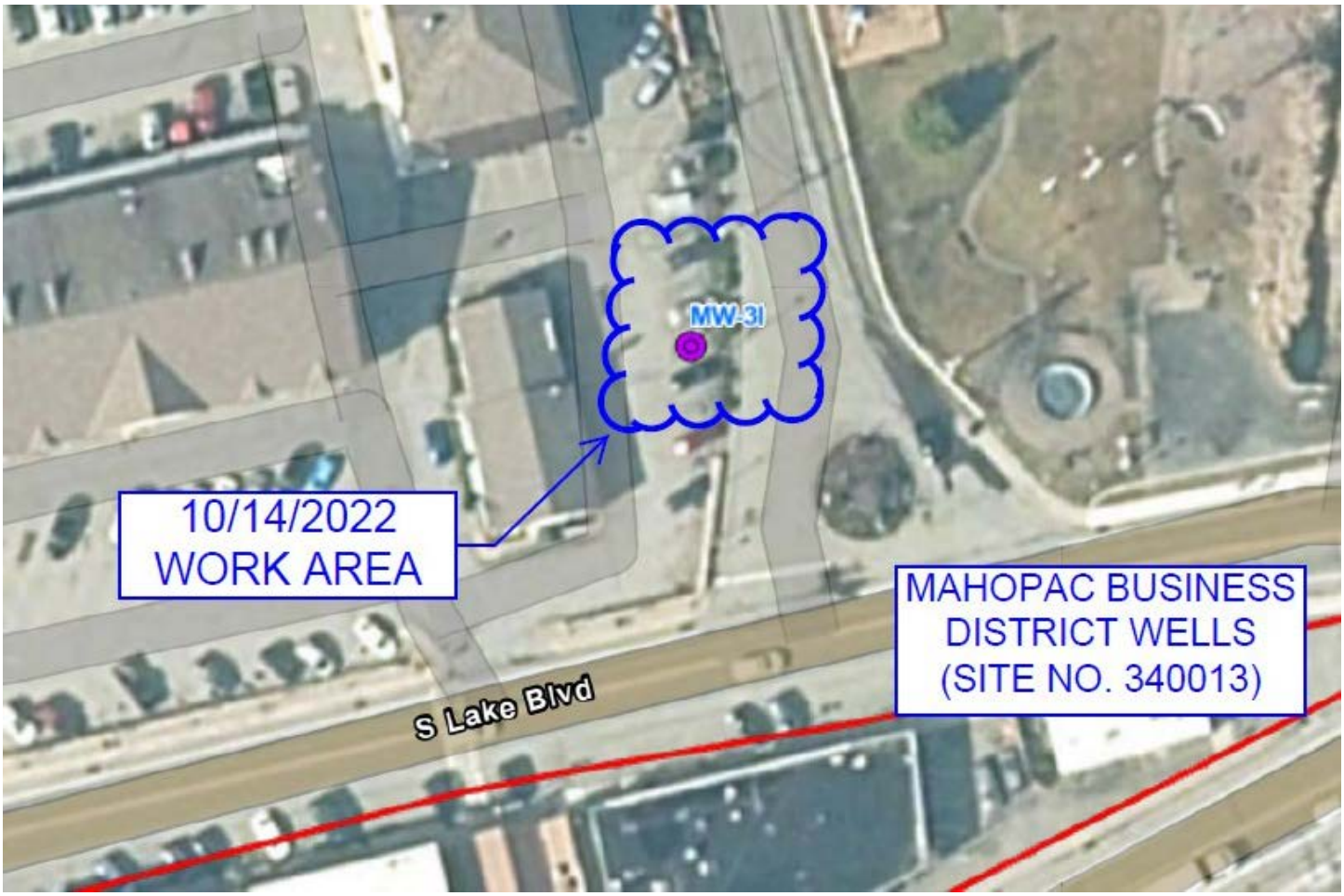
## Issues Pending

None.

## Interaction with Public, Property Owners, Media, etc.

Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization. In addition, property owners were notified of planned work activities and schedule via phone call prior to performance of work. The owner and property tenant of 903 South Lake was concerned with the size and proposed location of the storage container. TRC and Precision worked with the owner and tenant to move the container to a location that minimizes the impact of the storage container on the available establishment parking.

**Include (insert) figures with markups showing location of work and job progress**



**Site Photographs (Descriptions Below)**



Photo 1: Photograph of MBDW-MW-3I during development activities, facing east.



Photo 2: Photograph of groundwater during the development of MBDW-MW-3I.



Photo 3: View of the contents of an IDW drum.



Photo 4: View of MBDW-MW-3I during development. Facing south.

**Comments**

None.

**Site Inspector(s):** Rich DePolo

**Date: 10/14/2022**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments: | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

Comments:
None.

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☒ | No ☐ | N/A☐ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☒ | No ☐ | N/A☐ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☒ | No ☐ | N/A☐ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☒ | No ☐ | N/A☐ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☒ | No ☐ | N/A☐ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☒ | No ☐ | N/A☐ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |

Comments:
A purge water waste characterization sample was submitted to the laboratory for analysis for EPA 8081, EPA 8015 GRO, Flashpoint (SW 846), EPA 8082, EPA 6010 (TAL Metals), Reactivity, Corrosivity, EPA 8270 (TCL SVOCS) and EPA 8015 GRO. Drums are currently being stored in a locking storage container at 903 South Lake Boulevard. Additional purge water will be generated during sampling in approximately two weeks. Results of waste characterization and sampling analyses will be used to identify a disposal facility following well sampling.

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |

| | | | |
|---|---|---|---|
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?<br>***There is no "site power" available for use. All power is supplied by portable generators.*** | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☒ | No ☐ | N/A☐ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☐ | No ☐ | N/A☒ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009812-04 (Task 1)

**DEC Insp. –** N/A

**DEC PM –** Jasmine Stefansky

**Contractor Supt. –** N/A

**Engineer PM –** Jenna Raup

**Engineer Insp. –** Rich DePolo

**Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Cloudy | AM | Cloudy, Scattered Rain | PM |
| **Temperature** | 50°F | AM | 55°F | PM |
| **Wind** | 0 – 5 mph SW | AM | 0 – 5 mph SW | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE.
- Parking cones were used to block off the work area.

| **Summary of Work Performed** | Arrived at site: | 9:45 | Departed Site: | 15:00 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) performed gauging and sampling activities associated with 6 on-Site wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York.

Upon arrival at the Site, monitoring wells MBDW-MW-2I, MBDW-MW-2S, and MBDW-MW-3I were gauged using a Heron Interface probe. Depth to water and depth to bottom values were recorded for each.

Well Sampling Activities

- MBDW-MW-2I, MBDW-WM-2S, and MBDW-MW-3I were sampled using low flow sampling techniques. During purging, water quality parameters (turbidity, oxidation-reduction potential [ORP], pH, conductivity, etc.) were collected using a Horiba U-52 water quality meter and recorded in a field logbook. Parameters were allowed to stabilized prior to sample collection.
- Samples were collected in laboratory-supplied bottleware for analysis for PFAS (USEPA Method 1633, for 40 compounds) and TCL VOCs (USEPA Method 8260).
- The purged water from sampled wells was containerized in 55-gallon drums and were sealed, labeled, and stored in a dedicated locking container at 903 South Lake Boulevard.
- At MBDW-MW-2I, both the Matrix Spike and Matrix Spike Duplicate (MS/MSD) samples were collected.
- All samples were stored in coolers on-ice with a trip blank pending delivery to the call-out Environmental Laboratory Approval Program (ELAP) laboratory. Standard chain-of-custody (COC) procedures were followed.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 5.5 |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| Heron Interface Probe, 500' | Pine Environmental | 1 | 1 |
| Horiba U-52 Water Quality Meter | Pine Environmental | 1 | 1 |
| Geotech Peristaltic Pump | Pine Environmental | 1 | 1 |
| MiniRAE 3000 PID | Pine Environmental | 1 | 1 |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**

Purged groundwater generated during groundwater sampling was containerized in labeled 55-gallon steel drums. Following sampling, drums were sealed and stowed in a dedicated locking container at 903 South Lake Boulevard.

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| Not Applicable | |
| | |

**Project Schedule Comments**

Well sampling will continue 11/2 and 11/3. Precision Environmental will be present on 11/3 to assist with waste well development water management during development and sampling of MBDW-MW-2D.

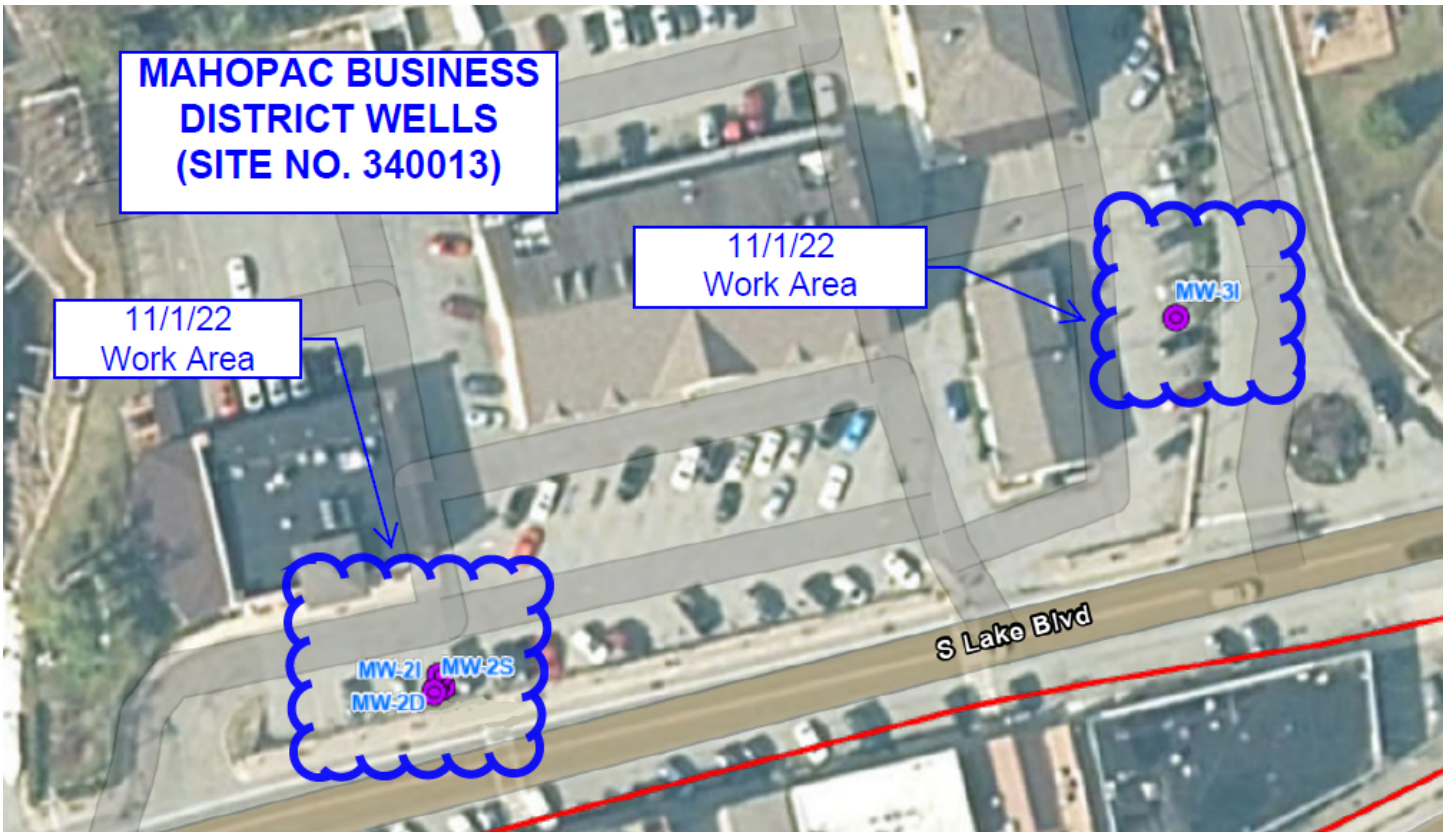
**Issues Pending**

None.

**Interaction with Public, Property Owners, Media, etc.**

Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization.

**Include (insert) figures with markups showing location of work and job progress**


MAHOPAC BUSINESS DISTRICT WELLS (SITE NO. 340013)
11/1/22 Work Area
11/1/22 Work Area
MW-3I
MW-2I
MW-2S
MW-2D
S Lake Blvd

**Site Photographs (Descriptions Below)**



Photo 1: Photograph of MBDW-MW-2I during sampling activities, facing south.

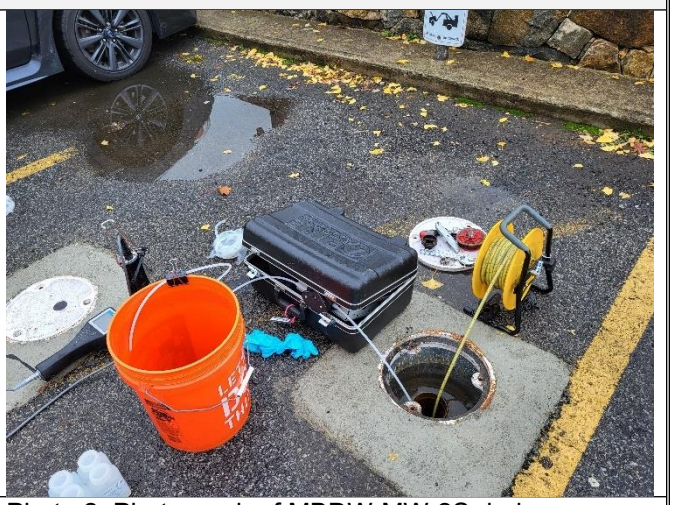


Photo 2: Photograph of MBDW-MW-2S during sampling activities, facing south.



Photo 3: View of the clear non-turbid water purged from MBDW-MW-2S prior to sampling.



Photo 4: View of MBDW-MW-3I during sampling activities, facing west.

**Comments**

None.

**Site Inspector(s):** Rich DePolo

**Date: 11/1/2022**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments:<br>None. | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

| |
|---|
| Comments:<br>None. |

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☒ | No ☐ | N/A☐ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☒ | No ☐ | N/A☐ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☒ | No ☐ | N/A☐ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☒ | No ☐ | N/A☐ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☒ | No ☐ | N/A☐ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☒ | No ☐ | N/A☐ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>All IDW drums are locked in a container at 903 South Lake Boulevard to prevent public exposure. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |

Comments:
None.

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)? | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☐ | No ☐ | N/A☒ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☐ | No ☐ | N/A☒ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☐ | No ☐ | N/A☒ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

| | |
|---|---|
| NYSDEC<br>Division of Environmental Remediation | **Contract No. –** D009812-04 (Task 1) |
| **Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York | **DEC Insp. –** N/A<br>**DEC PM –** Jasmine Stefansky<br>**Contractor Supt. –** N/A<br>**Engineer PM –** Jenna Raup<br>**Engineer Insp. –** Rich DePolo |

| **Weather Conditions** | | | | |
|---|---|---|---|---|
| **General Description** | Sunny, Clear | AM | Sunny, Clear | PM |
| **Temperature** | 55°F | AM | 62°F | PM |
| **Wind** | 0 – 5 mph SW | AM | 0 – 5 mph SW | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE.
- Parking cones were used to block off the work area.

| **Summary of Work Performed** | Arrived at site: | 8:30 | Departed Site: | 13:30 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) performed gauging and sampling activities associated with 6 on-Site wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York.

Upon arrival at the Site, monitoring wells MBDW-MW-6S, and MBDW-MW-6I were gauged using a Heron Interface probe. Depth to water and depth to bottom values were recorded for each.

Well Sampling Activities

- MBDW-MW-6S and MBDW-MW-6I were sampled using low flow sampling techniques. During purging, water quality parameters (turbidity, oxidation-reduction potential [ORP], pH, conductivity, etc.) were collected using a Horiba U-52 water quality meter and recorded in a field logbook. Parameters were allowed to stabilized prior to sample collection.
- Samples were collected in laboratory-supplied bottleware for analysis for PFAS (USEPA Method 1633, for 40 compounds) and TCL VOCs (USEPA Method 8260).
- The purged water from sampled wells was containerized in 55-gallon drums and were sealed, labeled, and stored in a dedicated locking container at 903 South Lake Boulevard.
- All samples were stored in coolers on-ice with a trip blank pending delivery to the call-out Environmental Laboratory Approval Program (ELAP) laboratory. Standard chain-of-custody (COC) procedures were followed.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 5 |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| Heron Interface Probe, 500' | Pine Environmental | 1 | 1 |
| Horiba U-52 Water Quality Meter | Pine Environmental | 1 | 1 |
| Geotech Peristaltic Pump | Pine Environmental | 1 | 1 |
| MiniRAE 3000 PID | Pine Environmental | 1 | 1 |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**

Purged groundwater generated during groundwater sampling was containerized in labeled 55-gallon steel drums. Following sampling, drums were sealed and stowed in a dedicated locking container at 903 South Lake Boulevard.

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| Not Applicable | |
| | |

**Project Schedule Comments**

Well sampling will continue on 11/3. Precision Environmental will be present on 11/3 to assist with waste well development water management during development and sampling of MBDW-MW-2D

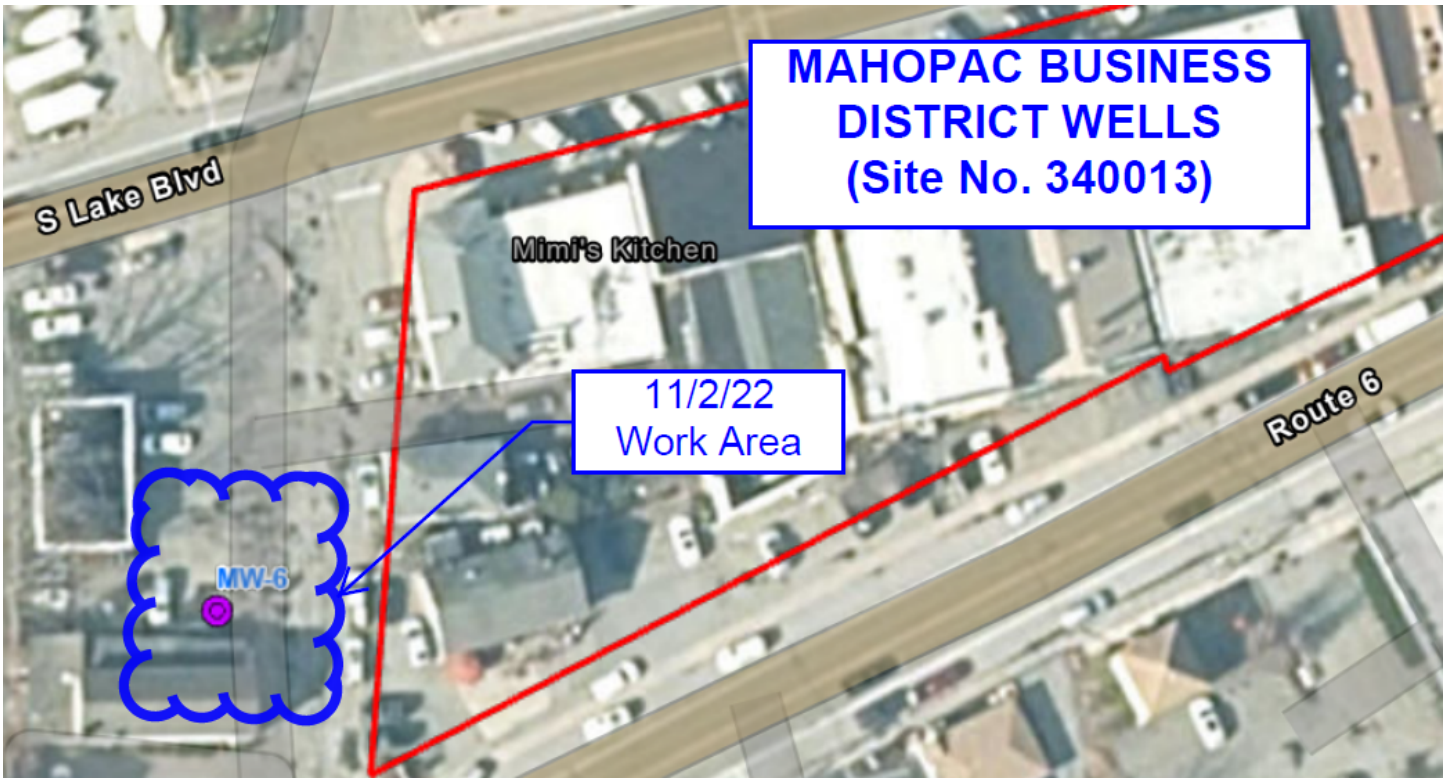
**Issues Pending**

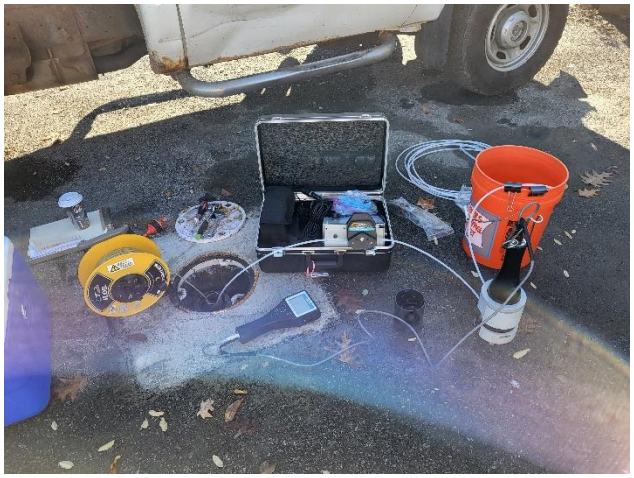
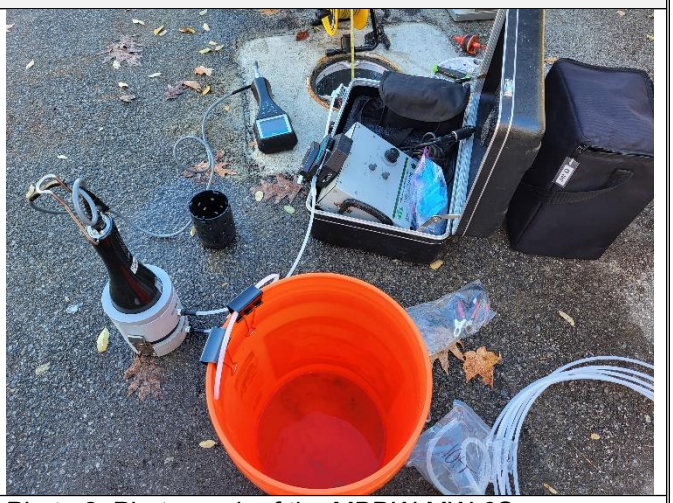
None.

**Interaction with Public, Property Owners, Media, etc.**

Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization.

**Include (insert) figures with markups showing location of work and job progress**



| **Site Photographs (Descriptions Below)** | |
|---|---|
|  |  |
| Photo 1: Photograph of MBDW-MW-6S during sampling activities, facing southeast. | Photo 2: Photograph of the MBDW-MW-6S purge water during sampling activities, facing north. |
|  |  |
| Photo 3: Photograph of MBDW-MW-6I during sampling activities, facing northeast. | Photo 4: Photograph of the storage container behind 903 S. Lake Boulevard due IDW drum storage, facing northwest. |

| **Comments** | |
|---|---|
| None. | |
| **Site Inspector(s):** Rich DePolo | **Date: 11/2/2022** |

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments:<br>None. | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

Comments:
None.

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☒ | No ☐ | N/A☐ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☒ | No ☐ | N/A☐ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☒ | No ☐ | N/A☐ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☒ | No ☐ | N/A☐ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☒ | No ☐ | N/A☐ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☒ | No ☐ | N/A☐ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>All IDW drums are locked in a container at 903 South Lake Boulevard to prevent public exposure. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |

Comments:
None.

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)? | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☐ | No ☐ | N/A☒ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☐ | No ☐ | N/A☒ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☐ | No ☐ | N/A☒ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009812-04 (Task 1)
**DEC Insp. –** N/A
**DEC PM –** Jasmine Stefansky
**Contractor Supt. –** Precision
**Engineer PM –** Jenna Raup
**Engineer Insp. –** Rich DePolo

**Site Location:** Mahopac Business District Wells, South Lake Boulevard (Route 6N), Mahopac, New York

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Sunny, Clear | AM | Sunny, Clear | PM |
| **Temperature** | 50°F | AM | 65°F | PM |
| **Wind** | 0 – 5 mph SW | AM | 5 – 10 mph SW | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | **No** | NA |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

- Site work performed in Level D PPE.
- Parking cones were used to block off the work area.

| **Summary of Work Performed** | Arrived at site: | 8:00 | Departed Site: | 14:45 |
|---|---|---|---|---|

TRC Engineers, Inc. (TRC) performed gauging and sampling activities associated with 6 on-Site wells at the Mahopac Business District (Site) located on South Lake Boulevard, in the downtown area of Mahopac, New York.

MBDW-MW-2D was developed using a 2'' Grundfos submersible pump prior to low-flow sampling. During development of the well, TRC personnel recorded water quality parameters using a Horiba U-52 water quality meter to ensure that the well was stabilized, with particular emphasis on achieving a turbidity of <10 NTU. MBDW-MW-2D was purged/developed with assistance from Precision Environmental (Precision), who provided a generator and a support vehicle for movement of investigation-derived waste (IDW) from the well to the storage container behind the restaurant at 903 South Lake Boulevard. Following the development of MBDW-MW-2D, the well was sampled using low-flow techniques via a Geotech Low-Flow bladder pump with dedicated tubing.

Well Sampling Activities

- During purging of MBDW-MW-2D, water quality parameters (Turbidity, ORP, pH, Conductivity, etc.) were collected using a Horiba U-52 water quality meter and recorded in a field logbook. Parameters were allowed to stabilized prior to sample collection. A turbidity of o NTU was achieved.
- Samples were collected in laboratory-supplied bottleware for analysis for PFAS (USEPA Method 1633, for 40 compounds) and TCL VOCs (USEPA Method 8260).
- The purged water from sampled wells was containerized in 55-gallon drums that were sealed, labeled, and stored in a dedicated locking container at 903 South Lake Boulevard.
- All samples were placed in chilled coolers and transported via courier to Pace Analytical Laboratories Inc. (PACE), the call-out Environmental Laboratory Approval Program (ELAP) laboratory. Standard chain-of-custody (COC) procedures were followed.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | No | **NA** |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Rich DePolo | TRC Engineers | Geologist | 6.75 |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| Heron Interface Probe, 500' | Pine Environmental | 1 | 1 |
| Horiba U-52 Water Quality Meter | Pine Environmental | 1 | 1 |
| MiniRAE 3000 PID | Pine Environmental | 1 | 1 |
| Grundfos Submersible Pump | Geotech | 1 | 1 |
| Geotech Low-Flow Bladder Pump | Geotech | 1 | 1 |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons)* |
|---|---|---|---|---|---|---|
| Not Applicable | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

*On-Site scale for off-site shipment, delivery ticket for material received

**Equipment/Material Tracking Comments:**

Purged groundwater generated during groundwater sampling was containerized in labeled 55-gallon steel drums. Following sampling, drums were sealed and stowed in a dedicated locking container at 903 South Lake Boulevard.

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| Not Applicable | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| Not Applicable | |
| | |

**Project Schedule Comments**

Sampling of existing monitoring wells is complete. Removal of IDW will be scheduled following receipt of laboratory analytical data.

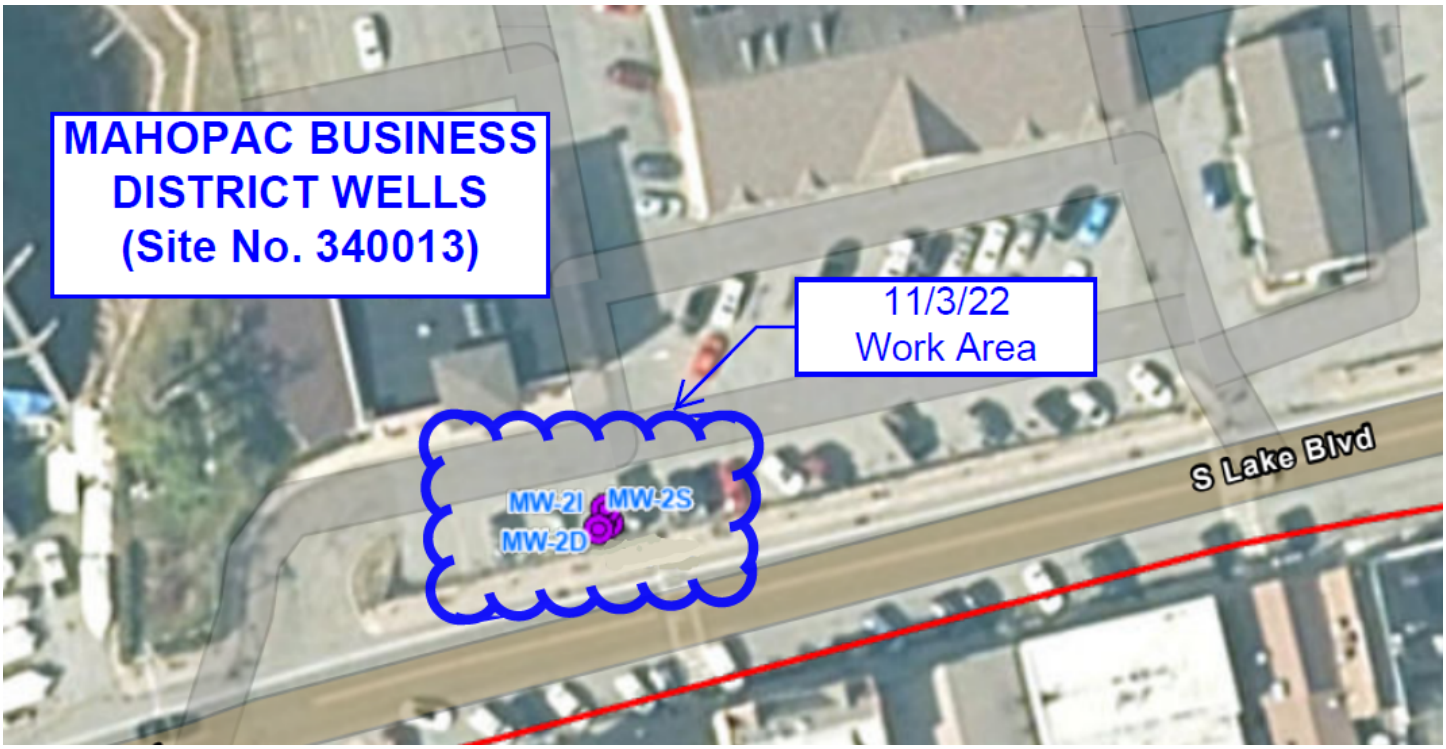
**Issues Pending**

None.

**Interaction with Public, Property Owners, Media, etc.**

Voluntary Access Agreements (VAAs) in place with property owners of 903, 918 and 945 South Lake Boulevard prior to mobilization.

**Include (insert) figures with markups showing location of work and job progress**


MAHOPAC BUSINESS DISTRICT WELLS (Site No. 340013)
11/3/22 Work Area
MW-2I
MW-2S
MW-2D
S Lake Blvd

**Site Photographs (Descriptions Below)**



Photo 1: Photograph of MBDW-MW-2D during development activities, facing southwest.



Photo 2: Photograph of the MBDW-MW-2D being developed into drums on a support truck. Facing southwest.



Photo 3: Photograph of the groundwater purged into an IDW drum from MBDW-MW-2D.




Photo 4: Photograph of the transfer of IDW water from the support truck drums into drums within the storage container, facing northeast.

**Comments**

None.

**Site Inspector(s):** Rich DePolo

**Date: 11/3/2022**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☒

## DAILY HEALTH CHECKLIST

| | | |
|---|---|---|
| Is social distancing being practiced? | Yes ☒ | No ☐ |
| Is the tail gate safety meeting held outdoors? | Yes ☒ | No ☐ |
| Are remote/call in job meetings being held in lieu of meeting in person where possible? | Yes ☒ | No ☐ |
| Were personal protective gloves, masks, and eye protection being used? | Yes ☒ | No ☐ |
| Are sanitizing wipes, wash stations or spray available? | Yes ☒ | No ☐ |
| Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)? | Yes ☐ | No ☒ |
| Comments:<br>None. | | |

## REMEDIAL ACTIVITIES AT PROPERTIES

| | | |
|---|---|---|
| 1. Have anyone at this location been tested and confirmed to have COVID-19? | Yes ☐ | No ☒ |
| 2. Is anyone at this location isolated or quarantined for COVID-19? | Yes ☐ | No ☒ |
| 3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days? | Yes ☐ | No ☒ |
| 4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)? | Yes ☐ | No ☒ |
| 5. Does the Department and its contractors have your permission to enter the property at this time? | Yes ☒ | No ☐ |
| If Yes to any of 1-4 above:<br>• If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry.<br>• If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry. | Yes ☐ | No ☐ |

Comments:
None.

On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☒ | No ☐ | N/A☐ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☒ | No ☐ | N/A☐ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☒ | No ☐ | N/A☐ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☒ | No ☐ | N/A☐ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☒ | No ☐ | N/A☐ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☒ | No ☐ | N/A☐ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>All IDW drums are locked in a container behind 903 South Lake Boulevard to prevent exposure. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☒ | N/A☐ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |

Comments:
None.

**RESILIENCE/GREEN REMEDIATION CHECKLIST**

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)? | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☐ | No ☐ | N/A☒ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☒ | No ☐ | N/A☐ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☒ | No ☐ | N/A☐ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br>None. | | | |

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

**Contract No. –** D009812-04, Task 1
**DEC Insp. –** N/A
**DEC PM –** Jasmine Stefansky
**Contractor Supt. –** Sean Tuthill
**Engineer PM –** Jenna Raup
**Engineer Insp. –** Jenna Raup

**Site Location:** Mahopac Business District Wells

**Weather Conditions**

| | | | | |
|---|---|---|---|---|
| **General Description** | Overcast | AM | N/A | PM |
| **Temperature** | 50°F | AM | N/A | PM |
| **Wind** | NW 15 mph | AM | N/A | PM |

**Health & Safety**
**If any box below is checked "Yes", provide explanation under "Health & Safety Comments".**

| | | | |
|---|---|---|---|
| Were there any changes to the Health & Safety Plan? | *Yes | **No** | NA |
| Were there any exceedances of the perimeter air monitoring reported on this date? | *Yes | No | **NA** |
| Were there any nuisance issues reported/observed on this date? | *Yes | **No** | NA |

**Health & Safety Comments**

All work conducted in Level D PPE.

| **Summary of Work Performed** | Arrived at site: | 07:45 | Departed Site: | 09:30 |
|---|---|---|---|---|

TRC was on-Site at 903 South Lake Boulevard with AARCO Environmental Corp. (AARCO or "Subcontractor") to pick-up investigation-derived waste (IDW) drums generated during Site well redevelopment and sampling. IDW drums are characterized as non-regulated PFAS-contaminated liquid waste and are being transported by AARCO to Dale Transfer Corp. in West Babylon, NY prior to being bulked and transported to Clear Flo Technology in North Lindenhurst, NY for disposal.

**Equipment/Material Tracking**
**If any box below is checked "Yes", provide explanation under "Material Tracking Comments".**

| | | | |
|---|---|---|---|
| Were there any vehicles which did not display proper D.O.T numbers and placards? | *Yes | **No** | NA |
| Were there any vehicles which were not tarped? | *Yes | No | **NA** |
| Were there any vehicles which were not decontaminated prior to exiting the work site? | *Yes | No | **NA** |

**Personnel and Equipment**

| Individual | Company | Trade | Total Hours |
|---|---|---|---|
| Jenna Raup | TRC Engineers, Inc. | Senior Project Manager | 1.75 |
| Elijah Oztark / Stewart G | AARCO | Driver / Laborer | 0.75 |
| | | | |
| | | | |
| | | | |

| Equipment Description | Contractor/Vendor | Quantity | Used |
|---|---|---|---|
| Truck with Lift Gate | AARCO | 1 | 1 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| Material Description | Imported/ Delivered to Site | Exported off Site | Waste Profile (If Applicable) | Source or Disposal Facility (If Applicable) | Daily Loads | Daily Weight (tons) |
|---|---|---|---|---|---|---|
| Purge Water IDW | N/A | 4/7/2023 | Non-Regulated PFAS-Contaminated Liquid Waste | Dale Transfer Corp., West Babylon, NY / Clear Flo Technology, North Lindenhurst, NY | 1 | 1.2 |

**Equipment/Material Tracking Comments:**
Waste Manifest Tracking No. NHWM218496

**Visitors to Site**

| Name | Representing | Entered Exclusion/CRZ Zone | |
|---|---|---|---|
| None | | Yes | No |
| | | Yes | No |
| | | Yes | No |
| | | Yes | No |

**Site Representatives**

| Name | Representing |
|---|---|
| | |
| | |
| | |
| | |

**Project Schedule Comments**

This phase of the project will be complete once the storage container is removed from the property (schedule TBD).

**Issues Pending**

None.

**Interaction with Public, Property Owners, Media, etc.**

None.

**Include (insert) figures with markups showing location of work and job progress**




**Site Photographs (Descriptions Below)**



Photo 1: Waste drums in IDW storage container prior to removal.



Photo 2: Storage container following waste drum removal.




Photo 3: Labeled drum.

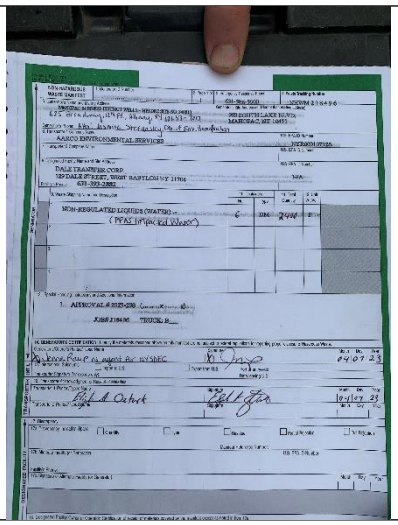


Photo 4: Completed waste manifest.

| **Comments** | |
|---|---|
| None. | |
| **Site Inspector(s):** Jenna Raup | **Date: 04/07/2023** |

Separate videos of operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? No ☒ Yes ☐

## On-Site Waste Storage

| | | | |
|---|---|---|---|
| Drums, roll offs and piles are staged in secure areas? | Yes ☒ | No ☐ | N/A☐ |
| Liners and berms have been installed if necessary to prevent cross contamination of clean areas? | Yes ☐ | No ☐ | N/A☒ |
| Containers are in good condition or properly overpacked? | Yes ☒ | No ☐ | N/A☐ |
| Waste materials are scheduled to be properly characterized and disposed of prior to demobilization? | Yes ☐ | No ☐ | N/A☒ |
| Complying with RCRA 90-day storage limitation for hazardous waste? | Yes ☐ | No ☐ | N/A☒ |
| Piles are securely covered when not in use? | Yes ☐ | No ☐ | N/A☒ |
| Containers are closed when not in use? | Yes ☒ | No ☐ | N/A☐ |
| Staging areas should be inspected periodically and any issues addressed immediately? | Yes ☒ | No ☐ | N/A☐ |
| Signage and labeling comply with RCRA requirements for all staging areas and containers? | Yes ☒ | No ☐ | N/A☐ |
| If any issues noted, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments:<br><br>All drums have been removed from IDW Storage Container at 903 South Lake Boulevard. The storage container is scheduled to be removed within the next two weeks. | | | |

## NUISANCE CHECKLIST

| | | | |
|---|---|---|---|
| Were there any community complaints related to work on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were there any odors detected on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was noise outside specification and/or above background on this date? | Yes ☐ | No ☒ | N/A☐ |
| Were vibration readings outside specification and/or above background on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible dust observed beyond the work perimeter on this date? | Yes ☐ | No ☐ | N/A☒ |
| Any visible contrast (turbidity) beyond engineering controls observed on this date? | Yes ☐ | No ☐ | N/A☒ |
| Was turbidity checked at the outfall(s)? | AM ☐ | PM ☐ | N/A☒ |

| | | | |
|---|---|---|---|
| Were any property owners NOT provided advance notice for work performed on this property on this date? | Yes ☐ | No ☒ | N/A☐ |
| Was the temporary fabric structure closed at the end of the day? | Yes ☐ | No ☐ | N/A☒ |
| Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work? | Yes ☐ | No ☐ | N/A☒ |
| If yes, has Contractor been notified? | Yes ☐ | No ☐ | N/A☒ |
| Comments: | | | |

## RESILIENCE/GREEN REMEDIATION CHECKLIST

| | | | |
|---|---|---|---|
| Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)? | Yes ☐ | No ☐ | N/A☒ |
| Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment? | Yes ☒ | No ☐ | N/A☐ |
| Is vehicle idling adequately reduced per 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3? | Yes ☒ | No ☐ | N/A☐ |
| Is BART-equipped equipment properly maintained and working? | Yes ☐ | No ☐ | N/A☒ |
| Is work being sequenced to avoid double handling? | Yes ☒ | No ☐ | N/A☐ |
| Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with? | Yes ☒ | No ☐ | N/A☒ |
| Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed? | Yes ☐ | No ☐ | N/A☒ |
| Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)? | Yes ☐ | No ☐ | N/A☒ |
| | | | |
| Has Contractor been notified of any deficiencies? | Yes ☐ | No ☐ | N/A☒ |
| Comments: | | | |

* BART – Best Available Retrofit Technology

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | | | |
|---|---|---|---|
| **PROJECT NAME** | Mahopac BD | **LOCATION ID** | MW-02I |
| **PROJECT NUMBER** | 386554.0000.0000 | **DATE** | 10/21/2020 |
| **SAMPLE ID** | MW-02I | **START TIME** | 8:15 |
| **SAMPLE TIME** | 9:00 | **END TIME** | 9:10 |
| | | **SITE NAME/NUMBER** | 340013 |
| | | **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER Unknown

**TUBING ID (INCHES)** [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.38 FT | **FINAL DTW (BMP)** | 4.80 FT | **PROT. CASING STICKUP (AGS)** | - FT | **TOC/TOR DIFFERENCE** | - FT |
| **WELL DEPTH (BMP)** | 48.06 FT | **SCREEN LENGTH** | FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | - SEC |
| **WATER COLUMN** | 43.68 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | - SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 7.16 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 2.60 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | - PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 8:15 | **BEGIN PURGING** | | | | | | | | | |
| 8:20 | 4.71 | 250 | 17.17 | 1.75 | 6.68 | 0.31 | 42.5 | 291 | 45 | |
| 8:25 | 4.75 | 250 | 16.98 | 1.73 | 6.90 | 0.06 | 36.4 | 280 | 45 | |
| 8:30 | 4.85 | 250 | 16.82 | 1.70 | 6.94 | 0.0 | 42.3 | 275 | 45 | |
| 8:35 | 4.97 | 250 | 16.65 | 1.67 | 6.94 | 0.0 | 36.8 | 270 | 45 | |
| 8:40 | 5.02 | 250 | 16.58 | 1.65 | 6.93 | 0.0 | 34.0 | 268 | 45 | |
| 8:45 | 5.00 | 250 | 16.54 | 1.64 | 6.92 | 0.0 | 40.6 | 267 | 45 | |
| 8:50 | 4.90 | 250 | 16.47 | 1.62 | 6.90 | 0.0 | 34.5 | 264 | 45 | |
| 8:55 | 4.80 | 250 | 16.46 | 1.61 | 6.90 | 0.0 | 29.8 | 263 | 45 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | **16** | **1.61** | **6.9** | **0** | **29.8** | **260** | | |

**TEMP**.: nearest degree (ex. 10.1 = 10)
**COND**.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

| TYPE OF PUMP | DECON FLUIDS USED | TUBING/PUMP/BLADDER MATERIALS | | EQUIPMENT USED | |
|---|---|---|---|---|---|
| [X] PERISTALTIC | [ ] LIQUINOX | [X] SILICON TUBING | [ ] S. STEEL PUMP MATERIAL | [X] WL METER | Heron |
| [ ] SUBMERSIBLE | [ ] DEIONIZED WATER | [ ] TEFLON TUBING | [ ] PVC PUMP MATERIAL | [X] PID | MiniRAE 3000 |
| [ ] BLADDER | [ ] POTABLE WATER | [ ] TEFLON LINED TUBING | [ ] GEOPROBE SCREEN | [X] WQ METER | Horiba U-52 |
| [ ] | [ ] NITRIC ACID | [X] HDPE TUBING | [ ] TEFLON BLADDER | [X] TURB. METER | Horiba U-52 |
| [ ] WATTERA | [ ] HEXANE | [ ] LDPE TUBING | [ ] OTHER | [X] PUMP | Pine Peri Pump |
| [ ] OTHER | [ ] METHANOL | [ ] OTHER | [ ] OTHER | [ ] OTHER | |
| [ ] OTHER | [ ] OTHER | [ ] OTHER | [ ] OTHER | [ ] FILTERS | NO. TYPE |

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| x | TCL VOCS + 10 TICS | 8260 | No | HCl | 25 ml | Yes | No | See COC |
| x | PFAS | 537 mod. | No | None | 250 ml | Yes | No | See COC |
| x | 1,4-dioxane | 8270 SIM | No | None | 1 L | Yes | No | See COC |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED YES [ ] NO [X]

NO-PURGE METHOD UTILIZED YES [ ] NO [ ]

NUMBER OF GALLONS GENERATED 2.60

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Interior of well was rusted.

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Justin King Date: 11/19/2020

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac BD |
| **PROJECT NUMBER** | 386554.0000.0000 |
| **SAMPLE ID** | MW-02S |
| **SAMPLE TIME** | 10:25 |

| | |
|---|---|
| **LOCATION ID** | MW-02S |
| **DATE** | 10/21/2020 |
| **START TIME** | 9:20 |
| **END TIME** | 10:30 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER Unknown

**TUBING ID (INCHES)** [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.79 FT | **FINAL DTW (BMP)** | 6.10 FT | **PROT. CASING STICKUP (AGS)** | - FT | **TOC/TOR DIFFERENCE** | - FT |
| **WELL DEPTH (BMP)** | 19.29 FT | **SCREEN LENGTH** | FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | - SEC |
| **WATER COLUMN** | 14.5 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | - SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 2.38 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 3.90 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | - PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:20 | **BEGIN PURGING** | | | | | | | | | |
| 9:25 | 5.89 | 250 | 18.54 | 3.31 | 7.04 | 0.0 | 68.6 | 302 | 16 | |
| 9:30 | 5.92 | 250 | 18.57 | 3.24 | 7.04 | 0.0 | 49.0 | 295 | 16 | |
| 9:35 | 5.97 | 250 | 18.57 | 3.22 | 7.05 | 0.0 | 45.1 | 292 | 16 | |
| 9:40 | 6.00 | 250 | 18.55 | 3.20 | 7.06 | 0.0 | 46.1 | 286 | 16 | |
| 9:45 | 6.03 | 250 | 18.57 | 3.18 | 7.05 | 0.0 | 40.9 | 283 | 16 | |
| 9:50 | 6.05 | 250 | 18.57 | 3.17 | 7.07 | 0.0 | 34.8 | 279 | 16 | |
| 9:55 | 6.08 | 250 | 18.61 | 3.17 | 7.08 | 0.0 | 31.0 | 275 | 16 | |
| 10:00 | 6.10 | 250 | 18.63 | 3.16 | 7.09 | 0.0 | 27.0 | 272 | 16 | |
| 10:05 | 6.07 | 250 | 18.68 | 3.16 | 7.10 | 0.0 | 22.8 | 267 | 16 | |
| 10:10 | 6.08 | 250 | 18.71 | 3.16 | 7.11 | 0.0 | 20.8 | 263 | 16 | |
| 10:15 | 6.12 | 250 | 18.73 | 3.14 | 7.11 | 0.0 | 20.4 | 258 | 16 | |
| 10:20 | 6.10 | 250 | 18.75 | 3.14 | 7.12 | 0.0 | 22.3 | 252 | 16 | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | | | | | | | | |
| | | | **19** | **3.14** | **7.1** | **0** | **22.3** | **250** | | |

**TEMP**.: nearest degree (ex. 10.1 = 10)
**COND**.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [X] PID MiniRAE 3000
- [X] WQ METER Horiba U-52
- [X] TURB. METER Horiba U-52
- [X] PUMP Pine Peri Pump
- [ ] OTHER
- [ ] FILTERS NO. TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| x | TCL VOCS + 10 TICS | 8260 | No | HCl | 25 ml | Yes | No | See COC |
| x | PFAS | 537 mod. | No | None | 250 ml | Yes | No | See COC |
| x | 1,4-dioxane | 8270 SIM | No | None | 1 L | Yes | No | See COC |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [ ] NO [X]

NUMBER OF GALLONS GENERATED: 3.90

NO-PURGE METHOD UTILIZED — YES [ ] NO [ ]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Interior of well was rusted.

Sampler Signature: Lexie Lill

Print Name: Lexie Lill

Checked By: Justin King

Date: 11/19/2020

# LOW FLOW GROUNDWATER SAMPLING RECORD

| PROJECT NAME | Mahopac BD | | |
|---|---|---|---|
| PROJECT NUMBER | 386554.0000.0000 | | |
| SAMPLE ID | MW-06 | SAMPLE TIME | 11:55 |

| LOCATION ID | MW-06 | DATE | 10/21/2020 |
|---|---|---|---|
| START TIME | 10:45 | END TIME | 12:00 |
| SITE NAME/NUMBER | 340013 | PAGE | 1 OF 1 |

WELL DIAMETER (INCHES): [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER Unknown

TUBING ID (INCHES): [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

MEASUREMENT POINT (MP): [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

WELL INTEGRITY

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| INITIAL DTW (BMP) | 3.87 FT | FINAL DTW (BMP) | 4.03 FT | PROT. CASING STICKUP (AGS) | - FT | TOC/TOR DIFFERENCE | - FT |
| WELL DEPTH (BMP) | 45.1 FT | SCREEN LENGTH | FT | PID AMBIENT AIR | 0.0 PPM | REFILL TIMER SETTING | - SEC |
| WATER COLUMN | 41.23 FT | DRAWDOWN VOLUME (final DTW - initial DTW X well diam. squared X 0.041) | GAL | PID WELL MOUTH | 0.0 PPM | DISCHARGE TIMER SETTING | - SEC |
| CALCULATED GAL/VOL (column X well diameter squared X 0.041) | 6.76 GAL | TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL) | 4.23 GAL | DRAWDOWN/ TOTAL PURGED | | PRESSURE TO PUMP | - PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:45 | **BEGIN PURGING** | | | | | | | | | |
| 10:50 | 4.15 | 250 | 16.44 | 0.970 | 6.42 | 0.0 | 348 | 309 | 40 | |
| 11:00 | 4.18 | 250 | 16.11 | 0.976 | 6.32 | 0.0 | 293 | 308 | 40 | |
| 11:05 | 3.82 | 250 | 16.02 | 0.975 | 6.32 | 0.0 | 239 | 305 | 40 | |
| 11:10 | 4.12 | 250 | 16.00 | 0.974 | 6.34 | 0.0 | 216 | 302 | 40 | |
| 11:15 | 4.12 | 250 | 15.99 | 0.973 | 6.34 | 0.0 | 204 | 301 | 40 | |
| 11:20 | 4.05 | 250 | 16.00 | 0.972 | 6.34 | 0.0 | 113 | 299 | 40 | |
| 11:25 | 4.02 | 250 | 15.98 | 0.971 | 6.34 | 0.0 | 50.1 | 298 | 40 | |
| 11:30 | 3.69 | 250 | 15.95 | 0.971 | 6.33 | 0.0 | 22.7 | 297 | 40 | |
| 11:35 | 4.07 | 250 | 15.94 | 0.971 | 6.33 | 0.0 | 16.8 | 296 | 40 | |
| 11:40 | 4.03 | 250 | 15.94 | 0.971 | 6.33 | 0.0 | 15.5 | 295 | 40 | |
| 11:45 | 4.03 | 250 | 15.91 | 0.972 | 6.32 | 0.0 | 13.7 | 294 | 40 | |
| 11:50 | 4.03 | 250 | 15.90 | 0.972 | 6.33 | 0.0 | 12.2 | 293 | 40 | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | | | | | | | | |
| | | | **16** | **0.972** | **6.3** | **0.0** | **12.2** | **290** | | |

**TEMP**.: nearest degree (ex. 10.1 = 10)
**COND**.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [ ] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [X] PID MiniRAE 3000
- [X] WQ METER Horiba U-52
- [X] TURB. METER Horiba U-52
- [X] PUMP Pine Peri Pump
- [ ] OTHER
- [ ] FILTERS NO. TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| x | TCL VOCS + 10 TICS | 8260 | No | HCl | 25 ml | Yes | No | See COC |
| x | PFAS | 537 mod. | No | None | 250 ml | Yes | No | See COC |
| x | 1,4-dioxane | 8270 SIM | No | None | 1 L | Yes | No | See COC |
| | | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED: YES [ ] NO [X]

NUMBER OF GALLONS GENERATED: 4.23

NO-PURGE METHOD UTILIZED: YES [ ] NO [ ]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Interior of well was rusted.

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Justin King Date: 11/19/2020

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | | | |
|---|---|---|---|
| **PROJECT NAME** | Mahopac BD | **LOCATION ID** | MW-03I |
| **PROJECT NUMBER** | 386554.0000.0000 | **DATE** | 10/21/2020 |
| **SAMPLE ID** | MW-03I | **START TIME** | 13:10 |
| **SAMPLE TIME** | 14:30 | **END TIME** | 14:35 |
| | | **SITE NAME/NUMBER** | 340013 |
| | | **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER Unknown

**TUBING ID (INCHES)** [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.02 FT | **FINAL DTW (BMP)** | 4.23 FT | **PROT. CASING STICKUP (AGS)** | - FT | **TOC/TOR DIFFERENCE** | - FT |
| **WELL DEPTH (BMP)** | 65.49 FT | **SCREEN LENGTH** | FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | - SEC |
| **WATER COLUMN** | 61.47 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | - SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 10.08 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 5.20 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | - PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 13:10 | **BEGIN PURGING** | | | | | | | | | |
| 13:15 | 4.25 | 250 | 16.51 | 0.669 | 6.51 | 1.90 | 710 | 341 | 60 | |
| 13:25 | 4.31 | 250 | 16.28 | 0.952 | 6.57 | 1.31 | 580 | 338 | 60 | |
| 13:35 | 4.32 | 250 | 16.11 | 1.130 | 6.60 | 0.82 | 405 | 334 | 60 | |
| 13:45 | 4.20 | 250 | 16.21 | 1.460 | 6.61 | 0.63 | 378 | 326 | 60 | |
| 13:55 | 4.30 | 250 | 15.98 | 1.480 | 6.58 | 0.62 | 315 | 321 | 60 | |
| 14:05 | 4.29 | 250 | 15.90 | 1.590 | 6.60 | 0.52 | 107 | 314 | 60 | |
| 14:10 | 4.30 | 250 | 15.87 | 1.640 | 6.61 | 0.41 | 49.0 | 306 | 60 | |
| 14:15 | 4.28 | 250 | 15.89 | 1.680 | 6.63 | 0.37 | 29.4 | 294 | 60 | |
| 14:20 | 4.22 | 250 | 15.89 | 1.710 | 6.65 | 0.35 | 22.2 | 278 | 60 | |
| 14:25 | 4.24 | 250 | 15.88 | 1.720 | 6.65 | 0.34 | 20.8 | 273 | 60 | |
| 14:30 | 4.23 | 250 | 15.84 | 1.750 | 6.66 | 0.28 | 20.3 | 265 | 60 | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | **16** | **1.75** | **6.7** | **0.3** | **20.3** | **270** | | |

**TEMP**.: nearest degree (ex. 10.1 = 10)
**COND**.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [X] PID MiniRAE 3000
- [X] WQ METER Horiba U-52
- [X] TURB. METER Horiba U-52
- [X] PUMP Pine Peri Pump
- [ ] OTHER
- [ ] FILTERS NO. TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| x | TCL VOCS + 10 TICS | 8260 | No | HCl | 25 ml | Yes | No | See COC |
| x | PFAS | 537 mod. | No | None | 250 ml | Yes | No | See COC |
| x | 1,4-dioxane | 8270 SIM | No | None | 1 L | Yes | No | See COC |
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**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [ ] NO [X]

NO-PURGE METHOD UTILIZED — YES [ ] NO [ ]

NUMBER OF GALLONS GENERATED: 5.20

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Interior of well was rusted.

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Justin King Date: 11/19/2020

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | | | |
|---|---|---|---|
| **PROJECT NAME** | Mahopac BD | **LOCATION ID** | MW-02D |
| **PROJECT NUMBER** | 386554.0000.0000 | **DATE** | 10/23/2020 |
| **SAMPLE ID** | MW-02D | **START TIME** | 8:40 |
| **SAMPLE TIME** | N/A | **END TIME** | 9:10 |
| | | **SITE NAME/NUMBER** | 340013 |
| | | **PAGE** | 1 OF 2 |

**WELL DIAMETER (INCHES)** [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER Unknown

**TUBING ID (INCHES)** [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.86 FT | **FINAL DTW (BMP)** | 4.63 FT | **PROT. CASING STICKUP (AGS)** | - FT | **TOC/TOR DIFFERENCE** | - FT |
| **WELL DEPTH (BMP)** | 337.8 FT | **SCREEN LENGTH** | FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | - SEC |
| **WATER COLUMN** | 332.94 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | - SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 54.60 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 1.95 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | - PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 8:40 | **BEGIN PURGING** | | | | | | | | | |
| 8:45 | 4.86 | 250 | 18.51 | 1.04 | 7.71 | 2.77 | 67.9 | 320 | 152 | |
| 8:50 | 4.6 | 250 | 18.18 | 1.04 | 7.24 | 2.30 | 67.3 | 337 | 152 | |
| 8:55 | 4.65 | 250 | 18.05 | 1.04 | 6.95 | 2.33 | 54.3 | 349 | 152 | |
| 9:00 | 4.53 | 250 | 18.06 | 1.03 | 6.85 | 2.01 | 45.7 | 353 | 152 | |
| 9:05 | 4.53 | 250 | 18.11 | 1.04 | 6.81 | 1.59 | 46.7 | 355 | 152 | |
| 9:10 | 4.63 | 250 | 18.21 | 1.04 | 6.77 | 1.27 | 43.2 | 358 | 152 | Could not collect sample with bladder pump due to equipment malfunctions. |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |

**TEMP**.: nearest degree (ex. 10.1 = 10)
**COND**.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [ ] PERISTALTIC
- [ ] SUBMERSIBLE
- [X] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [X] PID MiniRAE 3000
- [X] WQ METER Horiba U-52
- [X] TURB. METER Horiba U-52
- [X] PUMP Pine Bladder Pump
- [ ] OTHER
- [ ] FILTERS NO. TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| x | TCL VOCS + 10 TICS | 8260 | No | HCl | 25 ml | No | No | See COC |
| x | PFAS | 537 mod. | No | None | 250 ml | No | No | See COC |
| x | 1,4-dioxane | 8270 SIM | No | None | 1 L | No | No | See COC |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED YES [ ] NO [X]

NO-PURGE METHOD UTILIZED YES [ ] NO [ ]

NUMBER OF GALLONS GENERATED 1.95

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Interior of well was rusted.

Sampler Signature: Lexie Lill Print Name: Lexie Lill

Checked By: Justin King Date: 11/19/2020

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | | | |
|---|---|---|---|
| **PROJECT NAME** | Mahopac BD | **LOCATION ID** | MW-02D |
| **PROJECT NUMBER** | 386554.0000.0000 | **DATE** | 10/23/2020 |
| **SAMPLE ID** | MW-02D | **START TIME** | 9:50 |
| **SAMPLE TIME** | 11:05 | **END TIME** | 11:10 |
| | | **SITE NAME/NUMBER** | 340013 |
| | | **PAGE** | 2 OF 2 |

**WELL DIAMETER (INCHES)** [ ] 1 [ ] 2 [ ] 4 [ ] 6 [ ] 8 [X] OTHER Unknown

**TUBING ID (INCHES)** [ ] 1/8 [X] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [X] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 5.62 FT | **FINAL DTW (BMP)** | 4.52 FT | **PROT. CASING STICKUP (AGS)** | - FT | **TOC/TOR DIFFERENCE** | - FT |
| **WELL DEPTH (BMP)** | 337.8 FT | **SCREEN LENGTH** | FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | - SEC |
| **WATER COLUMN** | 332.18 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | - SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 54.48 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 4.55 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | - PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:50 | **BEGIN PURGING** | | | | | | | | | |
| 10:00 | 4.52 | 250 | 17.48 | 1.04 | 7.65 | 0.82 | 78.9 | 344 | 75 | |
| 10:05 | 4.49 | 250 | 17.42 | 1.03 | 7.67 | 0.58 | 78.5 | 342 | 75 | |
| 10:10 | 4.5 | 250 | 17.35 | 1.02 | 7.68 | 0.50 | 77.7 | 340 | 75 | |
| 10:15 | 4.49 | 250 | 17.24 | 1.03 | 7.67 | 0.43 | 73.1 | 339 | 75 | |
| 10:20 | 4.45 | 250 | 17.18 | 1.03 | 7.73 | 0.39 | 71.1 | 337 | 75 | |
| 10:25 | 4.43 | 250 | 17.11 | 1.03 | 7.72 | 0.38 | 69.6 | 336 | 75 | |
| 10:30 | 4.41 | 250 | 17.04 | 1.03 | 7.77 | 0.41 | 67.8 | 336 | 75 | |
| 10:35 | 4.52 | 250 | 17.07 | 1.03 | 7.78 | 0.41 | 65.4 | 335 | 75 | |
| 10:40 | 4.57 | 250 | 17.06 | 1.03 | 7.8 | 0.36 | 62.3 | 334 | 75 | |
| 10:45 | 4.53 | 250 | 17.06 | 1.03 | 7.81 | 0.39 | 62.8 | 334 | 75 | |
| 10:50 | 4.52 | 250 | 17.00 | 1.03 | 7.87 | 0.33 | 65.5 | 333 | 75 | |
| 10:55 | 4.55 | 250 | 16.99 | 1.03 | 7.84 | 0.31 | 64.3 | 332 | 75 | |
| 11:00 | 4.52 | 250 | 16.97 | 1.03 | 7.87 | 0.29 | 62.3 | 332 | 75 | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | | | | | | | | |
| | | | **17** | **1.03** | **7.9** | **0.3** | **62.3** | **330** | | |

**TEMP**.: nearest degree (ex. 10.1 = 10)
**COND**.: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [X] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [X] PID MiniRAE 3000
- [X] WQ METER Horiba U-52
- [X] TURB. METER Horiba U-52
- [X] PUMP Pine Peri Pump
- [ ] OTHER
- [ ] FILTERS NO. TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| x | TCL VOCS + 10 TICS | 8260 | No | HCl | 25 ml | Yes | DUP, MS/MSD | See COC |
| x | PFAS | 537 mod. | No | None | 250 ml | Yes | DUP, MS/MSD | See COC |
| x | 1,4-dioxane | 8270 SIM | No | None | 1 L | Yes | DUP, MS/MSD | See COC |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [ ] NO [X]

NO-PURGE METHOD UTILIZED — YES [ ] NO [ ]

NUMBER OF GALLONS GENERATED: 4.55

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Interior of well was rusted.

Sampler Signature: Lexie Lill  Print Name: Lexie Lill

Checked By: Justin King  Date: 11/19/2020

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 386554.0000.0000 Phase 1 |
| **SAMPLE ID** | N/A |
| **SAMPLE TIME** | N/A |

| | |
|---|---|
| **LOCATION ID** | MW-2I |
| **DATE** | 10/13/2022 |
| **START TIME** | 9:10 |
| **END TIME** | 10:40 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [x] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | x | | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 6.27 FT | **FINAL DTW (BMP)** | 7.51 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 49.31 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 43.04 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | 0.495 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 7.06 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 50.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:10 | **BEGIN PURGING** | | | | | | | | | |
| 9:30 | 7.50 | 5000 | 17.6 | 13.41 | 6.41 | 10.11 | 999.0 | 97 | 48 | Very turbid, black color, some organic sheen |
| 9:45 | 7.50 | 5000 | 17.9 | 6.71 | 6.91 | 10.31 | 999.0 | 81 | 48 | Well was pumped dry, reduced rate |
| 10:10 | 7.51 | 2500 | 18.3 | 4.21 | 7.31 | 9.27 | 761.0 | 191 | 48 | |
| 10:05 | 7.51 | 2500 | 18.5 | 3.91 | 7.36 | 4.10 | 108.1 | 181 | 48 | |
| 10:15 | 7.50 | 2500 | 18.9 | 3.38 | 7.41 | 0.63 | 31.2 | 161 | 48 | |
| 10:20 | 7.50 | 2500 | 19.3 | 3.51 | 7.40 | 0.76 | 15.1 | 152 | 48 | |
| 10:25 | 7.50 | 2500 | 20.2 | 3.53 | 7.39 | 0.82 | 10.3 | 149 | 48 | |
| 10:30 | 7.50 | 2500 | 20.5 | 3.54 | 7.38 | 0.85 | 8.7 | 147 | 48 | |
| 10:35 | 7.50 | 2500 | 20.5 | 3.54 | 7.38 | 0.90 | 8.3 | 144 | 48 | |
| 10:40 | 7.50 | 2500 | 20.3 | 3.54 | 7.39 | 0.92 | 8.2 | 141 | 48 | |
| | | | | | | | | | | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | **20** | **3.54** | **7.4** | **0.92** | **8.2** | **140** | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [ ] PERISTALTIC
- [X] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [ ] PID
- [X] WQ METER YSI
- [X] TURB. METER YSI
- [X] PUMP 300' Geotech Geosub II
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| [ ] | Not Sampled | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |

**PURGE OBSERVATIONS**

| | YES | NO |
|---|---|---|
| PURGE WATER CONTAINERIZED | X | |
| NO-PURGE METHOD UTILIZED | | X |

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Pump was periodically moved up and down to stir up silt within the well, a total of 50 gallons were purged. Well was purged for development purposes only.

Sampler Signature: Print Name Rich DePolo

Checked By: Date: 10/13/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 386554.0000.0000 Phase 1 |
| **SAMPLE ID** | N/A |
| **SAMPLE TIME** | N/A |

| | |
|---|---|
| **LOCATION ID** | MW-2S |
| **DATE** | 10/13/2022 |
| **START TIME** | 10:45 |
| **END TIME** | 11:25 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [x] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | x | | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 6.01 FT | **FINAL DTW (BMP)** | 6.38 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 19.81 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 6.80 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | 0.495 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 2.26 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 25.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:45 | **BEGIN PURGING** | | | | | | | | | |
| 10:50 | 6.71 | 2000 | 15.3 | 1.87 | 7.13 | 0.49 | 739.0 | 121 | 18 | Brown silt, no sheen ot odor |
| 10:55 | 6.35 | 2000 | 15.3 | 1.76 | 6.98 | 0.36 | 105.0 | 132 | 18 | |
| 11:00 | 6.31 | 2000 | 15.4 | 1.81 | 6.94 | 0.32 | 52.9 | 57.1 | 18 | |
| 11:05 | 6.34 | 2000 | 15.2 | 1.73 | 6.90 | 0.29 | 13.2 | 48.6 | 18 | |
| 11:10 | 6.35 | 2000 | 15.2 | 1.72 | 6.90 | 0.27 | 6.3 | 50.4 | 18 | clear |
| 11:15 | 6.35 | 2000 | 15.2 | 1.73 | 6.88 | 0.27 | 5.1 | 50.9 | 18 | |
| 11:20 | 6.38 | 2000 | 15.1 | 1.72 | 6.89 | 0.27 | 4.9 | 51.1 | 18 | |
| 11:25 | 6.38 | 2000 | 15.1 | 1.72 | 6.88 | 0.27 | 3.7 | 51.3 | 18 | |
| 11:30 | 6.38 | 2000 | 15.2 | 1.72 | 6.89 | 0.27 | 3.2 | 50.9 | 18 | |
| 11:35 | 6.38 | 2000 | 15.2 | 1.72 | 6.89 | 0.27 | 3.1 | 50.7 | 18 | |
| | | | | | | | | | | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | **15** | **1.72** | **6.9** | **0.3** | **3.1** | **51** | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

| TYPE OF PUMP | DECON FLUIDS USED | TUBING/PUMP/BLADDER MATERIALS | | EQUIPMENT USED |
|---|---|---|---|---|
| [ ] PERISTALTIC | [ ] LIQUINOX | [ ] SILICON TUBING | [ ] S. STEEL PUMP MATERIAL | [X] WL METER Heron |
| [X] SUBMERSIBLE | [X] DEIONIZED WATER | [ ] TEFLON TUBING | [ ] PVC PUMP MATERIAL | [ ] PID |
| [ ] BLADDER | [ ] POTABLE WATER | [ ] TEFLON LINED TUBING | [ ] GEOPROBE SCREEN | [X] WQ METER YSI |
| [ ] WATTERA | [ ] NITRIC ACID | [X] HDPE TUBING | [ ] TEFLON BLADDER | [X] TURB. METER YSI |
| [ ] OTHER | [ ] HEXANE | [ ] LDPE TUBING | [ ] OTHER | [X] PUMP 300' Geotech Geosub II |
| [ ] OTHER | [ ] METHANOL | [ ] OTHER | [ ] OTHER | [ ] OTHER |
| | [ ] OTHER | [ ] OTHER | [ ] OTHER | [ ] FILTERS NO. TYPE |

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| [ ] | Not Sampled | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |

**PURGE OBSERVATIONS**

| | YES | NO |
|---|---|---|
| PURGE WATER CONTAINERIZED | X | |
| NO-PURGE METHOD UTILIZED | | X |

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Pump was periodically moved up and down to stir up silt within the well, a total of 25 gallons were purged. Well was purged for development purposes only.

Sampler Signature:

Print Name Rich DePolo

Checked By:

Date: 10/13/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | | | |
|---|---|---|---|
| **PROJECT NAME** | Mahopac Business District Wells | **LOCATION ID** | MW-6I |
| **PROJECT NUMBER** | 386554.0000.0000 Phase 1 | **DATE** | 10/13/2022 |
| **SAMPLE ID** | N/A | **START TIME** | 11:55 |
| **SAMPLE TIME** | N/A | **END TIME** | 13:05 |
| | | **SITE NAME/NUMBER** | 340013 |
| | | **PAGE** | 1 OF 2 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [x] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | x | | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.41 FT | **FINAL DTW (BMP)** | 4.48 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 42.31 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 37.63 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | 0.011 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 6.17 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 60.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:55 | **BEGIN PURGING** | | | | | | | | | |
| 12:00 | 4.41 | 2500 | 15.1 | 1.40 | 6.58 | 0.63 | 937.0 | 86.7 | 46 | Red color, high FE concentration? |
| 12:05 | 4.43 | 2500 | 15.2 | 1.40 | 6.54 | 0.51 | 608.0 | 89.0 | 46 | |
| 12:10 | 4.47 | 2500 | 15.5 | 1.36 | 6.48 | 0.36 | 43.8 | 90.1 | 46 | |
| 12:15 | 4.49 | 2500 | 15.6 | 1.36 | 6.48 | 0.31 | 31.7 | 87.8 | 46 | |
| 12:20 | 4.49 | 2500 | 15.6 | 1.38 | 6.48 | 0.29 | 17.3 | 81.2 | 46 | clear |
| 12:25 | 4.49 | 2500 | 15.6 | 1.37 | 6.48 | 0.28 | 10.9 | 80.5 | 46 | |
| 12:30 | 4.51 | 2500 | 15.6 | 1.38 | 6.48 | 0.27 | 8.3 | 79.1 | 46 | |
| 12:35 | 4.52 | 2500 | 15.7 | 1.38 | 6.48 | 0.26 | 6.7 | 86.3 | 46 | |
| 12:40 | 4.52 | 2500 | 15.7 | 1.38 | 6.48 | 0.26 | 5.8 | 87.0 | 46 | |
| 12:45 | 4.54 | 2500 | 15.7 | 1.39 | 6.48 | 0.25 | 4.7 | 91.2 | 46 | |
| 12:50 | 4.57 | 2500 | 15.7 | 1.39 | 6.48 | 0.25 | 4.3 | 92.1 | 46 | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | | | | | | | | |
| | | | **15** | **1.39** | **6.5** | **0.2** | **3.8** | **98** | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

| TYPE OF PUMP | DECON FLUIDS USED | TUBING/PUMP/BLADDER MATERIALS | | EQUIPMENT USED |
|---|---|---|---|---|
| [ ] PERISTALTIC | [ ] LIQUINOX | [ ] SILICON TUBING | [ ] S. STEEL PUMP MATERIAL | [X] WL METER Heron |
| [X] SUBMERSIBLE | [X] DEIONIZED WATER | [ ] TEFLON TUBING | [ ] PVC PUMP MATERIAL | [ ] PID |
| [ ] BLADDER | [ ] POTABLE WATER | [ ] TEFLON LINED TUBING | [ ] GEOPROBE SCREEN | [X] WQ METER YSI |
| [ ] | [ ] NITRIC ACID | [X] HDPE TUBING | [ ] TEFLON BLADDER | [X] TURB. METER YSI |
| [ ] WATTERA | [ ] HEXANE | [ ] LDPE TUBING | [ ] OTHER | [X] PUMP 300' Geotech Geosub II |
| [ ] OTHER | [ ] METHANOL | [ ] OTHER | [ ] OTHER | [ ] OTHER |
| [ ] OTHER | [ ] OTHER | [ ] OTHER | [ ] OTHER | [ ] FILTERS NO. TYPE |

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| [ ] | Not Sampled | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED: YES [X] NO [ ]

NUMBER OF GALLONS GENERATED

NO-PURGE METHOD UTILIZED: YES [ ] NO [X]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Pump was periodically moved up and down to stir up silt within the well, a total of 60 gallons were purged. Well was purged for development purposes only.

Sampler Signature:

Print Name Rich DePolo

Checked By:

Date: 10/13/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 386554.0000.0000 Phase 1 |
| **SAMPLE ID** | N/A |
| **SAMPLE TIME** | N/A |

| | |
|---|---|
| **LOCATION ID** | MW-6I |
| **DATE** | 10/13/2022 |
| **START TIME** | 11:55 |
| **END TIME** | 13:05 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 2 OF 2 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [x] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | x | | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.41 FT | **FINAL DTW (BMP)** | 4.48 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 47.31 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 37.63 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | 0.011 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 6.17 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 60.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| | **BEGIN PURGING** | | | | | | | | | |
| 12:55 | 4.57 | 2500 | 15.8 | 1.39 | 6.49 | 0.25 | 4.1 | 92.2 | 46 | |
| 13:00 | 4.57 | 2500 | 15.9 | 1.39 | 6.49 | 0.25 | 3.9 | 92.7 | 46 | |
| 13:05 | 4.58 | 2500 | 15.9 | 1.39 | 6.49 | 0.24 | 3.8 | 97.8 | 46 | |
| | | | | | | | | | | |
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**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| **15** | **1.39** | **6.5** | **0.2** | **3.8** | **98** | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [ ] PERISTALTIC
- [X] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [ ] PID
- [X] WQ METER YSI
- [X] TURB. METER YSI
- [X] PUMP 300' Geotech Geosub II
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| [ ] | Not Sampled | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |

**PURGE OBSERVATIONS**

| | YES | NO |
|---|---|---|
| PURGE WATER CONTAINERIZED | X | |
| NO-PURGE METHOD UTILIZED | | X |

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Pump was periodically moved up and down to stir up silt within the well, a total of 60 gallons were purged. Well was purged for development purposes only.

Sampler Signature:

Print Name Rich DePolo

Checked By:

Date: 10/13/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 386554.0000.0000 Phase 1 |
| **SAMPLE ID** | N/A |
| **SAMPLE TIME** | N/A |

| | |
|---|---|
| **LOCATION ID** | MW-6S |
| **DATE** | 10/13/2022 |
| **START TIME** | 13:10 |
| **END TIME** | 14:05 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [ ] 3/8 [ ] 1/2 [x] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | x | | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.37 FT | **FINAL DTW (BMP)** | 4.48 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 9.71 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 37.63 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | 0.011 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 6.17 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 30.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 13:10 | **BEGIN PURGING** | | | | | | | | | |
| 13:15 | 4.38 | 2000 | 19.2 | 1.38 | 7.13 | 0.61 | 613.0 | 79.1 | 9.5 | Brown silt, organic sheen, no odor |
| 13:20 | 4.47 | 2000 | 19.8 | 1.68 | 6.85 | 0.55 | 413.0 | 89.8 | 9.5 | |
| 13:25 | 4.49 | 2000 | 19.6 | 1.70 | 6.74 | 0.32 | 109.7 | 94.6 | 9.5 | |
| 13:30 | 4.51 | 2000 | 20.0 | 1.66 | 6.71 | 0.43 | 281.7 | 76.2 | 9.5 | Stirred up silt with pump |
| 13:35 | 4.51 | 2000 | 19.6 | 1.46 | 6.74 | 0.44 | 78.2 | 78.6 | 9.5 | |
| 13:40 | 4.53 | 2000 | 19.5 | 1.21 | 6.69 | 0.37 | 42.8 | 84.1 | 9.5 | |
| 13:45 | 4.54 | 2000 | 19.5 | 1.27 | 6.71 | 0.28 | 13.6 | 86.2 | 9.5 | |
| 13:50 | 4.57 | 2000 | 19.6 | 1.29 | 6.69 | 0.31 | 8.2 | 78.9 | 9.5 | clear |
| 13:55 | 4.58 | 2000 | 19.5 | 1.29 | 6.71 | 0.33 | 5.6 | 77.6 | 9.5 | |
| 14:00 | 4.59 | 2000 | 19.5 | 1.30 | 6.71 | 0.32 | 4.9 | 77.2 | 9.5 | |
| 14:05 | 4.59 | 2000 | 19.5 | 1.29 | 6.72 | 0.31 | 4.8 | 76.9 | 9.5 | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | | | | | | | | |
| | | | **20** | **1.29** | **6.7** | **0.3** | **4.8** | **77** | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

| TYPE OF PUMP | DECON FLUIDS USED | TUBING/PUMP/BLADDER MATERIALS | | EQUIPMENT USED |
|---|---|---|---|---|
| [ ] PERISTALTIC | [ ] LIQUINOX | [ ] SILICON TUBING | [ ] S. STEEL PUMP MATERIAL | [X] WL METER Heron |
| [X] SUBMERSIBLE | [X] DEIONIZED WATER | [ ] TEFLON TUBING | [ ] PVC PUMP MATERIAL | [ ] PID |
| [ ] BLADDER | [ ] POTABLE WATER | [ ] TEFLON LINED TUBING | [ ] GEOPROBE SCREEN | [X] WQ METER YSI |
| [ ] WATTERA | [ ] NITRIC ACID | [X] HDPE TUBING | [ ] TEFLON BLADDER | [X] TURB. METER YSI |
| [ ] OTHER | [ ] HEXANE | [ ] LDPE TUBING | [ ] OTHER | [X] PUMP 300' Geotech Geosub II |
| [ ] OTHER | [ ] METHANOL | [ ] OTHER | [ ] OTHER | [ ] OTHER |
| | [ ] OTHER | [ ] OTHER | [ ] OTHER | [ ] FILTERS NO. ____ TYPE |

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| [ ] | Not Sampled | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |

**PURGE OBSERVATIONS**

| | YES | NO |
|---|---|---|
| PURGE WATER CONTAINERIZED | X | |
| NO-PURGE METHOD UTILIZED | | X |

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Pump was periodically moved up and down to stir up silt within the well, a total of 30 gallons were purged. Well was purged for development purposes only.

Organic sheen observed

Sampler Signature: Print Name Rich DePolo

Checked By: Date: 10/13/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | | | |
|---|---|---|---|
| **PROJECT NAME** | Mahopac Business District Wells | **LOCATION ID** | MW-3I |
| **PROJECT NUMBER** | 386554.0000.0000 Phase 1 | **DATE** | 10/14/2022 |
| **SAMPLE ID** | N/A | **START TIME** | 8:45 |
| **SAMPLE TIME** | N/A | **END TIME** | 10:40 |
| | | **SITE NAME/NUMBER** | 340013 |
| | | **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [x] 1/4 [ ] 3/8 [ ] 1/2 [x] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | x | | |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.49 FT | **FINAL DTW (BMP)** | 7.51 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 57.32 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 52.83 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | 0.495 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 8.66 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 75.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| | **BEGIN PURGING** | | | | | | | | | |
| 9:50 | 7.50 | 2500 | 15.3 | 2.83 | 7.32 | 0.32 | 10.1 | 24.7 | 55 | Very Sandy, brown color, no odor or sheen |
| 9:55 | 7.50 | 2500 | 15.3 | 2.84 | 7.32 | 0.31 | 10.2 | 23.2 | 55 | |
| 10:00 | 7.51 | 2500 | 15.3 | 2.84 | 7.33 | 0.31 | 8.2 | 23.1 | 55 | |
| 10:05 | 7.51 | 2500 | 15.2 | 2.55 | 7.33 | 0.29 | 8.1 | 22.7 | 55 | |
| 10:10 | 7.50 | 2500 | 15.3 | 2.87 | 7.33 | 0.29 | 6.7 | 22.6 | 55 | |
| 10:15 | 7.50 | 2500 | 15.3 | 2.87 | 7.33 | 0.29 | 6.3 | 22.1 | 55 | Stirred up silt with pump |
| 10:20 | 7.50 | 2500 | 15.3 | 2.87 | 7.33 | 0.28 | 6.2 | 21.7 | 55 | |
| 10:25 | 7.50 | 2500 | 15.3 | 2.87 | 7.33 | 0.29 | 6.4 | 20.8 | 55 | |
| 10:30 | 7.50 | 2500 | 15.3 | 2.87 | 7.33 | 0.29 | 5.9 | 21.1 | 55 | Stirred up silt with pump |
| 10:35 | 7.50 | 2500 | 15.3 | 2.87 | 7.33 | 0.29 | 5.8 | 20.8 | 55 | |
| | | | | | | | | | | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | **15** | **2.87** | **7.3** | **0.3** | **5.8** | **21** | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [ ] PERISTALTIC
- [X] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [X] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [ ] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [ ] PID
- [X] WQ METER YSI
- [X] TURB. METER YSI
- [X] PUMP 300' Geotech Geosub II
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| [ ] | Not Sampled | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |
| [ ] | | | | | | | | |

**PURGE OBSERVATIONS**

| | YES | NO |
|---|---|---|
| PURGE WATER CONTAINERIZED | X | |
| NO-PURGE METHOD UTILIZED | | |

NUMBER OF GALLONS GENERATED

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Pump was periodically moved up and down to stir up silt within the well, a total of 75 gallons were purged. Well was pruged for development purposes only.

Sampler Signature:

Print Name Rich DePolo

Checked By:

Date: 10/14/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 38655.0000.0000 |
| **SAMPLE ID** | MBDW-MW-2D |
| **SAMPLE TIME** | 0:00 |

| | |
|---|---|
| **LOCATION ID** | MW-2D |
| **DATE** | 11/3/2022 |
| **START TIME** | 8:45 |
| **END TIME** | 13:55 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 3 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [x] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | | | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 6.15 FT | **FINAL DTW (BMP)** | 6.44 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 339.7 FT | **SCREEN LENGTH** | 25 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 333.55 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | .0.420 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 54.70 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 55.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 8:45 | **BEGIN PURGING** | | | | | | | | | |
| 8:55 | 6.19 | 1000+ | 15.97 | 7.91 | 8.11 | 1.31 | 117.1 | 129 | 290 | Slightly turbid |
| 9:05 | 6.31 | 1000+ | 15.82 | 5.31 | 7.91 | 0.71 | 36.2 | 120 | 290 | |
| 9:15 | 6.35 | 1000+ | 15.81 | 4.92 | 7.71 | 0.56 | 17.1 | 119 | 290 | |
| 9:25 | 6.37 | 1000+ | 15.93 | 3.81 | 7.53 | 0.31 | 3.1 | 107 | 290 | Clear |
| 9:35 | 6.39 | 1000+ | 16.01 | 3.51 | 7.61 | 0.09 | 0.7 | 101 | 290 | |
| 9:45 | 6.49 | 1000+ | 16.03 | 2.960 | 7.66 | 0.00 | 0 | 92 | 290 | |
| 9:55 | 6.55 | 1000+ | 16.03 | 2.960 | 7.68 | 0.00 | 0 | 66 | 290 | |
| 10:05 | 6.61 | 1000+ | 16.99 | 2.96 | 7.61 | 0.00 | 98.4 | 54 | 290 | Pump rate inceased, surge well |
| 10:15 | 6.63 | 1000+ | 17.1 | 2.96 | 7.68 | 0.00 | 12.3 | 41 | 290 | |
| 10:25 | 6.67 | 1000+ | 17.37 | 2.96 | 7.69 | 0.00 | 5.2 | 29 | 290 | |
| 10:35 | 6.68 | 1000+ | 17.39 | 2.96 | 7.70 | 0.00 | 0.6 | 23 | 290 | Clear |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [ ] PERISTALTIC
- [x] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [ ] PID
- [X] WQ METER YSI
- [X] TURB. METER YSI
- [X] PUMP Grunfos
- [ ] OTHER
- [ ] FILTERS NO. TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 55

NO-PURGE METHOD UTILIZED — YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Purged using "surge and pump" method using 2" stainless steel Grunfos pump
Page 1 of 3, long purge time required due to water collumn thickness

Sampler Signature:

Print Name Rich DePolo

Checked By: Jenna Raup

Date: 11/3/2023

# LOW FLOW GROUNDWATER SAMPLING RECORD

| PROJECT NAME | | LOCATION ID | DATE |
|---|---|---|---|
| Mahopac Business District Wells | | MW-2D | 11/3/2022 |
| **PROJECT NUMBER** | | **START TIME** | **END TIME** |
| 38655.0000.0000 | | 8:45 | 13:55 |
| **SAMPLE ID** | **SAMPLE TIME** | **SITE NAME/NUMBER** | **PAGE** |
| MBDW-MW-2D | 0:00 | 340013 | 2 OF 3 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [x] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | | | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 6.15 FT | **FINAL DTW (BMP)** | 6.44 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 339.7 FT | **SCREEN LENGTH** | 25 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 333.55 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | .0.420 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 54.70 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 55.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:45 | 6.70 | 1000+ | 17.72 | 2.89 | 7.52 | 0.00 | 0.0 | 17 | 290 | Clear |
| 10:55 | 6.71 | 1000+ | 17.75 | 2.88 | 7.53 | 0.00 | 0.0 | 16 | 290 | |
| 11:05 | 6.70 | 1000+ | 17.77 | 2.86 | 7.60 | 0.00 | 0.0 | 14 | 290 | |
| 11:15 | 6.71 | 1000+ | 17.79 | 2.86 | 7.62 | 0.00 | 35.1 | 21 | 290 | Surging of well |
| 11:25 | 6.71 | 1000+ | 17.81 | 2.86 | 7.62 | 0.00 | 2.6 | 13 | 290 | |
| 11:35 | 6.71 | 1000+ | 17.81 | 2.87 | 7.65 | 0.00 | 0.6 | 12 | 290 | |
| 11:45 | 6.72 | 1000+ | 17.83 | 2.86 | 7.64 | 0.00 | 0.1 | 14 | 290 | |
| 11:55 | 6.72 | 1000+ | 17.82 | 2.82 | 7.60 | 0.00 | 0.0 | 13 | 290 | |
| 12:05 | 6.73 | 1000+ | 17.82 | 2.81 | 7.58 | 0.00 | 0.0 | 13 | 290 | |
| 12:15 | 6.74 | 1000+ | 17.82 | 2.80 | 7.57 | 0.00 | 0.0 | 13 | 290 | Clear |
| 12:25 | 6.73 | 1000+ | 17.81 | 2.80 | 7.57 | 0.00 | 0.0 | 12 | 290 | |
| | | | | | | | | | | |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [ ] PERISTALTIC
- [x] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [ ] PID
- [X] WQ METER YSI
- [X] TURB. METER YSI
- [X] PUMP Grunfos
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 55

NO-PURGE METHOD UTILIZED — YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Purged using "surge and pump" method using 2" stainless steel Grunfos pump
Page 2 of 3, long purge time required due to water collumn thickness

Sampler Signature:

Print Name Rich DePolo

Checked By: Jenna Raup

Date: 11/3/2023

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 38655.0000.0000 |
| **SAMPLE ID** | MBDW-MW-2D |
| **SAMPLE TIME** | 13:55 |

| | |
|---|---|
| **LOCATION ID** | MW-2D |
| **DATE** | 11/3/2022 |
| **START TIME** | 8:45 |
| **END TIME** | 13:55 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 3 OF 3 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [ ] 1/4 [x] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | x | |
| COLLAR | | | x |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 6.15 FT | **FINAL DTW (BMP)** | 6.44 FT | **PROT. CASING STICKUP (AGS)** | 0 FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 339.7 FT | **SCREEN LENGTH** | 25 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 333.55 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | .0.420 GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 54.70 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 55.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 13:00 | 6.41 | 250 | 17.84 | 4.71 | 7.49 | 4.53 | 5.3 | 51 | 290 | Clear |
| 13:05 | 6.42 | 250 | 17.89 | 3.01 | 7.49 | 7.27 | 0.7 | 43 | 290 | |
| 13:10 | 6.42 | 250 | 17.92 | 2.91 | 7.52 | 0.91 | 0.2 | 31 | 290 | |
| 13:15 | 6.43 | 250 | 17.95 | 2.90 | 7.52 | 0.73 | 0.1 | 25 | 290 | |
| 13:20 | 6.42 | 250 | 18.01 | 2.90 | 7.51 | 0.64 | 0.0 | 21 | 290 | |
| 13:25 | 6.43 | 250 | 18.07 | 2.89 | 7.49 | 0.61 | 0.1 | 20 | 290 | |
| 13:30 | 6.43 | 250 | 18.1 | 2.89 | 7.47 | 0.59 | 0 | 19 | 290 | |
| 13:35 | 6.44 | 250 | 18.11 | 2.88 | 7.45 | 0.55 | 0.0 | 15 | 290 | |
| 13:40 | 6.44 | 250 | 18.13 | 2.88 | 7.45 | 0.51 | 0.0 | 14 | 290 | |
| 13:45 | 6.44 | 250 | 18.13 | 2.88 | 7.44 | 0.49 | 0.0 | 14 | 290 | |
| 13:50 | 6.44 | 250 | 18.13 | 2.88 | 7.44 | 0.48 | 0.0 | 13 | 290 | Sample well |
| | | | | | | | | | | |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| | **18** | **2.88** | **7.4** | **0.5** | **0.0** | **13** |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [ ] PERISTALTIC
- [x] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [X] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [X] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [X] WL METER Heron
- [ ] PID
- [X] WQ METER YSI
- [X] TURB. METER YSI
- [X] PUMP Grunfos
- [ ] OTHER
- [ ] FILTERS NO. ___ TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 55

NO-PURGE METHOD UTILIZED — YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Purged using "surge and pump" method using 2" stainless steel Grunfos pump
Page 3 of 3, long purge time required due to water collumn thickness

**Sampling Log starts at 1300 to separate "purging" from low-flow sampling

Sampler Signature:

Print Name Rich DePolo

Checked By: Jenna Raup

Date: 11/3/2023

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 38655.0000.0000 |
| **SAMPLE ID** | MBDW-MW-2I |
| **SAMPLE TIME** | 11:35 |

| | |
|---|---|
| **LOCATION ID** | MW-2I |
| **DATE** | 11/1/2022 |
| **START TIME** | 10:20 |
| **END TIME** | 11:15 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [x] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | | x |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.98 FT | **FINAL DTW (BMP)** | 5.13 FT | **PROT. CASING STICKUP (AGS)** | N/A FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 49.39 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 44.41 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.1 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 7.28 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 7.50 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:25 | **BEGIN PURGING** | | | | | | | | | |
| 10:30 | 5.02 | 250 | 18.15 | 1.83 | 7.50 | 0.54 | 53.2 | 139 | 40 | Clear |
| 10:35 | 5.10 | 250 | 18.12 | 1.80 | 7.51 | 0.04 | 16.5 | 137 | 40 | |
| 10:40 | 5.11 | 250 | 17.98 | 1.83 | 7.50 | 0.03 | 7.5 | 136 | 40 | |
| 10:45 | 5.12 | 250 | 17.69 | 1.83 | 7.48 | 0.00 | 2.9 | 133 | 40 | |
| 10:50 | 5.13 | 250 | 17.66 | 1.83 | 7.47 | 0.00 | 2.5 | 131 | 40 | |
| 10:55 | 5.13 | 250 | 17.62 | 1.82 | 7.48 | 0.00 | 1.8 | 130 | 40 | |
| 11:00 | 5.14 | 250 | 17.60 | 1.82 | 7.48 | 0.00 | 1.6 | 128 | 40 | |
| 11:05 | 5.14 | 250 | 17.58 | 1.81 | 7.48 | 0.00 | 1.8 | 128 | 40 | |
| 11:10 | 5.13 | 250 | 17.56 | 1.80 | 7.48 | 0.00 | 1.9 | 126 | 40 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| **FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])** | | | **18** | **1.80** | **7.5** | **0.0** | **1.9** | **130** | | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [x] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [x] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [x] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [x] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [x] WL METER Heron
- [x] PID Mini Rae 3000
- [x] WQ METER Horiba U-52
- [x] TURB. METER Horiba U-52
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
| | | | | | | | | |
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**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED: YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 7.5

NO-PURGE METHOD UTILIZED: YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Groundwater clear the entire purge.

MS collected at 10:40; MSD collected at 10:45

Sampler Signature:

Print Name: Rich DePolo

Checked By: Brad LaForest

Date: 11/1/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 38655.0000.0000 |
| **SAMPLE ID** | MBDW-MW-2S |
| **SAMPLE TIME** | 12:40 |

| | |
|---|---|
| **LOCATION ID** | MW-2S |
| **DATE** | 11/1/2022 |
| **START TIME** | 11:50 |
| **END TIME** | 12:35 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [x] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | | x |
| COLLAR | x | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 5.39 FT | **FINAL DTW (BMP)** | 5.69 FT | **PROT. CASING STICKUP (AGS)** | N/A FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 19.01 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 13.62 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 2.23 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 5.50 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 11:50 | **BEGIN PURGING** | | | | | | | | | |
| 11:55 | 5.60 | 200 | 20.11 | 4.12 | 7.79 | 0.29 | 190.1 | 92 | 17 | Clear |
| 12:00 | 5.63 | 200 | 19.67 | 3.49 | 7.69 | 0.19 | 29.3 | 79 | 17 | |
| 12:05 | 5.65 | 200 | 19.71 | 3.40 | 7.64 | 0.05 | 27.8 | 69 | 17 | |
| 12:10 | 5.66 | 200 | 19.71 | 3..39 | 7.61 | 0.04 | 26.9 | 63 | 17 | |
| 12:15 | 5.66 | 200 | 19.74 | 3.36 | 7.62 | 0.02 | 19.3 | 59 | 17 | |
| 12:20 | 5.67 | 200 | 19.75 | 3.35 | 7.62 | 0.02 | 12.7 | 54 | 17 | |
| 12:25 | 5.68 | 200 | 19.74 | 3.34 | 7.61 | 0.01 | 8.9 | 53 | 17 | |
| 12:30 | 5.69 | 200 | 19.74 | 3.33 | 7.61 | 0.00 | 7.8 | 52 | 17 | |
| 12:35 | 5.69 | 200 | 19.74 | 3.31 | 7.60 | 0.00 | 7.3 | 51 | 17 | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| **19** | **3.31** | **7.6** | **0.0** | **7.3** | **51** | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [x] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] WATTERA
- [ ] OTHER
- [ ] OTHER

DECON FLUIDS USED
- [ ] LIQUINOX
- [ ] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER

TUBING/PUMP/BLADDER MATERIALS
- [x] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [x] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER
- [ ] OTHER

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER
- [ ] OTHER
- [ ] OTHER

EQUIPMENT USED
- [x] WL METER Heron
- [x] PID Mini Rae 3000
- [x] WQ METER Horiba U-52
- [x] TURB. METER Horiba U-52
- [ ] PUMP
- [ ] OTHER
- [ ] FILTERS NO. ____ TYPE

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
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**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED: YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 5.5

NO-PURGE METHOD UTILIZED: YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Sampler Signature:

Print Name: Rich DePolo

Checked By: Brad LaForest

Date: 11/1/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 38655.0000.0000 |
| **SAMPLE ID** | MBDW-MW-3I |
| **SAMPLE TIME** | 14:05 |

| | |
|---|---|
| **LOCATION ID** | MW-3I |
| **DATE** | 11/1/2022 |
| **START TIME** | 13:15 |
| **END TIME** | 14:00 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [x] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | | x |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 4.31 FT | **FINAL DTW (BMP)** | 4.98 FT | **PROT. CASING STICKUP (AGS)** | N/A FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 57.37 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.0 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 53.06 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 8.70 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 5.50 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 13:15 | **BEGIN PURGING** | | | | | | | | | |
| 13:20 | 4.85 | 200 | 19.17 | 0.749 | 8.15 | 3.59 | 128.1 | 179 | 50 | Slightly silty |
| 16:25 | 4.92 | 200 | 19.10 | 0.738 | 8.13 | 3.12 | 12.8 | 173 | 50 | |
| 13:30 | 4.93 | 200 | 18.91 | 0.737 | 8.13 | 3.01 | 11.1 | 175 | 50 | Clear |
| 13:35 | 4.95 | 200 | 18.87 | 0.736 | 8.13 | 2.94 | 9.4 | 177 | 50 | |
| 13:40 | 4.96 | 200 | 18.64 | 0.754 | 8.10 | 2.18 | 6.7 | 182 | 50 | |
| 13:45 | 4.96 | 200 | 18.61 | 0.751 | 8.09 | 2.07 | 6.4 | 183 | 50 | |
| 13:50 | 4.97 | 200 | 18.59 | 0.752 | 8.07 | 2.05 | 5.9 | 183 | 50 | |
| 13:55 | 4.97 | 200 | 18.59 | 0.752 | 8.07 | 2.03 | 5.5 | 185 | 50 | |
| 14:00 | 4.98 | 200 | 18.58 | 0.752 | 8.06 | 2.02 | 5.6 | 185 | 50 | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| **19** | **0.752** | **8.1** | **2.0** | **5.6** | **190** | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [x] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [ ] LIQUINOX
- [x] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [x] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [x] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [x] WL METER Heron
- [x] PID Mini Rae 3000
- [x] WQ METER Horiba U-52
- [x] TURB. METER Horiba U-52
- [ ] PUMP _____
- [ ] OTHER _____
- [ ] FILTERS NO. ____ TYPE _____

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
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**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 5.5

NO-PURGE METHOD UTILIZED — YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Slight siltiness at beginning of purge

Sampler Signature:

Print Name: Rich DePolo

Checked By: Brad LaForest

Date: 11/1/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 38655.0000.0000 |
| **SAMPLE ID** | MBDW-MW-6I |
| **SAMPLE TIME** | 11:40 |

| | |
|---|---|
| **LOCATION ID** | MW-6I |
| **DATE** | 11/2/2022 |
| **START TIME** | 10:45 |
| **END TIME** | 11:45 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [x] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | | x |
| COLLAR | x | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 2.91 FT | **FINAL DTW (BMP)** | 2.96 FT | **PROT. CASING STICKUP (AGS)** | N/A FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 47.36 FT | **SCREEN LENGTH** | 10 FT | **PID AMBIENT AIR** | 0.2 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 44.45 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 7.29 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 6.00 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 10:45 | **BEGIN PURGING** | | | | | | | | | |
| 10:50 | 2.93 | 200 | 17.41 | 1.18 | 6.99 | 0.64 | 46.7 | 199 | 45 | Clear |
| 10:55 | 2.94 | 200 | 17.43 | 1.190 | 6.90 | 0.15 | 36.9 | 195 | 45 | |
| 11:00 | 2.94 | 200 | 17.42 | 1.190 | 6.87 | 0.07 | 21.3 | 181 | 45 | |
| 11:05 | 2.95 | 200 | 17.40 | 1.190 | 6.82 | 0.05 | 10.9 | 173 | 45 | |
| 11:10 | 2.95 | 200 | 17.41 | 1.190 | 6.81 | 0.03 | 5.2 | 171 | 45 | |
| 11:15 | 2.96 | 200 | 17.41 | 1.19 | 6.81 | 0.00 | 1.3 | 168 | 45 | |
| 11:20 | 2.96 | 200 | 17.37 | 1.19 | 6.79 | 0.00 | 1.4 | 166 | 45 | |
| 11:25 | 2.96 | 200 | 17.35 | 1.20 | 6.79 | 0.01 | 1.1 | 165 | 45 | |
| 11:30 | 2.97 | 200 | 17.35 | 1.20 | 6.78 | 0.00 | 0.9 | 164 | 45 | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| **17** | **1.20** | **6.8** | **0.0** | **0.9** | **160** | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [x] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [ ] LIQUINOX
- [x] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [x] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [x] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [x] WL METER _____
- [x] PID _____
- [x] WQ METER _____
- [x] TURB. METER _____
- [ ] PUMP _____
- [ ] OTHER _____
- [ ] FILTERS NO. ____ TYPE _____

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED — YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 6

NO-PURGE METHOD UTILIZED — YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Sampler Signature:

Print Name: Rich DePolo

Checked By: Brad LaForest

Date: 11/2/2022

# LOW FLOW GROUNDWATER SAMPLING RECORD

| | |
|---|---|
| **PROJECT NAME** | Mahopac Business District Wells |
| **PROJECT NUMBER** | 38655.0000.0000 |
| **SAMPLE ID** | MBDW-MW-6S |
| **SAMPLE TIME** | 10:25 |

| | |
|---|---|
| **LOCATION ID** | MW-6S |
| **DATE** | 11/2/2022 |
| **START TIME** | 9:30 |
| **END TIME** | 10:20 |
| **SITE NAME/NUMBER** | 340013 |
| **PAGE** | 1 OF 1 |

**WELL DIAMETER (INCHES)** [ ] 1 [x] 2 [ ] 4 [ ] 6 [ ] 8 [ ] OTHER

**TUBING ID (INCHES)** [ ] 1/8 [x] 1/4 [ ] 3/8 [ ] 1/2 [ ] 5/8 [ ] OTHER

**MEASUREMENT POINT (MP)** [ ] TOP OF RISER (TOR) [x] TOP OF CASING (TOC) [ ] OTHER

**WELL INTEGRITY**

| | YES | NO | N/A |
|---|---|---|---|
| CAP | x | | |
| CASING | x | | |
| LOCKED | | | x |
| COLLAR | x | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **INITIAL DTW (BMP)** | 3.72 FT | **FINAL DTW (BMP)** | 4.19 FT | **PROT. CASING STICKUP (AGS)** | N/A FT | **TOC/TOR DIFFERENCE** | FT |
| **WELL DEPTH (BMP)** | 9.57 FT | **SCREEN LENGTH** | 5 FT | **PID AMBIENT AIR** | 0.2 PPM | **REFILL TIMER SETTING** | SEC |
| **WATER COLUMN** | 5.79 FT | **DRAWDOWN VOLUME** (final DTW - initial DTW X well diam. squared X 0.041) | GAL | **PID WELL MOUTH** | 0.0 PPM | **DISCHARGE TIMER SETTING** | SEC |
| **CALCULATED GAL/VOL** (column X well diameter squared X 0.041) | 0.95 GAL | **TOTAL VOL. PURGED** (mL per minute X total minutes X 0.00026 gal/mL) | 3.25 GAL | **DRAWDOWN/ TOTAL PURGED** | | **PRESSURE TO PUMP** | PSI |

**FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA (AS LISTED IN THE QAPP)**

| TIME 3-5 Minutes | DTW (FT) 0.0-0.33 ft Drawdown | PURGE RATE (mL/min) | TEMP. (°C) (+/- 3 degrees) | SP. CONDUCTANCE (mS/cm) (+/- 3%) | pH (units) (+/- 0.1 units) | DISS. $O_2$ (mg/L) (+/- 10%) | TURBIDITY (ntu) (+/- 10% <10 ntu) | REDOX (mv) (+/- 10 mv) | PUMP INTAKE DEPTH (ft) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9:30 | **BEGIN PURGING** | | | | | | | | | |
| 9:35 | 4.12 | 200 | 18.03 | 1.63 | 7.70 | 3.39 | 93.7 | 212 | 9 | Clear |
| 9:40 | 4.14 | 200 | 17.10 | 1.40 | 7.63 | 4.77 | 39.4 | 209 | 9 | |
| 9:45 | 4.15 | 200 | 17.28 | 1.40 | 7.66 | 5.97 | 31.6 | 207 | 9 | |
| 9:50 | 4.16 | 200 | 17.45 | 1.40 | 7.72 | 7.31 | 19.3 | 198 | 9 | |
| 9:55 | 4.16 | 200 | 17.71 | 1.40 | 7.68 | 6.32 | 14.4 | 184 | 9 | |
| 10:00 | 4.17 | 200 | 17.68 | 1.42 | 7.58 | 6.57 | 7.7 | 177 | 9 | |
| 10:05 | 4.18 | 200 | 17.66 | 1.43 | 7.60 | 6.63 | 2.8 | 170 | 9 | |
| 10:10 | 4.18 | 200 | 17.64 | 1.44 | 7.62 | 6.65 | 1.6 | 169 | 9 | |
| 10:15 | 4.19 | 200 | 17.61 | 1.44 | 7.62 | 6.67 | 1.3 | 165 | 9 | |
| 10:20 | 4.19 | 200 | 17.60 | 1.45 | 7.63 | 6.69 | 0.9 | 163 | 9 | |
| | | | | | | | | | | |

**FINAL STABILIZED FIELD PARAMETERS (to appropriate significant figures[SF])**

| | | | | | | |
|---|---|---|---|---|---|---|
| **18** | **1.45** | **7.6** | **6.7** | **0.9** | **160** | |

**TEMP.**: nearest degree (ex. 10.1 = 10)
**COND.**: 3 SF max (ex. 3333 = 3330, 0.696 = 0.696)
**pH**: nearest tenth (ex. 5.53 = 5.5)
**DO**: nearest tenth (ex. 3.51 = 3.5)
**TURB**: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
**ORP**: 2 SF (44.1 = 44, 191 = 190)

**EQUIPMENT DOCUMENTATION**

TYPE OF PUMP
- [x] PERISTALTIC
- [ ] SUBMERSIBLE
- [ ] BLADDER
- [ ] _____
- [ ] WATTERA
- [ ] OTHER _____
- [ ] OTHER _____

DECON FLUIDS USED
- [ ] LIQUINOX
- [x] DEIONIZED WATER
- [ ] POTABLE WATER
- [ ] NITRIC ACID
- [ ] HEXANE
- [ ] METHANOL
- [ ] OTHER _____

TUBING/PUMP/BLADDER MATERIALS
- [x] SILICON TUBING
- [ ] TEFLON TUBING
- [ ] TEFLON LINED TUBING
- [x] HDPE TUBING
- [ ] LDPE TUBING
- [ ] OTHER _____
- [ ] OTHER _____

- [ ] S. STEEL PUMP MATERIAL
- [ ] PVC PUMP MATERIAL
- [ ] GEOPROBE SCREEN
- [ ] TEFLON BLADDER
- [ ] OTHER _____
- [ ] OTHER _____
- [ ] OTHER _____

EQUIPMENT USED
- [x] WL METER _____
- [x] PID _____
- [x] WQ METER _____
- [x] TURB. METER _____
- [ ] PUMP _____
- [ ] OTHER _____
- [ ] FILTERS NO. ____ TYPE _____

**ANALYTICAL PARAMETERS**

| | PARAMETER | METHOD NUMBER | FIELD FILTERED | PRESERVATION METHOD | VOLUME REQUIRED | SAMPLE COLLECTED | QC COLLECTED | SAMPLE BOTTLE ID NUMBERS |
|---|---|---|---|---|---|---|---|---|
| X | See Chain of Custody | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**PURGE OBSERVATIONS**

PURGE WATER CONTAINERIZED: YES [x] NO [ ]

NUMBER OF GALLONS GENERATED 3.3

NO-PURGE METHOD UTILIZED: YES [ ] NO [x]

If yes, purged approximately 1 standing volume prior to sampling or _____mL for this sample location.

**SKETCH/NOTES**

Clear, new dry-cleaner

Sampler Signature:

Print Name: Rich DePolo

Checked By: Brad LaForest

Date: 11/2/2022

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

**NON-HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|
| | 1 | 631-586-5900 | NHWM 218496 |

**GENERATOR**

5. Generator's Name and Mailing Address
MAHOPAC BUSINESS DISTRICT WELLS – NYSDEC SITE NO. 340013
625 Broadway, 12th Fl., Albany, NY 12233-7017

Generator's Site Address (if different than mailing address)
903 SOUTH LAKE BLVD.
MAHOPAC, NY 10451

Generator's Phone: Attn: Jasmine Stefansky, Dir. of Env. Remediation

6. Transporter 1 Company Name: AARCO ENVIRONMENTAL SERVICES
U.S. EPA ID Number: NYR000107326

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
DALE TRANSFER CORP.
129 DALE STREET, WEST BABYLON NY 11704
U.S. EPA ID Number: N/A

Facility's Phone: 631-393-2882

| | 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | |
|---|---|---|---|---|---|---|
| 1. | NON-REGULATED LIQUIDS (WATER) – (PFAS-Impacted Water) | 6 | DM | 2400 | P | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |

13. Special Handling Instructions and Additional Information
1. APPROVAL # 2023-298 (6 x 55 g)
JOB# 218496 TRUCK: B

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: X Jenna Raup as agent for NYSDEC
Signature
Month 04 Day 07 Year 23

**INT'L**

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Elijah A Ozturk
Signature
Month 04 Day 07 Year 23

Transporter 2 Printed/Typed Name
Signature
Month Day Year

**DESIGNATED FACILITY**

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Armando Sanchez
Signature
Month 4 Day 7 Year 23

Printed in USA by GC Labels
1-800-997-6966

DESIGNATED FACILITY TO GENERATOR

Reorder Part# MANIFEST-C6NHW
913-897-6966

# APPENDIX D

# LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-177077-1
Client Project/Site: SMP B - Mahopac Business District Wells

For:
New York State D.E.C.
625 Broadway
Division of Environmental Remediation
Albany, New York 12233-7014

Attn: Brianna Scharf

*Authorized for release by:*
*10/31/2020 11:46:49 AM*

Judy Stone, Senior Project Manager
(484)685-0868
Judy.Stone@Eurofinset.com

LINKS

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Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

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

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

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

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



Judy Stone
Senior Project Manager
*10/31/2020 11:46:49 AM*

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# Definitions/Glossary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Qualifiers

### GC/MS 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. |
| X | Surrogate recovery exceeds control limits |

### GC/MS VOA TICs

| Qualifier | Qualifier Description |
|---|---|
| J | Indicates an Estimated Value for TICs |
| N | Presumptive evidence of material. |
| T | Result is  a tentatively identified compound (TIC) and an estimated value. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| E | Result exceeded calibration range. |

### 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. |

## 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 |

# Case Narrative

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Job ID: 480-177077-1

### Laboratory: Eurofins TestAmerica, Buffalo

**Narrative**

**Job Narrative**
**480-177077-1**

**Receipt**
The samples were received on 10/24/2020 8:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.5º C, 2.9º C and 3.1º C.

**GC/MS VOA**
Method 8260C: Surrogate recovery for the following sample was outside the upper control limit: MW-09S (480-177077-5). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MW-09S (480-177077-5), MW-10S (480-177077-6), MW-04S (480-177077-9) and MW-08S (480-177077-11). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-555715 recovered outside acceptance criteria, low biased, for 2-Hexanone and 2-Butanone (MEK). A reporting limit (RL) standard was analyzed, and the target analytes was detected. Since the associated samples were non-detect for these analytes, the data have been reported. The associated samples are impacted: DUP (480-177077-4), MW-09S (480-177077-5), MW-10S (480-177077-6), MW-06 (480-177077-7), MW-11S (480-177077-8), MW-04S (480-177077-9), MW-03I (480-177077-10), MW-08S (480-177077-11) and TRIP BLANK (480-177077-12).

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 ID: The 1,4-Dioxane result reported for sample (LCS 480-555817/2-A) has an E flag qualifier indicating the results are over the calibration range on the raw data. The actual amounts are within the calibration range; however, the E flag is generated based upon the bias corrected concentration. The LIMS system calculates a bias correction based on the recovery of the 1,4-Dioxane-d8 isotope.

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

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

**Organic Prep**
Method 3535: The following samples contained a thin layer of sediment at the bottom of the bottle prior to extraction: MW-02I (480-177077-1), MW-02S (480-177077-2), MW-02D (480-177077-3), MW-02D (480-177077-3[MS]), MW-02D (480-177077-3[MSD]), DUP (480-177077-4), MW-06 (480-177077-7) and MW-03I (480-177077-10).

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

# Detection Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Client Sample ID: MW-02I
## Lab Sample ID: 480-177077-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | 0.56 | J | 1.0 | 0.16 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 43 | | 4.2 | 2.0 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 180 | | 1.7 | 0.41 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 85 | | 1.7 | 0.49 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 45 | | 1.7 | 0.21 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 78 | | 1.7 | 0.71 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 6.4 | | 1.7 | 0.23 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 5.5 | | 1.7 | 0.26 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorododecanoic acid (PFDoA) | 0.72 | J | 1.7 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 8.8 | | 1.7 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 3.9 | | 1.7 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.59 | J | 1.7 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 28 | | 1.7 | 0.45 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-02S
## Lab Sample ID: 480-177077-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 12 | | 4.1 | 2.0 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 9.0 | | 1.6 | 0.40 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 7.2 | | 1.6 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 5.7 | | 1.6 | 0.21 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 28 | | 1.6 | 0.70 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 8.5 | | 1.6 | 0.22 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 2.3 | | 1.6 | 0.25 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorododecanoic acid (PFDoA) | 0.50 | J | 1.6 | 0.45 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 9.5 | | 1.6 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 2.3 | | 1.6 | 0.47 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.44 | J | 1.6 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 46 | | 1.6 | 0.44 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-02D
## Lab Sample ID: 480-177077-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 4.1 | J F1 F2 | 10 | 3.0 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 23 | | 4.2 | 2.0 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 59 | | 1.7 | 0.41 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 48 | | 1.7 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 39 | | 1.7 | 0.21 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 69 | | 1.7 | 0.71 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 14 | | 1.7 | 0.23 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 26 | | 1.7 | 0.26 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroundecanoic acid (PFUnA) | 5.6 | | 1.7 | 0.92 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorododecanoic acid (PFDoA) | 14 | | 1.7 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorotetradecanoic acid (PFTeA) | 2.5 | | 1.7 | 0.61 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 5.4 | | 1.7 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 3.6 | | 1.7 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.40 | J | 1.7 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 22 | | 1.7 | 0.45 | ng/L | 1 | | 537 (modified) | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Client Sample ID: DUP
## Lab Sample ID: 480-177077-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 3.1 | J | 10 | 3.0 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 23 | | 4.2 | 2.0 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 58 | | 1.7 | 0.41 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 49 | | 1.7 | 0.49 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 37 | | 1.7 | 0.21 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 65 | | 1.7 | 0.72 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 15 | | 1.7 | 0.23 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 27 | | 1.7 | 0.26 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroundecanoic acid (PFUnA) | 5.2 | | 1.7 | 0.93 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorododecanoic acid (PFDoA) | 14 | | 1.7 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorotetradecanoic acid (PFTeA) | 1.7 | | 1.7 | 0.62 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 5.1 | | 1.7 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 3.5 | | 1.7 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.37 | J | 1.7 | 0.16 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 21 | | 1.7 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-09S
## Lab Sample ID: 480-177077-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 6.3 | J | 10 | 4.4 | ug/L | 10 | | 8260C | Total/NA |

## Client Sample ID: MW-10S
## Lab Sample ID: 480-177077-6

No Detections.

## Client Sample ID: MW-06
## Lab Sample ID: 480-177077-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 15 | | 4.4 | 2.1 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 43 | | 1.8 | 0.43 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 32 | | 1.8 | 0.51 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 15 | | 1.8 | 0.22 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 38 | | 1.8 | 0.75 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 4.4 | | 1.8 | 0.24 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 9.4 | | 1.8 | 0.27 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorododecanoic acid (PFDoA) | 3.5 | | 1.8 | 0.49 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 6.7 | | 1.8 | 0.18 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 3.2 | | 1.8 | 0.50 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.48 | J | 1.8 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 36 | | 1.8 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-11S
## Lab Sample ID: 480-177077-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 5.4 | J | 10 | 3.0 | ug/L | 1 | | 8260C | Total/NA |
| Carbon disulfide | 0.37 | J | 1.0 | 0.19 | ug/L | 1 | | 8260C | Total/NA |
| Toluene | 5.5 | | 1.0 | 0.51 | ug/L | 1 | | 8260C | Total/NA |

## Client Sample ID: MW-04S
## Lab Sample ID: 480-177077-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 12 | J | 40 | 12 | ug/L | 4 | | 8260C | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

## Client Sample ID: MW-04S (Continued)
## Lab Sample ID: 480-177077-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 1.8 | J | 4.0 | 1.8 | ug/L | 4 | | 8260C | Total/NA |
| Toluene | 2.0 | J | 4.0 | 2.0 | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: MW-03I
## Lab Sample ID: 480-177077-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | 5.7 | J | 10 | 3.0 | ug/L | 1 | | 8260C | Total/NA |
| Methyl tert-butyl ether | 0.18 | J | 1.0 | 0.16 | ug/L | 1 | | 8260C | Total/NA |
| Perfluorobutanoic acid (PFBA) | 6.3 | | 4.1 | 2.0 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoropentanoic acid (PFPeA) | 3.0 | | 1.7 | 0.41 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 3.0 | | 1.7 | 0.48 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroheptanoic acid (PFHpA) | 5.5 | | 1.7 | 0.21 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanoic acid (PFOA) | 26 | | 1.7 | 0.70 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorononanoic acid (PFNA) | 8.5 | | 1.7 | 0.22 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorodecanoic acid (PFDA) | 6.3 | | 1.7 | 0.26 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluoroundecanoic acid (PFUnA) | 0.95 | J | 1.7 | 0.91 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorododecanoic acid (PFDoA) | 0.88 | J | 1.7 | 0.46 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorobutanesulfonic acid (PFBS) | 4.0 | | 1.7 | 0.17 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorohexanesulfonic acid (PFHxS) | 2.8 | | 1.7 | 0.47 | ng/L | 1 | | 537 (modified) | Total/NA |
| Perfluorooctanesulfonic acid (PFOS) | 11 | | 1.7 | 0.45 | ng/L | 1 | | 537 (modified) | Total/NA |

## Client Sample ID: MW-08S
## Lab Sample ID: 480-177077-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 4.5 | | 4.0 | 1.8 | ug/L | 4 | | 8260C | Total/NA |

## Client Sample ID: TRIP BLANK
## Lab Sample ID: 480-177077-12

No Detections.

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-02I
**Date Collected: 10/21/20 09:00**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-1
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/25/20 15:31 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/25/20 15:31 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/25/20 15:31 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/25/20 15:31 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 10/25/20 15:31 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/25/20 15:31 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/25/20 15:31 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/25/20 15:31 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/25/20 15:31 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/25/20 15:31 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/25/20 15:31 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/25/20 15:31 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/25/20 15:31 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/25/20 15:31 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/25/20 15:31 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/25/20 15:31 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/25/20 15:31 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/25/20 15:31 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/25/20 15:31 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/25/20 15:31 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/25/20 15:31 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/25/20 15:31 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/25/20 15:31 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/25/20 15:31 | 1 |
| **Methyl tert-butyl ether** | **0.56** | **J** | 1.0 | 0.16 | ug/L | | | 10/25/20 15:31 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/25/20 15:31 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/25/20 15:31 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/25/20 15:31 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/25/20 15:31 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/25/20 15:31 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/25/20 15:31 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/25/20 15:31 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/25/20 15:31 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/25/20 15:31 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/25/20 15:31 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/25/20 15:31 | 1 |

## Client Sample ID: MW-02I
**Date Collected: 10/21/20 09:00**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-1
**Matrix: Water**

| Tentatively Identified Compound | Est. Result | Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compound | None | | ug/L | | | | | 10/25/20 15:31 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 102 | | 80 - 120 | | 10/25/20 15:31 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 77 - 120 | | 10/25/20 15:31 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 73 - 120 | | 10/25/20 15:31 | 1 |
| Dibromofluoromethane (Surr) | 103 | | 75 - 123 | | 10/25/20 15:31 | 1 |

### Method: 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 | | 10/26/20 15:19 | 10/28/20 17:58 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8 | 26 | | 15 - 110 | 10/26/20 15:19 | 10/28/20 17:58 | 1 |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **43** | | 4.2 | 2.0 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **180** | | 1.7 | 0.41 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **85** | | 1.7 | 0.49 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **45** | | 1.7 | 0.21 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **78** | | 1.7 | 0.71 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorononanoic acid (PFNA)** | **6.4** | | 1.7 | 0.23 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **5.5** | | 1.7 | 0.26 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| Perfluoroundecanoic acid (PFUnA) | ND | | 1.7 | 0.92 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorododecanoic acid (PFDoA)** | **0.72** | **J** | 1.7 | 0.46 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | ND | | 1.7 | 0.61 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **8.8** | | 1.7 | 0.17 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **3.9** | | 1.7 | 0.48 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.59** | **J** | 1.7 | 0.16 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **28** | | 1.7 | 0.45 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.27 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.82 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.2 | 1.0 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.2 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 6:2 FTS | ND | | 4.2 | 2.1 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 8:2 FTS | ND | | 1.7 | 0.39 | ng/L | | 10/26/20 18:56 | 10/27/20 21:30 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C4 PFBA | 50 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C5 PFPeA | 63 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C2 PFHxA | 72 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C4 PFHpA | 84 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C4 PFOA | 82 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C5 PFNA | 87 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C2 PFDA | 92 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |

## Client Sample ID: MW-02I
**Date Collected: 10/21/20 09:00**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-1
**Matrix: Water**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C2 PFUnA | 91 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C2 PFDoA | 77 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C2 PFTeDA | 88 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C3 PFBS | 78 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 18O2 PFHxS | 83 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C4 PFOS | 79 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| 13C8 FOSA | 83 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| d3-NMeFOSAA | 68 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| d5-NEtFOSAA | 85 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| M2-6:2 FTS | 108 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |
| M2-8:2 FTS | 103 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 21:30 | 1 |

## Client Sample ID: MW-02S
**Date Collected: 10/21/20 10:25**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-2
**Matrix: Water**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/25/20 15:55 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/25/20 15:55 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/25/20 15:55 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/25/20 15:55 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 10/25/20 15:55 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/25/20 15:55 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/25/20 15:55 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/25/20 15:55 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/25/20 15:55 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/25/20 15:55 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/25/20 15:55 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/25/20 15:55 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/25/20 15:55 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/25/20 15:55 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/25/20 15:55 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/25/20 15:55 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/25/20 15:55 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/25/20 15:55 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/25/20 15:55 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/25/20 15:55 | 1 |

## Client Sample ID: MW-02S
**Date Collected: 10/21/20 10:25**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-2
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/25/20 15:55 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/25/20 15:55 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/25/20 15:55 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/25/20 15:55 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 10/25/20 15:55 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/25/20 15:55 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/25/20 15:55 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/25/20 15:55 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/25/20 15:55 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/25/20 15:55 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/25/20 15:55 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/25/20 15:55 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/25/20 15:55 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/25/20 15:55 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/25/20 15:55 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/25/20 15:55 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/25/20 15:55* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *101* | | *80 - 120* | | *10/25/20 15:55* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *77 - 120* | | *10/25/20 15:55* | *1* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *73 - 120* | | *10/25/20 15:55* | *1* |
| *Dibromofluoromethane (Surr)* | *98* | | *75 - 123* | | *10/25/20 15:55* | *1* |

### Method: 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 | | 10/26/20 15:19 | 10/28/20 18:21 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8* | *26* | | *15 - 110* | *10/26/20 15:19* | *10/28/20 18:21* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **12** | | 4.1 | 2.0 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **9.0** | | 1.6 | 0.40 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **7.2** | | 1.6 | 0.48 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **5.7** | | 1.6 | 0.21 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **28** | | 1.6 | 0.70 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorononanoic acid (PFNA)** | **8.5** | | 1.6 | 0.22 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **2.3** | | 1.6 | 0.25 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| Perfluoroundecanoic acid (PFUnA) | ND | | 1.6 | 0.90 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorododecanoic acid (PFDoA)** | **0.50** | **J** | 1.6 | 0.45 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 1.6 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | ND | | 1.6 | 0.60 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **9.5** | | 1.6 | 0.16 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **2.3** | | 1.6 | 0.47 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |

## Client Sample ID: MW-02S
**Lab Sample ID: 480-177077-2**
**Date Collected: 10/21/20 10:25**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.44** | **J** | 1.6 | 0.16 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **46** | | 1.6 | 0.44 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 1.6 | 0.26 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 1.6 | 0.81 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.1 | 0.99 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.1 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| 6:2 FTS | ND | | 4.1 | 2.1 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |
| 8:2 FTS | ND | | 1.6 | 0.38 | ng/L | | 10/26/20 18:56 | 10/27/20 21:39 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *44* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C5 PFPeA* | *61* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C2 PFHxA* | *72* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C4 PFHpA* | *81* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C4 PFOA* | *86* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C5 PFNA* | *91* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C2 PFDA* | *91* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C2 PFUnA* | *86* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C2 PFDoA* | *81* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C2 PFTeDA* | *74* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C3 PFBS* | *74* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *18O2 PFHxS* | *81* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C4 PFOS* | *76* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *13C8 FOSA* | *79* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *d3-NMeFOSAA* | *63* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *d5-NEtFOSAA* | *80* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *M2-6:2 FTS* | *114* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |
| *M2-8:2 FTS* | *94* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 21:39* | *1* |

## Client Sample ID: MW-02D
**Lab Sample ID: 480-177077-3**
**Date Collected: 10/23/20 11:05**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | F1 F2 | 1.0 | 0.82 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | F1 F2 | 1.0 | 0.21 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,1,2-Trichloroethane | ND | F1 F2 | 1.0 | 0.23 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | F1 F2 | 1.0 | 0.31 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,1-Dichloroethane | ND | F1 F2 | 1.0 | 0.38 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,1-Dichloroethene | ND | F1 F2 | 1.0 | 0.29 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,2,4-Trichlorobenzene | ND | F1 F2 | 1.0 | 0.41 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | F1 F2 | 1.0 | 0.39 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,2-Dichlorobenzene | ND | F1 F2 | 1.0 | 0.79 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,2-Dichloroethane | ND | F1 F2 | 1.0 | 0.21 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,2-Dichloropropane | ND | F1 F2 | 1.0 | 0.72 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,3-Dichlorobenzene | ND | F1 F2 | 1.0 | 0.78 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,4-Dichlorobenzene | ND | F1 F2 | 1.0 | 0.84 | ug/L | | | 10/25/20 16:19 | 1 |

**Client Sample ID: MW-02D**
**Lab Sample ID: 480-177077-3**
**Date Collected: 10/23/20 11:05**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 2-Butanone (MEK) | ND | F1 F2 | 10 | 1.3 | ug/L | | | 10/25/20 16:19 | 1 |
| 2-Hexanone | ND | F1 F2 | 5.0 | 1.2 | ug/L | | | 10/25/20 16:19 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | F1 F2 | 5.0 | 2.1 | ug/L | | | 10/25/20 16:19 | 1 |
| **Acetone** | **4.1** | **J F1 F2** | 10 | 3.0 | ug/L | | | 10/25/20 16:19 | 1 |
| Benzene | ND | F1 F2 | 1.0 | 0.41 | ug/L | | | 10/25/20 16:19 | 1 |
| Bromodichloromethane | ND | F1 F2 | 1.0 | 0.39 | ug/L | | | 10/25/20 16:19 | 1 |
| Bromoform | ND | F1 F2 | 1.0 | 0.26 | ug/L | | | 10/25/20 16:19 | 1 |
| Bromomethane | ND | F1 F2 | 1.0 | 0.69 | ug/L | | | 10/25/20 16:19 | 1 |
| Carbon disulfide | ND | F1 F2 | 1.0 | 0.19 | ug/L | | | 10/25/20 16:19 | 1 |
| Carbon tetrachloride | ND | F1 F2 | 1.0 | 0.27 | ug/L | | | 10/25/20 16:19 | 1 |
| Chlorobenzene | ND | F1 F2 | 1.0 | 0.75 | ug/L | | | 10/25/20 16:19 | 1 |
| Dibromochloromethane | ND | F1 F2 | 1.0 | 0.32 | ug/L | | | 10/25/20 16:19 | 1 |
| Chloroethane | ND | F1 F2 | 1.0 | 0.32 | ug/L | | | 10/25/20 16:19 | 1 |
| Chloroform | ND | F1 F2 | 1.0 | 0.34 | ug/L | | | 10/25/20 16:19 | 1 |
| Chloromethane | ND | F1 F2 | 1.0 | 0.35 | ug/L | | | 10/25/20 16:19 | 1 |
| cis-1,2-Dichloroethene | ND | F1 F2 | 1.0 | 0.81 | ug/L | | | 10/25/20 16:19 | 1 |
| cis-1,3-Dichloropropene | ND | F1 F2 | 1.0 | 0.36 | ug/L | | | 10/25/20 16:19 | 1 |
| Cyclohexane | ND | F1 F2 | 1.0 | 0.18 | ug/L | | | 10/25/20 16:19 | 1 |
| Dichlorodifluoromethane | ND | F1 F2 | 1.0 | 0.68 | ug/L | | | 10/25/20 16:19 | 1 |
| Ethylbenzene | ND | F1 F2 | 1.0 | 0.74 | ug/L | | | 10/25/20 16:19 | 1 |
| 1,2-Dibromoethane | ND | F1 F2 | 1.0 | 0.73 | ug/L | | | 10/25/20 16:19 | 1 |
| Isopropylbenzene | ND | F1 F2 | 1.0 | 0.79 | ug/L | | | 10/25/20 16:19 | 1 |
| Methyl acetate | ND | F1 F2 | 2.5 | 1.3 | ug/L | | | 10/25/20 16:19 | 1 |
| Methyl tert-butyl ether | ND | F1 F2 | 1.0 | 0.16 | ug/L | | | 10/25/20 16:19 | 1 |
| Methylcyclohexane | ND | F1 F2 | 1.0 | 0.16 | ug/L | | | 10/25/20 16:19 | 1 |
| Methylene Chloride | ND | F1 F2 | 1.0 | 0.44 | ug/L | | | 10/25/20 16:19 | 1 |
| Styrene | ND | F1 F2 | 1.0 | 0.73 | ug/L | | | 10/25/20 16:19 | 1 |
| Tetrachloroethene | ND | F1 F2 | 1.0 | 0.36 | ug/L | | | 10/25/20 16:19 | 1 |
| Toluene | ND | F1 F2 | 1.0 | 0.51 | ug/L | | | 10/25/20 16:19 | 1 |
| trans-1,2-Dichloroethene | ND | F1 F2 | 1.0 | 0.90 | ug/L | | | 10/25/20 16:19 | 1 |
| trans-1,3-Dichloropropene | ND | F1 F2 | 1.0 | 0.37 | ug/L | | | 10/25/20 16:19 | 1 |
| Trichloroethene | ND | F1 F2 | 1.0 | 0.46 | ug/L | | | 10/25/20 16:19 | 1 |
| Trichlorofluoromethane | ND | F1 F2 | 1.0 | 0.88 | ug/L | | | 10/25/20 16:19 | 1 |
| Vinyl chloride | ND | F1 F2 | 1.0 | 0.90 | ug/L | | | 10/25/20 16:19 | 1 |
| Xylenes, Total | ND | F1 F2 | 2.0 | 0.66 | ug/L | | | 10/25/20 16:19 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/25/20 16:19* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *99* | | *80 - 120* | | *10/25/20 16:19* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *77 - 120* | | *10/25/20 16:19* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *73 - 120* | | *10/25/20 16:19* | *1* |
| *Dibromofluoromethane (Surr)* | *102* | | *75 - 123* | | *10/25/20 16:19* | *1* |

## Method: 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 | | 10/26/20 15:19 | 10/28/20 17:11 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8* | *25* | | *15 - 110* | *10/26/20 15:19* | *10/28/20 17:11* | *1* |

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

**Client Sample ID: MW-02D**
**Lab Sample ID: 480-177077-3**
**Date Collected: 10/23/20 11:05**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

## Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **23** | | 4.2 | 2.0 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **59** | | 1.7 | 0.41 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **48** | | 1.7 | 0.48 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **39** | | 1.7 | 0.21 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **69** | | 1.7 | 0.71 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorononanoic acid (PFNA)** | **14** | | 1.7 | 0.23 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **26** | | 1.7 | 0.26 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluoroundecanoic acid (PFUnA)** | **5.6** | | 1.7 | 0.92 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorododecanoic acid (PFDoA)** | **14** | | 1.7 | 0.46 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorotetradecanoic acid (PFTeA)** | **2.5** | | 1.7 | 0.61 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **5.4** | | 1.7 | 0.17 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **3.6** | | 1.7 | 0.48 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.40** | **J** | 1.7 | 0.16 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **22** | | 1.7 | 0.45 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.27 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.82 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.2 | 1.0 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.2 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| 6:2 FTS | ND | | 4.2 | 2.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |
| 8:2 FTS | ND | | 1.7 | 0.38 | ng/L | | 10/26/20 18:56 | 10/27/20 22:06 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *63* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C5 PFPeA* | *75* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C2 PFHxA* | *76* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C4 PFHpA* | *75* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C4 PFOA* | *79* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C5 PFNA* | *86* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C2 PFDA* | *77* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C2 PFUnA* | *75* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C2 PFDoA* | *66* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C2 PFTeDA* | *62* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C3 PFBS* | *75* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *18O2 PFHxS* | *76* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C4 PFOS* | *75* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *13C8 FOSA* | *76* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *d3-NMeFOSAA* | *70* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *d5-NEtFOSAA* | *77* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *M2-6:2 FTS* | *91* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |
| *M2-8:2 FTS* | *95* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:06* | *1* |

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

**Client Sample ID: DUP**
**Lab Sample ID: 480-177077-4**
**Date Collected: 10/22/20 10:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

## Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/26/20 12:21 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/26/20 12:21 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/26/20 12:21 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/26/20 12:21 | 1 |
| **Acetone** | **3.1** | **J** | 10 | 3.0 | ug/L | | | 10/26/20 12:21 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 12:21 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 12:21 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/26/20 12:21 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/26/20 12:21 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/26/20 12:21 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/26/20 12:21 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/26/20 12:21 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 12:21 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 12:21 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/26/20 12:21 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/26/20 12:21 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/26/20 12:21 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 12:21 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/26/20 12:21 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/26/20 12:21 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/26/20 12:21 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 12:21 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 12:21 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/26/20 12:21 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 12:21 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 12:21 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/26/20 12:21 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 12:21 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 12:21 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/26/20 12:21 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 12:21 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/26/20 12:21 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/26/20 12:21 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/26/20 12:21 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 12:21 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/26/20 12:21 | 1 |

## Client Sample ID: DUP
**Date Collected: 10/22/20 10:30**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-4
**Matrix: Water**

| Tentatively Identified Compound | Est. Result | Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compound | None | | ug/L | | | | | 10/26/20 12:21 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 116 | | 80 - 120 | | 10/26/20 12:21 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 77 - 120 | | 10/26/20 12:21 | 1 |
| 4-Bromofluorobenzene (Surr) | 93 | | 73 - 120 | | 10/26/20 12:21 | 1 |
| Dibromofluoromethane (Surr) | 112 | | 75 - 123 | | 10/26/20 12:21 | 1 |

### Method: 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 | | 10/26/20 15:19 | 10/28/20 18:45 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 1,4-Dioxane-d8 | 24 | | 15 - 110 | 10/26/20 15:19 | 10/28/20 18:45 | 1 |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **23** | | 4.2 | 2.0 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **58** | | 1.7 | 0.41 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **49** | | 1.7 | 0.49 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **37** | | 1.7 | 0.21 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **65** | | 1.7 | 0.72 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorononanoic acid (PFNA)** | **15** | | 1.7 | 0.23 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **27** | | 1.7 | 0.26 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluoroundecanoic acid (PFUnA)** | **5.2** | | 1.7 | 0.93 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorododecanoic acid (PFDoA)** | **14** | | 1.7 | 0.46 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorotetradecanoic acid (PFTeA)** | **1.7** | | 1.7 | 0.62 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **5.1** | | 1.7 | 0.17 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **3.5** | | 1.7 | 0.48 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.37** | **J** | 1.7 | 0.16 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **21** | | 1.7 | 0.46 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.27 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.83 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.2 | 1.0 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.2 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 6:2 FTS | ND | | 4.2 | 2.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 8:2 FTS | ND | | 1.7 | 0.39 | ng/L | | 10/26/20 18:56 | 10/27/20 22:34 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C4 PFBA | 66 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C5 PFPeA | 77 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C2 PFHxA | 80 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C4 PFHpA | 79 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C4 PFOA | 83 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |

## Client Sample ID: DUP
**Lab Sample ID: 480-177077-4**
**Date Collected: 10/22/20 10:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C5 PFNA | 78 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C2 PFDA | 79 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C2 PFUnA | 84 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C2 PFDoA | 70 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C2 PFTeDA | 69 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C3 PFBS | 76 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 18O2 PFHxS | 77 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C4 PFOS | 78 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| 13C8 FOSA | 78 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| d3-NMeFOSAA | 71 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| d5-NEtFOSAA | 78 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| M2-6:2 FTS | 96 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |
| M2-8:2 FTS | 104 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:34 | 1 |

## Client Sample ID: MW-09S
**Lab Sample ID: 480-177077-5**
**Date Collected: 10/21/20 11:15**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 10 | 8.2 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,1,2,2-Tetrachloroethane | ND | | 10 | 2.1 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,1,2-Trichloroethane | ND | | 10 | 2.3 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 10 | 3.1 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,1-Dichloroethane | ND | | 10 | 3.8 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,1-Dichloroethene | ND | | 10 | 2.9 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,2,4-Trichlorobenzene | ND | | 10 | 4.1 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,2-Dibromo-3-Chloropropane | ND | | 10 | 3.9 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,2-Dichlorobenzene | ND | | 10 | 7.9 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,2-Dichloroethane | ND | | 10 | 2.1 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,2-Dichloropropane | ND | | 10 | 7.2 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,3-Dichlorobenzene | ND | | 10 | 7.8 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,4-Dichlorobenzene | ND | | 10 | 8.4 | ug/L | | | 10/26/20 12:45 | 10 |
| 2-Butanone (MEK) | ND | | 100 | 13 | ug/L | | | 10/26/20 12:45 | 10 |
| 2-Hexanone | ND | | 50 | 12 | ug/L | | | 10/26/20 12:45 | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 50 | 21 | ug/L | | | 10/26/20 12:45 | 10 |
| Acetone | ND | | 100 | 30 | ug/L | | | 10/26/20 12:45 | 10 |
| Benzene | ND | | 10 | 4.1 | ug/L | | | 10/26/20 12:45 | 10 |
| Bromodichloromethane | ND | | 10 | 3.9 | ug/L | | | 10/26/20 12:45 | 10 |
| Bromoform | ND | | 10 | 2.6 | ug/L | | | 10/26/20 12:45 | 10 |
| Bromomethane | ND | | 10 | 6.9 | ug/L | | | 10/26/20 12:45 | 10 |
| Carbon disulfide | ND | | 10 | 1.9 | ug/L | | | 10/26/20 12:45 | 10 |
| Carbon tetrachloride | ND | | 10 | 2.7 | ug/L | | | 10/26/20 12:45 | 10 |
| Chlorobenzene | ND | | 10 | 7.5 | ug/L | | | 10/26/20 12:45 | 10 |
| Dibromochloromethane | ND | | 10 | 3.2 | ug/L | | | 10/26/20 12:45 | 10 |
| Chloroethane | ND | | 10 | 3.2 | ug/L | | | 10/26/20 12:45 | 10 |
| Chloroform | ND | | 10 | 3.4 | ug/L | | | 10/26/20 12:45 | 10 |
| Chloromethane | ND | | 10 | 3.5 | ug/L | | | 10/26/20 12:45 | 10 |
| cis-1,2-Dichloroethene | ND | | 10 | 8.1 | ug/L | | | 10/26/20 12:45 | 10 |
| cis-1,3-Dichloropropene | ND | | 10 | 3.6 | ug/L | | | 10/26/20 12:45 | 10 |

## Client Sample ID: MW-09S
**Lab Sample ID: 480-177077-5**

**Date Collected: 10/21/20 11:15**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cyclohexane | ND | | 10 | 1.8 | ug/L | | | 10/26/20 12:45 | 10 |
| Dichlorodifluoromethane | ND | | 10 | 6.8 | ug/L | | | 10/26/20 12:45 | 10 |
| Ethylbenzene | ND | | 10 | 7.4 | ug/L | | | 10/26/20 12:45 | 10 |
| 1,2-Dibromoethane | ND | | 10 | 7.3 | ug/L | | | 10/26/20 12:45 | 10 |
| Isopropylbenzene | ND | | 10 | 7.9 | ug/L | | | 10/26/20 12:45 | 10 |
| Methyl acetate | ND | | 25 | 13 | ug/L | | | 10/26/20 12:45 | 10 |
| Methyl tert-butyl ether | ND | | 10 | 1.6 | ug/L | | | 10/26/20 12:45 | 10 |
| Methylcyclohexane | ND | | 10 | 1.6 | ug/L | | | 10/26/20 12:45 | 10 |
| **Methylene Chloride** | **6.3** | **J** | 10 | 4.4 | ug/L | | | 10/26/20 12:45 | 10 |
| Styrene | ND | | 10 | 7.3 | ug/L | | | 10/26/20 12:45 | 10 |
| Tetrachloroethene | ND | | 10 | 3.6 | ug/L | | | 10/26/20 12:45 | 10 |
| Toluene | ND | | 10 | 5.1 | ug/L | | | 10/26/20 12:45 | 10 |
| trans-1,2-Dichloroethene | ND | | 10 | 9.0 | ug/L | | | 10/26/20 12:45 | 10 |
| trans-1,3-Dichloropropene | ND | | 10 | 3.7 | ug/L | | | 10/26/20 12:45 | 10 |
| Trichloroethene | ND | | 10 | 4.6 | ug/L | | | 10/26/20 12:45 | 10 |
| Trichlorofluoromethane | ND | | 10 | 8.8 | ug/L | | | 10/26/20 12:45 | 10 |
| Vinyl chloride | ND | | 10 | 9.0 | ug/L | | | 10/26/20 12:45 | 10 |
| Xylenes, Total | ND | | 20 | 6.6 | ug/L | | | 10/26/20 12:45 | 10 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 12:45* | *10* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *111* | | *80 - 120* | | *10/26/20 12:45* | *10* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *77 - 120* | | *10/26/20 12:45* | *10* |
| *4-Bromofluorobenzene (Surr)* | *82* | | *73 - 120* | | *10/26/20 12:45* | *10* |
| *Dibromofluoromethane (Surr)* | *125* | *X* | *75 - 123* | | *10/26/20 12:45* | *10* |

## Client Sample ID: MW-10S
**Lab Sample ID: 480-177077-6**

**Date Collected: 10/21/20 11:45**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 4.0 | 3.3 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.0 | 0.84 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,1,2-Trichloroethane | ND | | 4.0 | 0.92 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 4.0 | 1.2 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,1-Dichloroethane | ND | | 4.0 | 1.5 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,1-Dichloroethene | ND | | 4.0 | 1.2 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,2-Dichlorobenzene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,2-Dichloroethane | ND | | 4.0 | 0.84 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,2-Dichloropropane | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,3-Dichlorobenzene | ND | | 4.0 | 3.1 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,4-Dichlorobenzene | ND | | 4.0 | 3.4 | ug/L | | | 10/26/20 13:10 | 4 |
| 2-Butanone (MEK) | ND | | 40 | 5.3 | ug/L | | | 10/26/20 13:10 | 4 |
| 2-Hexanone | ND | | 20 | 5.0 | ug/L | | | 10/26/20 13:10 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20 | 8.4 | ug/L | | | 10/26/20 13:10 | 4 |

## Client Sample ID: MW-10S
**Lab Sample ID: 480-177077-6**
**Date Collected: 10/21/20 11:45**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | | 40 | 12 | ug/L | | | 10/26/20 13:10 | 4 |
| Benzene | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 13:10 | 4 |
| Bromodichloromethane | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 13:10 | 4 |
| Bromoform | ND | | 4.0 | 1.0 | ug/L | | | 10/26/20 13:10 | 4 |
| Bromomethane | ND | | 4.0 | 2.8 | ug/L | | | 10/26/20 13:10 | 4 |
| Carbon disulfide | ND | | 4.0 | 0.76 | ug/L | | | 10/26/20 13:10 | 4 |
| Carbon tetrachloride | ND | | 4.0 | 1.1 | ug/L | | | 10/26/20 13:10 | 4 |
| Chlorobenzene | ND | | 4.0 | 3.0 | ug/L | | | 10/26/20 13:10 | 4 |
| Dibromochloromethane | ND | | 4.0 | 1.3 | ug/L | | | 10/26/20 13:10 | 4 |
| Chloroethane | ND | | 4.0 | 1.3 | ug/L | | | 10/26/20 13:10 | 4 |
| Chloroform | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 13:10 | 4 |
| Chloromethane | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 13:10 | 4 |
| cis-1,2-Dichloroethene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 13:10 | 4 |
| cis-1,3-Dichloropropene | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 13:10 | 4 |
| Cyclohexane | ND | | 4.0 | 0.72 | ug/L | | | 10/26/20 13:10 | 4 |
| Dichlorodifluoromethane | ND | | 4.0 | 2.7 | ug/L | | | 10/26/20 13:10 | 4 |
| Ethylbenzene | ND | | 4.0 | 3.0 | ug/L | | | 10/26/20 13:10 | 4 |
| 1,2-Dibromoethane | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 13:10 | 4 |
| Isopropylbenzene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 13:10 | 4 |
| Methyl acetate | ND | | 10 | 5.2 | ug/L | | | 10/26/20 13:10 | 4 |
| Methyl tert-butyl ether | ND | | 4.0 | 0.64 | ug/L | | | 10/26/20 13:10 | 4 |
| Methylcyclohexane | ND | | 4.0 | 0.64 | ug/L | | | 10/26/20 13:10 | 4 |
| Methylene Chloride | ND | | 4.0 | 1.8 | ug/L | | | 10/26/20 13:10 | 4 |
| Styrene | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 13:10 | 4 |
| Tetrachloroethene | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 13:10 | 4 |
| Toluene | ND | | 4.0 | 2.0 | ug/L | | | 10/26/20 13:10 | 4 |
| trans-1,2-Dichloroethene | ND | | 4.0 | 3.6 | ug/L | | | 10/26/20 13:10 | 4 |
| trans-1,3-Dichloropropene | ND | | 4.0 | 1.5 | ug/L | | | 10/26/20 13:10 | 4 |
| Trichloroethene | ND | | 4.0 | 1.8 | ug/L | | | 10/26/20 13:10 | 4 |
| Trichlorofluoromethane | ND | | 4.0 | 3.5 | ug/L | | | 10/26/20 13:10 | 4 |
| Vinyl chloride | ND | | 4.0 | 3.6 | ug/L | | | 10/26/20 13:10 | 4 |
| Xylenes, Total | ND | | 8.0 | 2.6 | ug/L | | | 10/26/20 13:10 | 4 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 13:10* | *4* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *110* | | *80 - 120* | | *10/26/20 13:10* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *77 - 120* | | *10/26/20 13:10* | *4* |
| *4-Bromofluorobenzene (Surr)* | *83* | | *73 - 120* | | *10/26/20 13:10* | *4* |
| *Dibromofluoromethane (Surr)* | *115* | | *75 - 123* | | *10/26/20 13:10* | *4* |

## Client Sample ID: MW-06
**Lab Sample ID: 480-177077-7**
**Date Collected: 10/21/20 11:55**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 13:35 | 1 |

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

**Client Sample ID: MW-06**
**Lab Sample ID: 480-177077-7**
**Date Collected: 10/21/20 11:55**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/26/20 13:35 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/26/20 13:35 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/26/20 13:35 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/26/20 13:35 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 10/26/20 13:35 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 13:35 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 13:35 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/26/20 13:35 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/26/20 13:35 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/26/20 13:35 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/26/20 13:35 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/26/20 13:35 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 13:35 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 13:35 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/26/20 13:35 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/26/20 13:35 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/26/20 13:35 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 13:35 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/26/20 13:35 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/26/20 13:35 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/26/20 13:35 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 13:35 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 13:35 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/26/20 13:35 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 13:35 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 13:35 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/26/20 13:35 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 13:35 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 13:35 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/26/20 13:35 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 13:35 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/26/20 13:35 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/26/20 13:35 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/26/20 13:35 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 13:35 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/26/20 13:35 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 13:35* | *1* |

## Client Sample ID: MW-06
**Date Collected: 10/21/20 11:55**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-7
**Matrix: Water**

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *111* | | *80 - 120* | | *10/26/20 13:35* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *77 - 120* | | *10/26/20 13:35* | *1* |
| *4-Bromofluorobenzene (Surr)* | *86* | | *73 - 120* | | *10/26/20 13:35* | *1* |
| *Dibromofluoromethane (Surr)* | *117* | | *75 - 123* | | *10/26/20 13:35* | *1* |

### Method: 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 | | 10/26/20 15:19 | 10/28/20 19:08 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8* | *28* | | *15 - 110* | *10/26/20 15:19* | *10/28/20 19:08* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **15** | | 4.4 | 2.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **43** | | 1.8 | 0.43 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **32** | | 1.8 | 0.51 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **15** | | 1.8 | 0.22 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **38** | | 1.8 | 0.75 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorononanoic acid (PFNA)** | **4.4** | | 1.8 | 0.24 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **9.4** | | 1.8 | 0.27 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| Perfluoroundecanoic acid (PFUnA) | ND | | 1.8 | 0.97 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorododecanoic acid (PFDoA)** | **3.5** | | 1.8 | 0.49 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 1.8 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | ND | | 1.8 | 0.64 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **6.7** | | 1.8 | 0.18 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **3.2** | | 1.8 | 0.50 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluoroheptanesulfonic Acid (PFHpS)** | **0.48** | **J** | 1.8 | 0.17 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **36** | | 1.8 | 0.48 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 1.8 | 0.28 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 1.8 | 0.87 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.4 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.4 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| 6:2 FTS | ND | | 4.4 | 2.2 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| 8:2 FTS | ND | | 1.8 | 0.41 | ng/L | | 10/26/20 18:56 | 10/27/20 22:43 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *55* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C5 PFPeA* | *70* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C2 PFHxA* | *79* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C4 PFHpA* | *86* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C4 PFOA* | *90* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C5 PFNA* | *90* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C2 PFDA* | *83* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C2 PFUnA* | *93* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C2 PFDoA* | *85* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |
| *13C2 PFTeDA* | *85* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:43* | *1* |

## Client Sample ID: MW-06
**Lab Sample ID: 480-177077-7**
**Date Collected: 10/21/20 11:55**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C3 PFBS | 78 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| 18O2 PFHxS | 80 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| 13C4 PFOS | 79 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| 13C8 FOSA | 81 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| d3-NMeFOSAA | 69 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| d5-NEtFOSAA | 87 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| M2-6:2 FTS | 85 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |
| M2-8:2 FTS | 85 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 22:43 | 1 |

## Client Sample ID: MW-11S
**Lab Sample ID: 480-177077-8**
**Date Collected: 10/21/20 13:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/26/20 14:00 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/26/20 14:00 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/26/20 14:00 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/26/20 14:00 | 1 |
| **Acetone** | **5.4** | **J** | 10 | 3.0 | ug/L | | | 10/26/20 14:00 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 14:00 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 14:00 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/26/20 14:00 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/26/20 14:00 | 1 |
| **Carbon disulfide** | **0.37** | **J** | 1.0 | 0.19 | ug/L | | | 10/26/20 14:00 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/26/20 14:00 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/26/20 14:00 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 14:00 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 14:00 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/26/20 14:00 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/26/20 14:00 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/26/20 14:00 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 14:00 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/26/20 14:00 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/26/20 14:00 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/26/20 14:00 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 14:00 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 14:00 | 1 |

## Client Sample ID: MW-11S
**Lab Sample ID: 480-177077-8**
**Date Collected: 10/21/20 13:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/26/20 14:00 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 14:00 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 14:00 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/26/20 14:00 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 14:00 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 14:00 | 1 |
| **Toluene** | **5.5** | | 1.0 | 0.51 | ug/L | | | 10/26/20 14:00 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 14:00 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/26/20 14:00 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/26/20 14:00 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/26/20 14:00 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 14:00 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/26/20 14:00 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Isooctanol* | *2.6* | *T J N* | *ug/L* | | *8.94* | *26952-21-6* | | *10/26/20 14:00* | *1* |
| *Unknown* | *3.0* | *T J* | *ug/L* | | *9.35* | | | *10/26/20 14:00* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *110* | | *80 - 120* | | *10/26/20 14:00* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *77 - 120* | | *10/26/20 14:00* | *1* |
| *4-Bromofluorobenzene (Surr)* | *84* | | *73 - 120* | | *10/26/20 14:00* | *1* |
| *Dibromofluoromethane (Surr)* | *114* | | *75 - 123* | | *10/26/20 14:00* | *1* |

## Client Sample ID: MW-04S
**Lab Sample ID: 480-177077-9**
**Date Collected: 10/21/20 14:10**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 4.0 | 3.3 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.0 | 0.84 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,1,2-Trichloroethane | ND | | 4.0 | 0.92 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 4.0 | 1.2 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,1-Dichloroethane | ND | | 4.0 | 1.5 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,1-Dichloroethene | ND | | 4.0 | 1.2 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,2-Dichlorobenzene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,2-Dichloroethane | ND | | 4.0 | 0.84 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,2-Dichloropropane | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,3-Dichlorobenzene | ND | | 4.0 | 3.1 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,4-Dichlorobenzene | ND | | 4.0 | 3.4 | ug/L | | | 10/26/20 14:24 | 4 |
| 2-Butanone (MEK) | ND | | 40 | 5.3 | ug/L | | | 10/26/20 14:24 | 4 |
| 2-Hexanone | ND | | 20 | 5.0 | ug/L | | | 10/26/20 14:24 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20 | 8.4 | ug/L | | | 10/26/20 14:24 | 4 |
| **Acetone** | **12** | **J** | 40 | 12 | ug/L | | | 10/26/20 14:24 | 4 |
| Benzene | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 14:24 | 4 |
| Bromodichloromethane | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 14:24 | 4 |
| Bromoform | ND | | 4.0 | 1.0 | ug/L | | | 10/26/20 14:24 | 4 |

## Client Sample ID: MW-04S
**Lab Sample ID: 480-177077-9**
**Date Collected: 10/21/20 14:10**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Bromomethane | ND | | 4.0 | 2.8 | ug/L | | | 10/26/20 14:24 | 4 |
| Carbon disulfide | ND | | 4.0 | 0.76 | ug/L | | | 10/26/20 14:24 | 4 |
| Carbon tetrachloride | ND | | 4.0 | 1.1 | ug/L | | | 10/26/20 14:24 | 4 |
| Chlorobenzene | ND | | 4.0 | 3.0 | ug/L | | | 10/26/20 14:24 | 4 |
| Dibromochloromethane | ND | | 4.0 | 1.3 | ug/L | | | 10/26/20 14:24 | 4 |
| Chloroethane | ND | | 4.0 | 1.3 | ug/L | | | 10/26/20 14:24 | 4 |
| Chloroform | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 14:24 | 4 |
| Chloromethane | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 14:24 | 4 |
| cis-1,2-Dichloroethene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 14:24 | 4 |
| cis-1,3-Dichloropropene | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 14:24 | 4 |
| Cyclohexane | ND | | 4.0 | 0.72 | ug/L | | | 10/26/20 14:24 | 4 |
| Dichlorodifluoromethane | ND | | 4.0 | 2.7 | ug/L | | | 10/26/20 14:24 | 4 |
| Ethylbenzene | ND | | 4.0 | 3.0 | ug/L | | | 10/26/20 14:24 | 4 |
| 1,2-Dibromoethane | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 14:24 | 4 |
| Isopropylbenzene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 14:24 | 4 |
| Methyl acetate | ND | | 10 | 5.2 | ug/L | | | 10/26/20 14:24 | 4 |
| Methyl tert-butyl ether | ND | | 4.0 | 0.64 | ug/L | | | 10/26/20 14:24 | 4 |
| Methylcyclohexane | ND | | 4.0 | 0.64 | ug/L | | | 10/26/20 14:24 | 4 |
| **Methylene Chloride** | **1.8** | **J** | 4.0 | 1.8 | ug/L | | | 10/26/20 14:24 | 4 |
| Styrene | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 14:24 | 4 |
| Tetrachloroethene | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 14:24 | 4 |
| **Toluene** | **2.0** | **J** | 4.0 | 2.0 | ug/L | | | 10/26/20 14:24 | 4 |
| trans-1,2-Dichloroethene | ND | | 4.0 | 3.6 | ug/L | | | 10/26/20 14:24 | 4 |
| trans-1,3-Dichloropropene | ND | | 4.0 | 1.5 | ug/L | | | 10/26/20 14:24 | 4 |
| Trichloroethene | ND | | 4.0 | 1.8 | ug/L | | | 10/26/20 14:24 | 4 |
| Trichlorofluoromethane | ND | | 4.0 | 3.5 | ug/L | | | 10/26/20 14:24 | 4 |
| Vinyl chloride | ND | | 4.0 | 3.6 | ug/L | | | 10/26/20 14:24 | 4 |
| Xylenes, Total | ND | | 8.0 | 2.6 | ug/L | | | 10/26/20 14:24 | 4 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 14:24* | *4* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *108* | | *80 - 120* | | *10/26/20 14:24* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *77 - 120* | | *10/26/20 14:24* | *4* |
| *4-Bromofluorobenzene (Surr)* | *85* | | *73 - 120* | | *10/26/20 14:24* | *4* |
| *Dibromofluoromethane (Surr)* | *118* | | *75 - 123* | | *10/26/20 14:24* | *4* |

## Client Sample ID: MW-03I
**Lab Sample ID: 480-177077-10**
**Date Collected: 10/21/20 14:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/26/20 14:49 | 1 |

## Client Sample ID: MW-03I
**Date Collected: 10/21/20 14:30**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-10
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/26/20 14:49 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/26/20 14:49 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/26/20 14:49 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/26/20 14:49 | 1 |
| **Acetone** | **5.7** | **J** | 10 | 3.0 | ug/L | | | 10/26/20 14:49 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 14:49 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 14:49 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/26/20 14:49 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/26/20 14:49 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/26/20 14:49 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/26/20 14:49 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/26/20 14:49 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 14:49 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 14:49 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/26/20 14:49 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/26/20 14:49 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/26/20 14:49 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 14:49 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/26/20 14:49 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/26/20 14:49 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/26/20 14:49 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 14:49 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 14:49 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/26/20 14:49 | 1 |
| **Methyl tert-butyl ether** | **0.18** | **J** | 1.0 | 0.16 | ug/L | | | 10/26/20 14:49 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 14:49 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/26/20 14:49 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 14:49 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 14:49 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/26/20 14:49 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 14:49 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/26/20 14:49 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/26/20 14:49 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/26/20 14:49 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 14:49 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/26/20 14:49 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 14:49* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *109* | | *80 - 120* | | *10/26/20 14:49* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *77 - 120* | | *10/26/20 14:49* | *1* |
| *4-Bromofluorobenzene (Surr)* | *80* | | *73 - 120* | | *10/26/20 14:49* | *1* |

## Client Sample ID: MW-03I
**Date Collected: 10/21/20 14:30**
**Date Received: 10/24/20 08:00**

## Lab Sample ID: 480-177077-10
**Matrix: Water**

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

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *Dibromofluoromethane (Surr)* | *116* | | *75 - 123* | | *10/26/20 14:49* | *1* |

### Method: 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 | | 10/26/20 15:19 | 10/28/20 19:31 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8* | *30* | | *15 - 110* | *10/26/20 15:19* | *10/28/20 19:31* | *1* |

### Method: 537 (modified) - Fluorinated Alkyl Substances

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanoic acid (PFBA)** | **6.3** | | 4.1 | 2.0 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluoropentanoic acid (PFPeA)** | **3.0** | | 1.7 | 0.41 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **3.0** | | 1.7 | 0.48 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluoroheptanoic acid (PFHpA)** | **5.5** | | 1.7 | 0.21 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **26** | | 1.7 | 0.70 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorononanoic acid (PFNA)** | **8.5** | | 1.7 | 0.22 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorodecanoic acid (PFDA)** | **6.3** | | 1.7 | 0.26 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluoroundecanoic acid (PFUnA)** | **0.95** | **J** | 1.7 | 0.91 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorododecanoic acid (PFDoA)** | **0.88** | **J** | 1.7 | 0.46 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | ND | | 1.7 | 0.60 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorobutanesulfonic acid (PFBS)** | **4.0** | | 1.7 | 0.17 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorohexanesulfonic acid (PFHxS)** | **2.8** | | 1.7 | 0.47 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | 1.7 | 0.16 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| **Perfluorooctanesulfonic acid (PFOS)** | **11** | | 1.7 | 0.45 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.26 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.81 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.1 | 0.99 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.1 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| 6:2 FTS | ND | | 4.1 | 2.1 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |
| 8:2 FTS | ND | | 1.7 | 0.38 | ng/L | | 10/26/20 18:56 | 10/27/20 22:52 | 1 |

| Isotope Dilution | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *51* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C5 PFPeA* | *65* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C2 PFHxA* | *77* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C4 PFHpA* | *80* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C4 PFOA* | *89* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C5 PFNA* | *91* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C2 PFDA* | *93* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C2 PFUnA* | *84* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C2 PFDoA* | *75* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C2 PFTeDA* | *84* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C3 PFBS* | *78* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |

## Client Sample ID: MW-03I
**Lab Sample ID: 480-177077-10**
**Date Collected: 10/21/20 14:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *18O2 PFHxS* | *85* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C4 PFOS* | *80* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *13C8 FOSA* | *82* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *d3-NMeFOSAA* | *69* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *d5-NEtFOSAA* | *85* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *M2-6:2 FTS* | *129* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |
| *M2-8:2 FTS* | *111* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 22:52* | *1* |

## Client Sample ID: MW-08S
**Lab Sample ID: 480-177077-11**
**Date Collected: 10/22/20 11:00**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 4.0 | 3.3 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,1,2,2-Tetrachloroethane | ND | | 4.0 | 0.84 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,1,2-Trichloroethane | ND | | 4.0 | 0.92 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 4.0 | 1.2 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,1-Dichloroethane | ND | | 4.0 | 1.5 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,1-Dichloroethene | ND | | 4.0 | 1.2 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,2,4-Trichlorobenzene | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,2-Dibromo-3-Chloropropane | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,2-Dichlorobenzene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,2-Dichloroethane | ND | | 4.0 | 0.84 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,2-Dichloropropane | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,3-Dichlorobenzene | ND | | 4.0 | 3.1 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,4-Dichlorobenzene | ND | | 4.0 | 3.4 | ug/L | | | 10/26/20 15:14 | 4 |
| 2-Butanone (MEK) | ND | | 40 | 5.3 | ug/L | | | 10/26/20 15:14 | 4 |
| 2-Hexanone | ND | | 20 | 5.0 | ug/L | | | 10/26/20 15:14 | 4 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 20 | 8.4 | ug/L | | | 10/26/20 15:14 | 4 |
| Acetone | ND | | 40 | 12 | ug/L | | | 10/26/20 15:14 | 4 |
| Benzene | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 15:14 | 4 |
| Bromodichloromethane | ND | | 4.0 | 1.6 | ug/L | | | 10/26/20 15:14 | 4 |
| Bromoform | ND | | 4.0 | 1.0 | ug/L | | | 10/26/20 15:14 | 4 |
| Bromomethane | ND | | 4.0 | 2.8 | ug/L | | | 10/26/20 15:14 | 4 |
| Carbon disulfide | ND | | 4.0 | 0.76 | ug/L | | | 10/26/20 15:14 | 4 |
| Carbon tetrachloride | ND | | 4.0 | 1.1 | ug/L | | | 10/26/20 15:14 | 4 |
| Chlorobenzene | ND | | 4.0 | 3.0 | ug/L | | | 10/26/20 15:14 | 4 |
| Dibromochloromethane | ND | | 4.0 | 1.3 | ug/L | | | 10/26/20 15:14 | 4 |
| Chloroethane | ND | | 4.0 | 1.3 | ug/L | | | 10/26/20 15:14 | 4 |
| Chloroform | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 15:14 | 4 |
| Chloromethane | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 15:14 | 4 |
| cis-1,2-Dichloroethene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 15:14 | 4 |
| cis-1,3-Dichloropropene | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 15:14 | 4 |
| Cyclohexane | ND | | 4.0 | 0.72 | ug/L | | | 10/26/20 15:14 | 4 |
| Dichlorodifluoromethane | ND | | 4.0 | 2.7 | ug/L | | | 10/26/20 15:14 | 4 |
| Ethylbenzene | ND | | 4.0 | 3.0 | ug/L | | | 10/26/20 15:14 | 4 |
| 1,2-Dibromoethane | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 15:14 | 4 |
| Isopropylbenzene | ND | | 4.0 | 3.2 | ug/L | | | 10/26/20 15:14 | 4 |
| Methyl acetate | ND | | 10 | 5.2 | ug/L | | | 10/26/20 15:14 | 4 |

## Client Sample ID: MW-08S
**Lab Sample ID: 480-177077-11**

**Date Collected: 10/22/20 11:00**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether | ND | | 4.0 | 0.64 | ug/L | | | 10/26/20 15:14 | 4 |
| Methylcyclohexane | ND | | 4.0 | 0.64 | ug/L | | | 10/26/20 15:14 | 4 |
| **Methylene Chloride** | **4.5** | | 4.0 | 1.8 | ug/L | | | 10/26/20 15:14 | 4 |
| Styrene | ND | | 4.0 | 2.9 | ug/L | | | 10/26/20 15:14 | 4 |
| Tetrachloroethene | ND | | 4.0 | 1.4 | ug/L | | | 10/26/20 15:14 | 4 |
| Toluene | ND | | 4.0 | 2.0 | ug/L | | | 10/26/20 15:14 | 4 |
| trans-1,2-Dichloroethene | ND | | 4.0 | 3.6 | ug/L | | | 10/26/20 15:14 | 4 |
| trans-1,3-Dichloropropene | ND | | 4.0 | 1.5 | ug/L | | | 10/26/20 15:14 | 4 |
| Trichloroethene | ND | | 4.0 | 1.8 | ug/L | | | 10/26/20 15:14 | 4 |
| Trichlorofluoromethane | ND | | 4.0 | 3.5 | ug/L | | | 10/26/20 15:14 | 4 |
| Vinyl chloride | ND | | 4.0 | 3.6 | ug/L | | | 10/26/20 15:14 | 4 |
| Xylenes, Total | ND | | 8.0 | 2.6 | ug/L | | | 10/26/20 15:14 | 4 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 15:14* | *4* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *112* | | *80 - 120* | | *10/26/20 15:14* | *4* |
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *77 - 120* | | *10/26/20 15:14* | *4* |
| *4-Bromofluorobenzene (Surr)* | *82* | | *73 - 120* | | *10/26/20 15:14* | *4* |
| *Dibromofluoromethane (Surr)* | *120* | | *75 - 123* | | *10/26/20 15:14* | *4* |

## Client Sample ID: TRIP BLANK
**Lab Sample ID: 480-177077-12**

**Date Collected: 10/22/20 00:00**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

### Method: 8260C - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/26/20 15:38 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/26/20 15:38 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/26/20 15:38 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/26/20 15:38 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 10/26/20 15:38 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 15:38 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 15:38 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/26/20 15:38 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/26/20 15:38 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/26/20 15:38 | 1 |

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

**Client Sample ID: TRIP BLANK**
**Lab Sample ID: 480-177077-12**
**Date Collected: 10/22/20 00:00**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/26/20 15:38 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/26/20 15:38 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 15:38 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 15:38 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/26/20 15:38 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/26/20 15:38 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/26/20 15:38 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 15:38 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/26/20 15:38 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/26/20 15:38 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/26/20 15:38 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 15:38 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 15:38 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/26/20 15:38 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 15:38 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 15:38 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/26/20 15:38 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 15:38 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 15:38 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/26/20 15:38 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 15:38 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/26/20 15:38 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/26/20 15:38 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/26/20 15:38 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 15:38 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/26/20 15:38 | 1 |

| *Tentatively Identified Compound* | *Est. Result* | *Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 15:38* | *1* |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *110* | | *80 - 120* | | *10/26/20 15:38* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *77 - 120* | | *10/26/20 15:38* | *1* |
| *4-Bromofluorobenzene (Surr)* | *80* | | *73 - 120* | | *10/26/20 15:38* | *1* |
| *Dibromofluoromethane (Surr)* | *110* | | *75 - 123* | | *10/26/20 15:38* | *1* |

# Surrogate Summary

Client: New York State D.E.C.
Project/Site: SMP B - Mahopac Business District Wells

Job ID: 480-177077-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | TOL | DCA | BFB | DBFM |
| Lab Sample ID | Client Sample ID | (80-120) | (77-120) | (73-120) | (75-123) |
| 480-177077-1 | MW-02I | 102 | 106 | 97 | 103 |
| 480-177077-2 | MW-02S | 101 | 101 | 96 | 98 |
| 480-177077-3 | MW-02D | 99 | 105 | 94 | 102 |
| 480-177077-3 MS | MW-02D | 106 | 97 | 87 | 111 |
| 480-177077-3 MSD | MW-02D | 114 | 103 | 90 | 113 |
| 480-177077-4 | DUP | 116 | 103 | 93 | 112 |
| 480-177077-5 | MW-09S | 111 | 105 | 82 | 125 X |
| 480-177077-6 | MW-10S | 110 | 104 | 83 | 115 |
| 480-177077-7 | MW-06 | 111 | 107 | 86 | 117 |
| 480-177077-8 | MW-11S | 110 | 105 | 84 | 114 |
| 480-177077-9 | MW-04S | 108 | 107 | 85 | 118 |
| 480-177077-10 | MW-03I | 109 | 101 | 80 | 116 |
| 480-177077-11 | MW-08S | 112 | 108 | 82 | 120 |
| 480-177077-12 | TRIP BLANK | 110 | 105 | 80 | 110 |
| LCS 480-555654/5 | Lab Control Sample | 105 | 101 | 102 | 104 |
| LCS 480-555715/29 | Lab Control Sample | 105 | 105 | 90 | 110 |
| MB 480-555654/7 | Method Blank | 102 | 101 | 98 | 98 |
| MB 480-555715/7 | Method Blank | 108 | 111 | 84 | 115 |

**Surrogate Legend**

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

# Isotope Dilution Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | DXE (15-110) |
| 480-177077-1 | MW-02I | 26 |
| 480-177077-2 | MW-02S | 26 |
| 480-177077-3 | MW-02D | 25 |
| 480-177077-3 MS | MW-02D | 25 |
| 480-177077-3 MSD | MW-02D | 28 |
| 480-177077-4 | DUP | 24 |
| 480-177077-7 | MW-06 | 28 |
| 480-177077-10 | MW-03I | 30 |
| LCS 480-555817/2-A | Lab Control Sample | 30 |
| MB 480-555817/1-A | Method Blank | 29 |

**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) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | PFBA (25-150) | PFPeA (25-150) | PFHxA (25-150) | C4PFHA (25-150) | PFOA (25-150) | PFNA (25-150) | PFDA (25-150) | PFUnA (25-150) |
| 480-177077-1 | MW-02I | 50 | 63 | 72 | 84 | 82 | 87 | 92 | 91 |
| 480-177077-2 | MW-02S | 44 | 61 | 72 | 81 | 86 | 91 | 91 | 86 |
| 480-177077-3 | MW-02D | 63 | 75 | 76 | 75 | 79 | 86 | 77 | 75 |
| 480-177077-3 MS | MW-02D | 75 | 89 | 94 | 92 | 93 | 92 | 88 | 94 |
| 480-177077-3 MSD | MW-02D | 63 | 73 | 79 | 72 | 74 | 81 | 76 | 73 |
| 480-177077-4 | DUP | 66 | 77 | 80 | 79 | 83 | 78 | 79 | 84 |
| 480-177077-7 | MW-06 | 55 | 70 | 79 | 86 | 90 | 90 | 83 | 93 |
| 480-177077-10 | MW-03I | 51 | 65 | 77 | 80 | 89 | 91 | 93 | 84 |
| LCS 320-425572/2-A | Lab Control Sample | 77 | 81 | 84 | 87 | 86 | 95 | 92 | 97 |
| MB 320-425572/1-A | Method Blank | 63 | 68 | 67 | 77 | 78 | 78 | 71 | 77 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | PFDoA (25-150) | PFTDA (25-150) | C3PFBS (25-150) | PFHxS (25-150) | PFOS (25-150) | PFOSA (25-150) | d3NMFOS (25-150) | d5NEFOS (25-150) |
| 480-177077-1 | MW-02I | 77 | 88 | 78 | 83 | 79 | 83 | 68 | 85 |
| 480-177077-2 | MW-02S | 81 | 74 | 74 | 81 | 76 | 79 | 63 | 80 |
| 480-177077-3 | MW-02D | 66 | 62 | 75 | 76 | 75 | 76 | 70 | 77 |
| 480-177077-3 MS | MW-02D | 76 | 85 | 91 | 90 | 90 | 91 | 84 | 88 |
| 480-177077-3 MSD | MW-02D | 71 | 73 | 74 | 77 | 74 | 75 | 71 | 74 |
| 480-177077-4 | DUP | 70 | 69 | 76 | 77 | 78 | 78 | 71 | 78 |
| 480-177077-7 | MW-06 | 85 | 85 | 78 | 80 | 79 | 81 | 69 | 87 |
| 480-177077-10 | MW-03I | 75 | 84 | 78 | 85 | 80 | 82 | 69 | 85 |
| LCS 320-425572/2-A | Lab Control Sample | 81 | 82 | 83 | 86 | 84 | 78 | 81 | 92 |
| MB 320-425572/1-A | Method Blank | 68 | 67 | 71 | 71 | 73 | 67 | 66 | 77 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | M262FTS (25-150) | M282FTS (25-150) |
| 480-177077-1 | MW-02I | 108 | 103 |
| 480-177077-2 | MW-02S | 114 | 94 |
| 480-177077-3 | MW-02D | 91 | 95 |
| 480-177077-3 MS | MW-02D | 104 | 113 |

# Isotope Dilution Summary

Client: New York State D.E.C. Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## 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) | | | | | | | | |
| 480-177077-3 MSD | MW-02D | 86 | 92 | | | | | | | | |
| 480-177077-4 | DUP | 96 | 104 | | | | | | | | |
| 480-177077-7 | MW-06 | 85 | 85 | | | | | | | | |
| 480-177077-10 | MW-03I | 129 | 111 | | | | | | | | |
| LCS 320-425572/2-A | Lab Control Sample | 79 | 83 | | | | | | | | |
| MB 320-425572/1-A | Method Blank | 71 | 75 | | | | | | | | |

**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

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 480-555654/7**
**Matrix: Water**
**Analysis Batch: 555654**

**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 | 0.82 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/25/20 14:15 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/25/20 14:15 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/25/20 14:15 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/25/20 14:15 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 10/25/20 14:15 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/25/20 14:15 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/25/20 14:15 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/25/20 14:15 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/25/20 14:15 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/25/20 14:15 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/25/20 14:15 | 1 |
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/25/20 14:15 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/25/20 14:15 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/25/20 14:15 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/25/20 14:15 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/25/20 14:15 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/25/20 14:15 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/25/20 14:15 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/25/20 14:15 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/25/20 14:15 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/25/20 14:15 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/25/20 14:15 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/25/20 14:15 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/25/20 14:15 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 10/25/20 14:15 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/25/20 14:15 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/25/20 14:15 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/25/20 14:15 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/25/20 14:15 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/25/20 14:15 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/25/20 14:15 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/25/20 14:15 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/25/20 14:15 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/25/20 14:15 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/25/20 14:15 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/25/20 14:15 | 1 |

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

**Lab Sample ID: MB 480-555654/7**
**Matrix: Water**
**Analysis Batch: 555654**

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

| Tentatively Identified Compound | MB Est. Result | MB Qualifier | Unit | D | RT | CAS No. | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tentatively Identified Compound | None | | ug/L | | | | | 10/25/20 14:15 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Toluene-d8 (Surr) | 102 | | 80 - 120 | | 10/25/20 14:15 | 1 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 77 - 120 | | 10/25/20 14:15 | 1 |
| 4-Bromofluorobenzene (Surr) | 98 | | 73 - 120 | | 10/25/20 14:15 | 1 |
| Dibromofluoromethane (Surr) | 98 | | 75 - 123 | | 10/25/20 14:15 | 1 |

**Lab Sample ID: LCS 480-555654/5**
**Matrix: Water**
**Analysis Batch: 555654**

**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 | 22.1 | | ug/L | | 88 | 73 - 126 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 24.2 | | ug/L | | 97 | 76 - 120 |
| 1,1,2-Trichloroethane | 25.0 | 23.3 | | ug/L | | 93 | 76 - 122 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 25.0 | 23.2 | | ug/L | | 93 | 61 - 148 |
| 1,1-Dichloroethane | 25.0 | 23.6 | | ug/L | | 94 | 77 - 120 |
| 1,1-Dichloroethene | 25.0 | 22.1 | | ug/L | | 88 | 66 - 127 |
| 1,2,4-Trichlorobenzene | 25.0 | 22.7 | | ug/L | | 91 | 79 - 122 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 20.1 | | ug/L | | 80 | 56 - 134 |
| 1,2-Dichlorobenzene | 25.0 | 23.6 | | ug/L | | 94 | 80 - 124 |
| 1,2-Dichloroethane | 25.0 | 24.0 | | ug/L | | 96 | 75 - 120 |
| 1,2-Dichloropropane | 25.0 | 24.6 | | ug/L | | 98 | 76 - 120 |
| 1,3-Dichlorobenzene | 25.0 | 24.6 | | ug/L | | 98 | 77 - 120 |
| 1,4-Dichlorobenzene | 25.0 | 24.1 | | ug/L | | 96 | 80 - 120 |
| 2-Butanone (MEK) | 125 | 126 | | ug/L | | 100 | 57 - 140 |
| 2-Hexanone | 125 | 131 | | ug/L | | 105 | 65 - 127 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 128 | | ug/L | | 102 | 71 - 125 |
| Acetone | 125 | 119 | | ug/L | | 95 | 56 - 142 |
| Benzene | 25.0 | 23.4 | | ug/L | | 94 | 71 - 124 |
| Bromodichloromethane | 25.0 | 22.9 | | ug/L | | 92 | 80 - 122 |
| Bromoform | 25.0 | 20.1 | | ug/L | | 81 | 61 - 132 |
| Bromomethane | 25.0 | 20.5 | | ug/L | | 82 | 55 - 144 |
| Carbon disulfide | 25.0 | 21.0 | | ug/L | | 84 | 59 - 134 |
| Carbon tetrachloride | 25.0 | 22.1 | | ug/L | | 88 | 72 - 134 |
| Chlorobenzene | 25.0 | 24.2 | | ug/L | | 97 | 80 - 120 |
| Dibromochloromethane | 25.0 | 22.5 | | ug/L | | 90 | 75 - 125 |
| Chloroethane | 25.0 | 23.1 | | ug/L | | 92 | 69 - 136 |
| Chloroform | 25.0 | 22.6 | | ug/L | | 90 | 73 - 127 |
| Chloromethane | 25.0 | 23.7 | | ug/L | | 95 | 68 - 124 |
| cis-1,2-Dichloroethene | 25.0 | 22.4 | | ug/L | | 90 | 74 - 124 |
| cis-1,3-Dichloropropene | 25.0 | 23.6 | | ug/L | | 95 | 74 - 124 |
| Cyclohexane | 25.0 | 24.5 | | ug/L | | 98 | 59 - 135 |
| Dichlorodifluoromethane | 25.0 | 24.4 | | ug/L | | 98 | 59 - 135 |
| Ethylbenzene | 25.0 | 24.3 | | ug/L | | 97 | 77 - 123 |
| 1,2-Dibromoethane | 25.0 | 23.6 | | ug/L | | 95 | 77 - 120 |

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

**Lab Sample ID: LCS 480-555654/5**
**Matrix: Water**
**Analysis Batch: 555654**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 25.0 | 24.3 | | ug/L | | 97 | 77 - 122 |
| Methyl acetate | 50.0 | 48.1 | | ug/L | | 96 | 74 - 133 |
| Methyl tert-butyl ether | 25.0 | 22.8 | | ug/L | | 91 | 77 - 120 |
| Methylcyclohexane | 25.0 | 23.4 | | ug/L | | 94 | 68 - 134 |
| Methylene Chloride | 25.0 | 22.5 | | ug/L | | 90 | 75 - 124 |
| Styrene | 25.0 | 24.8 | | ug/L | | 99 | 80 - 120 |
| Tetrachloroethene | 25.0 | 23.4 | | ug/L | | 94 | 74 - 122 |
| Toluene | 25.0 | 23.7 | | ug/L | | 95 | 80 - 122 |
| trans-1,2-Dichloroethene | 25.0 | 22.9 | | ug/L | | 92 | 73 - 127 |
| trans-1,3-Dichloropropene | 25.0 | 23.4 | | ug/L | | 94 | 80 - 120 |
| Trichloroethene | 25.0 | 23.0 | | ug/L | | 92 | 74 - 123 |
| Trichlorofluoromethane | 25.0 | 22.0 | | ug/L | | 88 | 62 - 150 |
| Vinyl chloride | 25.0 | 22.4 | | ug/L | | 90 | 65 - 133 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *105* | | *80 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *77 - 120* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *73 - 120* |
| *Dibromofluoromethane (Surr)* | *104* | | *75 - 123* |

**Lab Sample ID: MB 480-555715/7**
**Matrix: Water**
**Analysis Batch: 555715**

**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 | 0.82 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,1-Dichloroethane | ND | | 1.0 | 0.38 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,1-Dichloroethene | ND | | 1.0 | 0.29 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,2-Dichloroethane | ND | | 1.0 | 0.21 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,2-Dichloropropane | ND | | 1.0 | 0.72 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 | ug/L | | | 10/26/20 11:51 | 1 |
| 2-Butanone (MEK) | ND | | 10 | 1.3 | ug/L | | | 10/26/20 11:51 | 1 |
| 2-Hexanone | ND | | 5.0 | 1.2 | ug/L | | | 10/26/20 11:51 | 1 |
| 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 | ug/L | | | 10/26/20 11:51 | 1 |
| Acetone | ND | | 10 | 3.0 | ug/L | | | 10/26/20 11:51 | 1 |
| Benzene | ND | | 1.0 | 0.41 | ug/L | | | 10/26/20 11:51 | 1 |
| Bromodichloromethane | ND | | 1.0 | 0.39 | ug/L | | | 10/26/20 11:51 | 1 |
| Bromoform | ND | | 1.0 | 0.26 | ug/L | | | 10/26/20 11:51 | 1 |
| Bromomethane | ND | | 1.0 | 0.69 | ug/L | | | 10/26/20 11:51 | 1 |
| Carbon disulfide | ND | | 1.0 | 0.19 | ug/L | | | 10/26/20 11:51 | 1 |
| Carbon tetrachloride | ND | | 1.0 | 0.27 | ug/L | | | 10/26/20 11:51 | 1 |

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

**Lab Sample ID: MB 480-555715/7**
**Matrix: Water**
**Analysis Batch: 555715**

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chlorobenzene | ND | | 1.0 | 0.75 | ug/L | | | 10/26/20 11:51 | 1 |
| Dibromochloromethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 11:51 | 1 |
| Chloroethane | ND | | 1.0 | 0.32 | ug/L | | | 10/26/20 11:51 | 1 |
| Chloroform | ND | | 1.0 | 0.34 | ug/L | | | 10/26/20 11:51 | 1 |
| Chloromethane | ND | | 1.0 | 0.35 | ug/L | | | 10/26/20 11:51 | 1 |
| cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 | ug/L | | | 10/26/20 11:51 | 1 |
| cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 11:51 | 1 |
| Cyclohexane | ND | | 1.0 | 0.18 | ug/L | | | 10/26/20 11:51 | 1 |
| Dichlorodifluoromethane | ND | | 1.0 | 0.68 | ug/L | | | 10/26/20 11:51 | 1 |
| Ethylbenzene | ND | | 1.0 | 0.74 | ug/L | | | 10/26/20 11:51 | 1 |
| 1,2-Dibromoethane | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 11:51 | 1 |
| Isopropylbenzene | ND | | 1.0 | 0.79 | ug/L | | | 10/26/20 11:51 | 1 |
| Methyl acetate | ND | | 2.5 | 1.3 | ug/L | | | 10/26/20 11:51 | 1 |
| Methyl tert-butyl ether | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 11:51 | 1 |
| Methylcyclohexane | ND | | 1.0 | 0.16 | ug/L | | | 10/26/20 11:51 | 1 |
| Methylene Chloride | ND | | 1.0 | 0.44 | ug/L | | | 10/26/20 11:51 | 1 |
| Styrene | ND | | 1.0 | 0.73 | ug/L | | | 10/26/20 11:51 | 1 |
| Tetrachloroethene | ND | | 1.0 | 0.36 | ug/L | | | 10/26/20 11:51 | 1 |
| Toluene | ND | | 1.0 | 0.51 | ug/L | | | 10/26/20 11:51 | 1 |
| trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 11:51 | 1 |
| trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 | ug/L | | | 10/26/20 11:51 | 1 |
| Trichloroethene | ND | | 1.0 | 0.46 | ug/L | | | 10/26/20 11:51 | 1 |
| Trichlorofluoromethane | ND | | 1.0 | 0.88 | ug/L | | | 10/26/20 11:51 | 1 |
| Vinyl chloride | ND | | 1.0 | 0.90 | ug/L | | | 10/26/20 11:51 | 1 |
| Xylenes, Total | ND | | 2.0 | 0.66 | ug/L | | | 10/26/20 11:51 | 1 |

| *Tentatively Identified Compound* | *MB Est. Result* | *MB Qualifier* | *Unit* | *D* | *RT* | *CAS No.* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|---|---|---|
| *Tentatively Identified Compound* | *None* | | *ug/L* | | | | | *10/26/20 11:51* | *1* |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Toluene-d8 (Surr)* | *108* | | *80 - 120* | | *10/26/20 11:51* | *1* |
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *77 - 120* | | *10/26/20 11:51* | *1* |
| *4-Bromofluorobenzene (Surr)* | *84* | | *73 - 120* | | *10/26/20 11:51* | *1* |
| *Dibromofluoromethane (Surr)* | *115* | | *75 - 123* | | *10/26/20 11:51* | *1* |

**Lab Sample ID: LCS 480-555715/29**
**Matrix: Water**
**Analysis Batch: 555715**

**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 | 27.2 | | ug/L | | 109 | 73 - 126 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 22.7 | | ug/L | | 91 | 76 - 120 |
| 1,1,2-Trichloroethane | 25.0 | 22.3 | | ug/L | | 89 | 76 - 122 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 25.0 | 27.3 | | ug/L | | 109 | 61 - 148 |
| 1,1-Dichloroethane | 25.0 | 26.1 | | ug/L | | 104 | 77 - 120 |
| 1,1-Dichloroethene | 25.0 | 27.8 | | ug/L | | 111 | 66 - 127 |
| 1,2,4-Trichlorobenzene | 25.0 | 26.5 | | ug/L | | 106 | 79 - 122 |

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

**Lab Sample ID: LCS 480-555715/29**
**Matrix: Water**
**Analysis Batch: 555715**

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-Chloropropane | 25.0 | 24.4 | | ug/L | | 98 | 56 - 134 |
| 1,2-Dichlorobenzene | 25.0 | 24.1 | | ug/L | | 96 | 80 - 124 |
| 1,2-Dichloroethane | 25.0 | 24.5 | | ug/L | | 98 | 75 - 120 |
| 1,2-Dichloropropane | 25.0 | 24.1 | | ug/L | | 96 | 76 - 120 |
| 1,3-Dichlorobenzene | 25.0 | 23.1 | | ug/L | | 92 | 77 - 120 |
| 1,4-Dichlorobenzene | 25.0 | 21.9 | | ug/L | | 88 | 80 - 120 |
| 2-Butanone (MEK) | 125 | 100 | | ug/L | | 80 | 57 - 140 |
| 2-Hexanone | 125 | 100 | | ug/L | | 80 | 65 - 127 |
| 4-Methyl-2-pentanone (MIBK) | 125 | 118 | | ug/L | | 94 | 71 - 125 |
| Acetone | 125 | 120 | | ug/L | | 96 | 56 - 142 |
| Benzene | 25.0 | 24.9 | | ug/L | | 100 | 71 - 124 |
| Bromodichloromethane | 25.0 | 24.4 | | ug/L | | 98 | 80 - 122 |
| Bromoform | 25.0 | 22.3 | | ug/L | | 89 | 61 - 132 |
| Bromomethane | 25.0 | 24.2 | | ug/L | | 97 | 55 - 144 |
| Carbon disulfide | 25.0 | 26.5 | | ug/L | | 106 | 59 - 134 |
| Carbon tetrachloride | 25.0 | 28.7 | | ug/L | | 115 | 72 - 134 |
| Chlorobenzene | 25.0 | 22.6 | | ug/L | | 90 | 80 - 120 |
| Dibromochloromethane | 25.0 | 24.6 | | ug/L | | 98 | 75 - 125 |
| Chloroethane | 25.0 | 25.9 | | ug/L | | 104 | 69 - 136 |
| Chloroform | 25.0 | 25.8 | | ug/L | | 103 | 73 - 127 |
| Chloromethane | 25.0 | 26.4 | | ug/L | | 106 | 68 - 124 |
| cis-1,2-Dichloroethene | 25.0 | 26.0 | | ug/L | | 104 | 74 - 124 |
| cis-1,3-Dichloropropene | 25.0 | 21.9 | | ug/L | | 88 | 74 - 124 |
| Cyclohexane | 25.0 | 27.9 | | ug/L | | 111 | 59 - 135 |
| Dichlorodifluoromethane | 25.0 | 25.2 | | ug/L | | 101 | 59 - 135 |
| Ethylbenzene | 25.0 | 23.6 | | ug/L | | 95 | 77 - 123 |
| 1,2-Dibromoethane | 25.0 | 21.7 | | ug/L | | 87 | 77 - 120 |
| Isopropylbenzene | 25.0 | 26.8 | | ug/L | | 107 | 77 - 122 |
| Methyl acetate | 50.0 | 43.4 | | ug/L | | 87 | 74 - 133 |
| Methyl tert-butyl ether | 25.0 | 25.7 | | ug/L | | 103 | 77 - 120 |
| Methylcyclohexane | 25.0 | 27.9 | | ug/L | | 112 | 68 - 134 |
| Methylene Chloride | 25.0 | 27.4 | | ug/L | | 110 | 75 - 124 |
| Styrene | 25.0 | 22.4 | | ug/L | | 90 | 80 - 120 |
| Tetrachloroethene | 25.0 | 24.8 | | ug/L | | 99 | 74 - 122 |
| Toluene | 25.0 | 24.4 | | ug/L | | 98 | 80 - 122 |
| trans-1,2-Dichloroethene | 25.0 | 26.7 | | ug/L | | 107 | 73 - 127 |
| trans-1,3-Dichloropropene | 25.0 | 22.4 | | ug/L | | 90 | 80 - 120 |
| Trichloroethene | 25.0 | 24.3 | | ug/L | | 97 | 74 - 123 |
| Trichlorofluoromethane | 25.0 | 26.4 | | ug/L | | 106 | 62 - 150 |
| Vinyl chloride | 25.0 | 26.9 | | ug/L | | 108 | 65 - 133 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *105* | | *80 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *77 - 120* |
| *4-Bromofluorobenzene (Surr)* | *90* | | *73 - 120* |
| *Dibromofluoromethane (Surr)* | *110* | | *75 - 123* |

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

**Lab Sample ID: 480-177077-3 MS**
**Matrix: Water**
**Analysis Batch: 555715**

**Client Sample ID: MW-02D**
**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 | F1 F2 | 25.0 | 35.0 | F1 | ug/L | | 140 | 73 - 126 |
| 1,1,2,2-Tetrachloroethane | ND | F1 F2 | 25.0 | 26.0 | | ug/L | | 104 | 76 - 120 |
| 1,1,2-Trichloroethane | ND | F1 F2 | 25.0 | 24.0 | | ug/L | | 96 | 76 - 122 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | F1 F2 | 25.0 | 30.9 | | ug/L | | 124 | 61 - 148 |
| 1,1-Dichloroethane | ND | F1 F2 | 25.0 | 31.8 | F1 | ug/L | | 127 | 77 - 120 |
| 1,1-Dichloroethene | ND | F1 F2 | 25.0 | 35.3 | F1 | ug/L | | 141 | 66 - 127 |
| 1,2,4-Trichlorobenzene | ND | F1 F2 | 25.0 | 31.5 | F1 | ug/L | | 126 | 79 - 122 |
| 1,2-Dibromo-3-Chloropropane | ND | F1 F2 | 25.0 | 23.5 | | ug/L | | 94 | 56 - 134 |
| 1,2-Dichlorobenzene | ND | F1 F2 | 25.0 | 30.8 | | ug/L | | 123 | 80 - 124 |
| 1,2-Dichloroethane | ND | F1 F2 | 25.0 | 25.3 | | ug/L | | 101 | 75 - 120 |
| 1,2-Dichloropropane | ND | F1 F2 | 25.0 | 26.9 | | ug/L | | 108 | 76 - 120 |
| 1,3-Dichlorobenzene | ND | F1 F2 | 25.0 | 27.9 | | ug/L | | 112 | 77 - 120 |
| 1,4-Dichlorobenzene | ND | F1 F2 | 25.0 | 26.5 | | ug/L | | 106 | 78 - 124 |
| 2-Butanone (MEK) | ND | F1 F2 | 125 | 84.8 | | ug/L | | 68 | 57 - 140 |
| 2-Hexanone | ND | F1 F2 | 125 | 85.9 | | ug/L | | 69 | 65 - 127 |
| 4-Methyl-2-pentanone (MIBK) | ND | F1 F2 | 125 | 114 | | ug/L | | 91 | 71 - 125 |
| Acetone | 4.1 | J F1 F2 | 125 | 116 | | ug/L | | 89 | 56 - 142 |
| Benzene | ND | F1 F2 | 25.0 | 28.8 | | ug/L | | 115 | 71 - 124 |
| Bromodichloromethane | ND | F1 F2 | 25.0 | 26.6 | | ug/L | | 106 | 80 - 122 |
| Bromoform | ND | F1 F2 | 25.0 | 20.7 | | ug/L | | 83 | 61 - 132 |
| Bromomethane | ND | F1 F2 | 25.0 | 33.6 | | ug/L | | 134 | 55 - 144 |
| Carbon disulfide | ND | F1 F2 | 25.0 | 31.8 | | ug/L | | 127 | 59 - 134 |
| Carbon tetrachloride | ND | F1 F2 | 25.0 | 35.6 | F1 | ug/L | | 143 | 72 - 134 |
| Chlorobenzene | ND | F1 F2 | 25.0 | 26.0 | | ug/L | | 104 | 80 - 120 |
| Dibromochloromethane | ND | F1 F2 | 25.0 | 26.0 | | ug/L | | 104 | 75 - 125 |
| Chloroethane | ND | F1 F2 | 25.0 | 34.9 | F1 | ug/L | | 140 | 69 - 136 |
| Chloroform | ND | F1 F2 | 25.0 | 30.4 | | ug/L | | 122 | 73 - 127 |
| Chloromethane | ND | F1 F2 | 25.0 | 34.9 | F1 | ug/L | | 140 | 68 - 124 |
| cis-1,2-Dichloroethene | ND | F1 F2 | 25.0 | 32.0 | F1 | ug/L | | 128 | 74 - 124 |
| cis-1,3-Dichloropropene | ND | F1 F2 | 25.0 | 21.8 | | ug/L | | 87 | 74 - 124 |
| Cyclohexane | ND | F1 F2 | 25.0 | 31.6 | | ug/L | | 127 | 59 - 135 |
| Dichlorodifluoromethane | ND | F1 F2 | 25.0 | 29.6 | | ug/L | | 119 | 59 - 135 |
| Ethylbenzene | ND | F1 F2 | 25.0 | 27.9 | | ug/L | | 112 | 77 - 123 |
| 1,2-Dibromoethane | ND | F1 F2 | 25.0 | 22.2 | | ug/L | | 89 | 77 - 120 |
| Isopropylbenzene | ND | F1 F2 | 25.0 | 36.7 | F1 | ug/L | | 147 | 77 - 122 |
| Methyl acetate | ND | F1 F2 | 50.0 | 37.0 | | ug/L | | 74 | 74 - 133 |
| Methyl tert-butyl ether | ND | F1 F2 | 25.0 | 30.5 | F1 | ug/L | | 122 | 77 - 120 |
| Methylcyclohexane | ND | F1 F2 | 25.0 | 29.9 | | ug/L | | 120 | 68 - 134 |
| Methylene Chloride | ND | F1 F2 | 25.0 | 35.5 | F1 | ug/L | | 142 | 75 - 124 |
| Styrene | ND | F1 F2 | 25.0 | 24.8 | | ug/L | | 99 | 80 - 120 |
| Tetrachloroethene | ND | F1 F2 | 25.0 | 29.1 | | ug/L | | 117 | 74 - 122 |
| Toluene | ND | F1 F2 | 25.0 | 29.1 | | ug/L | | 116 | 80 - 122 |
| trans-1,2-Dichloroethene | ND | F1 F2 | 25.0 | 33.3 | F1 | ug/L | | 133 | 73 - 127 |
| trans-1,3-Dichloropropene | ND | F1 F2 | 25.0 | 22.0 | | ug/L | | 88 | 80 - 120 |
| Trichloroethene | ND | F1 F2 | 25.0 | 27.1 | | ug/L | | 108 | 74 - 123 |
| Trichlorofluoromethane | ND | F1 F2 | 25.0 | 34.7 | | ug/L | | 139 | 62 - 150 |
| Vinyl chloride | ND | F1 F2 | 25.0 | 35.6 | F1 | ug/L | | 142 | 65 - 133 |

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

**Lab Sample ID: 480-177077-3 MS**
**Matrix: Water**
**Analysis Batch: 555715**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *106* | | *80 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *77 - 120* |
| *4-Bromofluorobenzene (Surr)* | *87* | | *73 - 120* |
| *Dibromofluoromethane (Surr)* | *111* | | *75 - 123* |

**Lab Sample ID: 480-177077-3 MSD**
**Matrix: Water**
**Analysis Batch: 555715**

**Client Sample ID: MW-02D**
**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 | F1 F2 | 25.0 | 31.7 | F1 | ug/L | | 127 | 73 - 126 | 10 | 15 |
| 1,1,2,2-Tetrachloroethane | ND | F1 F2 | 25.0 | 25.0 | | ug/L | | 100 | 76 - 120 | 4 | 15 |
| 1,1,2-Trichloroethane | ND | F1 F2 | 25.0 | 24.1 | | ug/L | | 96 | 76 - 122 | 0 | 15 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | F1 F2 | 25.0 | 27.9 | | ug/L | | 112 | 61 - 148 | 10 | 20 |
| 1,1-Dichloroethane | ND | F1 F2 | 25.0 | 30.1 | | ug/L | | 120 | 77 - 120 | 6 | 20 |
| 1,1-Dichloroethene | ND | F1 F2 | 25.0 | 32.0 | F1 | ug/L | | 128 | 66 - 127 | 10 | 16 |
| 1,2,4-Trichlorobenzene | ND | F1 F2 | 25.0 | 29.1 | | ug/L | | 116 | 79 - 122 | 8 | 20 |
| 1,2-Dibromo-3-Chloropropane | ND | F1 F2 | 25.0 | 22.3 | | ug/L | | 89 | 56 - 134 | 5 | 15 |
| 1,2-Dichlorobenzene | ND | F1 F2 | 25.0 | 28.5 | | ug/L | | 114 | 80 - 124 | 8 | 20 |
| 1,2-Dichloroethane | ND | F1 F2 | 25.0 | 25.5 | | ug/L | | 102 | 75 - 120 | 1 | 20 |
| 1,2-Dichloropropane | ND | F1 F2 | 25.0 | 26.4 | | ug/L | | 106 | 76 - 120 | 2 | 20 |
| 1,3-Dichlorobenzene | ND | F1 F2 | 25.0 | 26.9 | | ug/L | | 108 | 77 - 120 | 4 | 20 |
| 1,4-Dichlorobenzene | ND | F1 F2 | 25.0 | 25.5 | | ug/L | | 102 | 78 - 124 | 4 | 20 |
| 2-Butanone (MEK) | ND | F1 F2 | 125 | 89.8 | | ug/L | | 72 | 57 - 140 | 6 | 20 |
| 2-Hexanone | ND | F1 F2 | 125 | 88.5 | | ug/L | | 71 | 65 - 127 | 3 | 15 |
| 4-Methyl-2-pentanone (MIBK) | ND | F1 F2 | 125 | 114 | | ug/L | | 91 | 71 - 125 | 0 | 35 |
| Acetone | 4.1 | J F1 F2 | 125 | 114 | | ug/L | | 88 | 56 - 142 | 1 | 15 |
| Benzene | ND | F1 F2 | 25.0 | 28.1 | | ug/L | | 113 | 71 - 124 | 3 | 13 |
| Bromodichloromethane | ND | F1 F2 | 25.0 | 27.5 | | ug/L | | 110 | 80 - 122 | 3 | 15 |
| Bromoform | ND | F1 F2 | 25.0 | 21.6 | | ug/L | | 87 | 61 - 132 | 4 | 15 |
| Bromomethane | ND | F1 F2 | 25.0 | 31.3 | | ug/L | | 125 | 55 - 144 | 7 | 15 |
| Carbon disulfide | ND | F1 F2 | 25.0 | 28.8 | | ug/L | | 115 | 59 - 134 | 10 | 15 |
| Carbon tetrachloride | ND | F1 F2 | 25.0 | 32.8 | | ug/L | | 131 | 72 - 134 | 8 | 15 |
| Chlorobenzene | ND | F1 F2 | 25.0 | 25.8 | | ug/L | | 103 | 80 - 120 | 1 | 25 |
| Dibromochloromethane | ND | F1 F2 | 25.0 | 26.5 | | ug/L | | 106 | 75 - 125 | 2 | 15 |
| Chloroethane | ND | F1 F2 | 25.0 | 32.0 | | ug/L | | 128 | 69 - 136 | 9 | 15 |
| Chloroform | ND | F1 F2 | 25.0 | 29.3 | | ug/L | | 117 | 73 - 127 | 4 | 20 |
| Chloromethane | ND | F1 F2 | 25.0 | 32.5 | F1 | ug/L | | 130 | 68 - 124 | 7 | 15 |
| cis-1,2-Dichloroethene | ND | F1 F2 | 25.0 | 29.6 | | ug/L | | 119 | 74 - 124 | 8 | 15 |
| cis-1,3-Dichloropropene | ND | F1 F2 | 25.0 | 23.1 | | ug/L | | 92 | 74 - 124 | 6 | 15 |
| Cyclohexane | ND | F1 F2 | 25.0 | 29.0 | | ug/L | | 116 | 59 - 135 | 9 | 20 |
| Dichlorodifluoromethane | ND | F1 F2 | 25.0 | 28.4 | | ug/L | | 114 | 59 - 135 | 4 | 20 |
| Ethylbenzene | ND | F1 F2 | 25.0 | 27.1 | | ug/L | | 109 | 77 - 123 | 3 | 15 |
| 1,2-Dibromoethane | ND | F1 F2 | 25.0 | 22.8 | | ug/L | | 91 | 77 - 120 | 3 | 15 |
| Isopropylbenzene | ND | F1 F2 | 25.0 | 34.5 | F1 | ug/L | | 138 | 77 - 122 | 6 | 20 |
| Methyl acetate | ND | F1 F2 | 50.0 | 38.9 | | ug/L | | 78 | 74 - 133 | 5 | 20 |
| Methyl tert-butyl ether | ND | F1 F2 | 25.0 | 27.9 | | ug/L | | 111 | 77 - 120 | 9 | 37 |
| Methylcyclohexane | ND | F1 F2 | 25.0 | 27.8 | | ug/L | | 111 | 68 - 134 | 7 | 20 |

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

**Lab Sample ID: 480-177077-3 MSD**
**Matrix: Water**
**Analysis Batch: 555715**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | ND | F1 F2 | 25.0 | 32.4 | F1 | ug/L | | 130 | 75 - 124 | 9 | 15 |
| Styrene | ND | F1 F2 | 25.0 | 24.2 | | ug/L | | 97 | 80 - 120 | 3 | 20 |
| Tetrachloroethene | ND | F1 F2 | 25.0 | 28.9 | | ug/L | | 116 | 74 - 122 | 1 | 20 |
| Toluene | ND | F1 F2 | 25.0 | 29.0 | | ug/L | | 116 | 80 - 122 | 0 | 15 |
| trans-1,2-Dichloroethene | ND | F1 F2 | 25.0 | 30.9 | | ug/L | | 124 | 73 - 127 | 7 | 20 |
| trans-1,3-Dichloropropene | ND | F1 F2 | 25.0 | 23.4 | | ug/L | | 94 | 80 - 120 | 6 | 15 |
| Trichloroethene | ND | F1 F2 | 25.0 | 27.1 | | ug/L | | 108 | 74 - 123 | 0 | 16 |
| Trichlorofluoromethane | ND | F1 F2 | 25.0 | 31.3 | | ug/L | | 125 | 62 - 150 | 10 | 20 |
| Vinyl chloride | ND | F1 F2 | 25.0 | 33.0 | | ug/L | | 132 | 65 - 133 | 8 | 15 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *Toluene-d8 (Surr)* | *114* | | *80 - 120* |
| *1,2-Dichloroethane-d4 (Surr)* | *103* | | *77 - 120* |
| *4-Bromofluorobenzene (Surr)* | *90* | | *73 - 120* |
| *Dibromofluoromethane (Surr)* | *113* | | *75 - 123* |

## Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

**Lab Sample ID: MB 480-555817/1-A**
**Matrix: Water**
**Analysis Batch: 556213**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 555817**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 0.20 | 0.10 | ug/L | | 10/26/20 15:19 | 10/28/20 14:47 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,4-Dioxane-d8* | *29* | | *15 - 110* | *10/26/20 15:19* | *10/28/20 14:47* | *1* |

**Lab Sample ID: LCS 480-555817/2-A**
**Matrix: Water**
**Analysis Batch: 556213**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 555817**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | | | 1.00 | 1.20 | E | ug/L | | 120 | 40 - 140 | | |

| *Isotope Dilution* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,4-Dioxane-d8* | *30* | | *15 - 110* |

**Lab Sample ID: 480-177077-3 MS**
**Matrix: Water**
**Analysis Batch: 556213**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**
**Prep Batch: 555817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.00 | 1.18 | | ug/L | | 118 | 40 - 140 | | |

| *Isotope Dilution* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,4-Dioxane-d8* | *25* | | *15 - 110* |

## Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) (Continued)

**Lab Sample ID: 480-177077-3 MSD**
**Matrix: Water**
**Analysis Batch: 556213**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**
**Prep Batch: 555817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,4-Dioxane | ND | | 1.00 | 1.18 | | ug/L | | 118 | 40 - 140 | 1 | 20 |

| *Isotope Dilution* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,4-Dioxane-d8* | *28* | | *15 - 110* |

## Method: 537 (modified) - Fluorinated Alkyl Substances

**Lab Sample ID: MB 320-425572/1-A**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | ND | | 5.0 | 2.4 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluoropentanoic acid (PFPeA) | ND | | 2.0 | 0.49 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorohexanoic acid (PFHxA) | ND | | 2.0 | 0.58 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluoroheptanoic acid (PFHpA) | ND | | 2.0 | 0.25 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorooctanoic acid (PFOA) | ND | | 2.0 | 0.85 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorononanoic acid (PFNA) | ND | | 2.0 | 0.27 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorodecanoic acid (PFDA) | ND | | 2.0 | 0.31 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluoroundecanoic acid (PFUnA) | ND | | 2.0 | 1.1 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorododecanoic acid (PFDoA) | ND | | 2.0 | 0.55 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 2.0 | 1.3 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | ND | | 2.0 | 0.73 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | ND | | 2.0 | 0.20 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | ND | | 2.0 | 0.57 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluoroheptanesulfonic Acid (PFHpS) | ND | | 2.0 | 0.19 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | ND | | 2.0 | 0.54 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 2.0 | 0.32 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 2.0 | 0.98 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 5.0 | 1.2 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 5.0 | 1.3 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| 6:2 FTS | ND | | 5.0 | 2.5 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| 8:2 FTS | ND | | 2.0 | 0.46 | ng/L | | 10/26/20 18:56 | 10/27/20 20:17 | 1 |

| *Isotope Dilution* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C4 PFBA* | *63* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C5 PFPeA* | *68* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C2 PFHxA* | *67* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C4 PFHpA* | *77* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C4 PFOA* | *78* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C5 PFNA* | *78* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C2 PFDA* | *71* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C2 PFUnA* | *77* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C2 PFDoA* | *68* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |
| *13C2 PFTeDA* | *67* | | *25 - 150* | *10/26/20 18:56* | *10/27/20 20:17* | *1* |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: MB 320-425572/1-A**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Isotope Dilution | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C3 PFBS | 71 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| 18O2 PFHxS | 71 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| 13C4 PFOS | 73 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| 13C8 FOSA | 67 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| d3-NMeFOSAA | 66 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| d5-NEtFOSAA | 77 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| M2-6:2 FTS | 71 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |
| M2-8:2 FTS | 75 | | 25 - 150 | 10/26/20 18:56 | 10/27/20 20:17 | 1 |

**Lab Sample ID: LCS 320-425572/2-A**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 40.0 | 43.9 | | ng/L | | 110 | 76 - 136 |
| Perfluoropentanoic acid (PFPeA) | 40.0 | 40.4 | | ng/L | | 101 | 71 - 131 |
| Perfluorohexanoic acid (PFHxA) | 40.0 | 42.1 | | ng/L | | 105 | 73 - 133 |
| Perfluoroheptanoic acid (PFHpA) | 40.0 | 40.0 | | ng/L | | 100 | 72 - 132 |
| Perfluorooctanoic acid (PFOA) | 40.0 | 41.3 | | ng/L | | 103 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | 40.0 | 39.6 | | ng/L | | 99 | 75 - 135 |
| Perfluorodecanoic acid (PFDA) | 40.0 | 42.7 | | ng/L | | 107 | 76 - 136 |
| Perfluoroundecanoic acid (PFUnA) | 40.0 | 41.3 | | ng/L | | 103 | 68 - 128 |
| Perfluorododecanoic acid (PFDoA) | 40.0 | 43.7 | | ng/L | | 109 | 71 - 131 |
| Perfluorotridecanoic acid (PFTriA) | 40.0 | 45.1 | | ng/L | | 113 | 71 - 131 |
| Perfluorotetradecanoic acid (PFTeA) | 40.0 | 42.3 | | ng/L | | 106 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 35.4 | 36.6 | | ng/L | | 103 | 67 - 127 |
| Perfluorohexanesulfonic acid (PFHxS) | 36.4 | 35.5 | | ng/L | | 97 | 59 - 119 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 38.1 | 43.1 | | ng/L | | 113 | 76 - 136 |
| Perfluorooctanesulfonic acid (PFOS) | 37.1 | 38.9 | | ng/L | | 105 | 70 - 130 |
| Perfluorodecanesulfonic acid (PFDS) | 38.6 | 39.4 | | ng/L | | 102 | 71 - 131 |
| Perfluorooctanesulfonamide (FOSA) | 40.0 | 44.7 | | ng/L | | 112 | 73 - 133 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 40.0 | 42.6 | | ng/L | | 106 | 76 - 136 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 40.0 | 41.6 | | ng/L | | 104 | 76 - 136 |
| 6:2 FTS | 37.9 | 37.6 | | ng/L | | 99 | 59 - 175 |
| 8:2 FTS | 38.3 | 41.9 | | ng/L | | 109 | 75 - 135 |

| Isotope Dilution | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 13C4 PFBA | 77 | | 25 - 150 |
| 13C5 PFPeA | 81 | | 25 - 150 |
| 13C2 PFHxA | 84 | | 25 - 150 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: LCS 320-425572/2-A**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Isotope Dilution | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| 13C4 PFHpA | 87 | | 25 - 150 |
| 13C4 PFOA | 86 | | 25 - 150 |
| 13C5 PFNA | 95 | | 25 - 150 |
| 13C2 PFDA | 92 | | 25 - 150 |
| 13C2 PFUnA | 97 | | 25 - 150 |
| 13C2 PFDoA | 81 | | 25 - 150 |
| 13C2 PFTeDA | 82 | | 25 - 150 |
| 13C3 PFBS | 83 | | 25 - 150 |
| 18O2 PFHxS | 86 | | 25 - 150 |
| 13C4 PFOS | 84 | | 25 - 150 |
| 13C8 FOSA | 78 | | 25 - 150 |
| d3-NMeFOSAA | 81 | | 25 - 150 |
| d5-NEtFOSAA | 92 | | 25 - 150 |
| M2-6:2 FTS | 79 | | 25 - 150 |
| M2-8:2 FTS | 83 | | 25 - 150 |

**Lab Sample ID: 480-177077-3 MS**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 23 | | 32.6 | 59.1 | | ng/L | | 112 | 76 - 136 |
| Perfluoropentanoic acid (PFPeA) | 59 | | 32.6 | 90.1 | | ng/L | | 97 | 71 - 131 |
| Perfluorohexanoic acid (PFHxA) | 48 | | 32.6 | 80.0 | | ng/L | | 98 | 73 - 133 |
| Perfluoroheptanoic acid (PFHpA) | 39 | | 32.6 | 69.8 | | ng/L | | 95 | 72 - 132 |
| Perfluorooctanoic acid (PFOA) | 69 | | 32.6 | 101 | | ng/L | | 101 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | 14 | | 32.6 | 51.9 | | ng/L | | 117 | 75 - 135 |
| Perfluorodecanoic acid (PFDA) | 26 | | 32.6 | 64.6 | | ng/L | | 120 | 76 - 136 |
| Perfluoroundecanoic acid (PFUnA) | 5.6 | | 32.6 | 39.6 | | ng/L | | 104 | 68 - 128 |
| Perfluorododecanoic acid (PFDoA) | 14 | | 32.6 | 51.3 | | ng/L | | 113 | 71 - 131 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 32.6 | 30.8 | | ng/L | | 95 | 71 - 131 |
| Perfluorotetradecanoic acid (PFTeA) | 2.5 | | 32.6 | 35.6 | | ng/L | | 101 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 5.4 | | 28.8 | 37.4 | | ng/L | | 111 | 67 - 127 |
| Perfluorohexanesulfonic acid (PFHxS) | 3.6 | | 29.6 | 35.1 | | ng/L | | 106 | 59 - 119 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.40 | J | 31.0 | 35.3 | | ng/L | | 112 | 76 - 136 |
| Perfluorooctanesulfonic acid (PFOS) | 22 | | 30.2 | 53.5 | | ng/L | | 105 | 70 - 130 |
| Perfluorodecanesulfonic acid (PFDS) | ND | | 31.4 | 30.1 | | ng/L | | 96 | 71 - 131 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 32.6 | 35.6 | | ng/L | | 109 | 73 - 133 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 32.6 | 36.1 | | ng/L | | 111 | 76 - 136 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 32.6 | 35.6 | | ng/L | | 109 | 76 - 136 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: 480-177077-3 MS**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 6:2 FTS | ND | | 30.9 | 31.0 | | ng/L | | 100 | 59 - 175 |
| 8:2 FTS | ND | | 31.2 | 33.4 | | ng/L | | 107 | 75 - 135 |

| *Isotope Dilution* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *75* | | *25 - 150* |
| *13C5 PFPeA* | *89* | | *25 - 150* |
| *13C2 PFHxA* | *94* | | *25 - 150* |
| *13C4 PFHpA* | *92* | | *25 - 150* |
| *13C4 PFOA* | *93* | | *25 - 150* |
| *13C5 PFNA* | *92* | | *25 - 150* |
| *13C2 PFDA* | *88* | | *25 - 150* |
| *13C2 PFUnA* | *94* | | *25 - 150* |
| *13C2 PFDoA* | *76* | | *25 - 150* |
| *13C2 PFTeDA* | *85* | | *25 - 150* |
| *13C3 PFBS* | *91* | | *25 - 150* |
| *18O2 PFHxS* | *90* | | *25 - 150* |
| *13C4 PFOS* | *90* | | *25 - 150* |
| *13C8 FOSA* | *91* | | *25 - 150* |
| *d3-NMeFOSAA* | *84* | | *25 - 150* |
| *d5-NEtFOSAA* | *88* | | *25 - 150* |
| *M2-6:2 FTS* | *104* | | *25 - 150* |
| *M2-8:2 FTS* | *113* | | *25 - 150* |

**Lab Sample ID: 480-177077-3 MSD**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | 23 | | 34.5 | 61.2 | | ng/L | | 112 | 76 - 136 | 4 | 30 |
| Perfluoropentanoic acid (PFPeA) | 59 | | 34.5 | 93.9 | | ng/L | | 103 | 71 - 131 | 4 | 30 |
| Perfluorohexanoic acid (PFHxA) | 48 | | 34.5 | 84.6 | | ng/L | | 106 | 73 - 133 | 6 | 30 |
| Perfluoroheptanoic acid (PFHpA) | 39 | | 34.5 | 79.7 | | ng/L | | 118 | 72 - 132 | 13 | 30 |
| Perfluorooctanoic acid (PFOA) | 69 | | 34.5 | 102 | | ng/L | | 97 | 70 - 130 | 1 | 30 |
| Perfluorononanoic acid (PFNA) | 14 | | 34.5 | 48.2 | | ng/L | | 100 | 75 - 135 | 7 | 30 |
| Perfluorodecanoic acid (PFDA) | 26 | | 34.5 | 60.2 | | ng/L | | 100 | 76 - 136 | 7 | 30 |
| Perfluoroundecanoic acid (PFUnA) | 5.6 | | 34.5 | 43.4 | | ng/L | | 110 | 68 - 128 | 9 | 30 |
| Perfluorododecanoic acid (PFDoA) | 14 | | 34.5 | 47.3 | | ng/L | | 95 | 71 - 131 | 8 | 30 |
| Perfluorotridecanoic acid (PFTriA) | ND | | 34.5 | 30.7 | | ng/L | | 89 | 71 - 131 | 0 | 30 |
| Perfluorotetradecanoic acid (PFTeA) | 2.5 | | 34.5 | 37.0 | | ng/L | | 100 | 70 - 130 | 4 | 30 |
| Perfluorobutanesulfonic acid (PFBS) | 5.4 | | 30.5 | 38.2 | | ng/L | | 107 | 67 - 127 | 2 | 30 |
| Perfluorohexanesulfonic acid (PFHxS) | 3.6 | | 31.4 | 35.4 | | ng/L | | 102 | 59 - 119 | 1 | 30 |
| Perfluoroheptanesulfonic Acid (PFHpS) | 0.40 | J | 32.8 | 38.4 | | ng/L | | 116 | 76 - 136 | 8 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | 22 | | 32.0 | 53.9 | | ng/L | | 100 | 70 - 130 | 1 | 30 |

## Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

**Lab Sample ID: 480-177077-3 MSD**
**Matrix: Water**
**Analysis Batch: 425872**

**Client Sample ID: MW-02D**
**Prep Type: Total/NA**
**Prep Batch: 425572**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorodecanesulfonic acid (PFDS) | ND | | 33.2 | 32.6 | | ng/L | | 98 | 71 - 131 | 8 | 30 |
| Perfluorooctanesulfonamide (FOSA) | ND | | 34.5 | 37.1 | | ng/L | | 108 | 73 - 133 | 4 | 30 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 34.5 | 37.9 | | ng/L | | 110 | 76 - 136 | 5 | 30 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 34.5 | 37.5 | | ng/L | | 109 | 76 - 136 | 5 | 30 |
| 6:2 FTS | ND | | 32.7 | 33.1 | | ng/L | | 101 | 59 - 175 | 6 | 30 |
| 8:2 FTS | ND | | 33.0 | 36.5 | | ng/L | | 111 | 75 - 135 | 9 | 30 |

| *Isotope Dilution* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *13C4 PFBA* | *63* | | *25 - 150* |
| *13C5 PFPeA* | *73* | | *25 - 150* |
| *13C2 PFHxA* | *79* | | *25 - 150* |
| *13C4 PFHpA* | *72* | | *25 - 150* |
| *13C4 PFOA* | *74* | | *25 - 150* |
| *13C5 PFNA* | *81* | | *25 - 150* |
| *13C2 PFDA* | *76* | | *25 - 150* |
| *13C2 PFUnA* | *73* | | *25 - 150* |
| *13C2 PFDoA* | *71* | | *25 - 150* |
| *13C2 PFTeDA* | *73* | | *25 - 150* |
| *13C3 PFBS* | *74* | | *25 - 150* |
| *18O2 PFHxS* | *77* | | *25 - 150* |
| *13C4 PFOS* | *74* | | *25 - 150* |
| *13C8 FOSA* | *75* | | *25 - 150* |
| *d3-NMeFOSAA* | *71* | | *25 - 150* |
| *d5-NEtFOSAA* | *74* | | *25 - 150* |
| *M2-6:2 FTS* | *86* | | *25 - 150* |
| *M2-8:2 FTS* | *92* | | *25 - 150* |

# QC Association Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## GC/MS VOA

### Analysis Batch: 555654

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-177077-1 | MW-02I | Total/NA | Water | 8260C | |
| 480-177077-2 | MW-02S | Total/NA | Water | 8260C | |
| 480-177077-3 | MW-02D | Total/NA | Water | 8260C | |
| MB 480-555654/7 | Method Blank | Total/NA | Water | 8260C | |
| LCS 480-555654/5 | Lab Control Sample | Total/NA | Water | 8260C | |

### Analysis Batch: 555715

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-177077-4 | DUP | Total/NA | Water | 8260C | |
| 480-177077-5 | MW-09S | Total/NA | Water | 8260C | |
| 480-177077-6 | MW-10S | Total/NA | Water | 8260C | |
| 480-177077-7 | MW-06 | Total/NA | Water | 8260C | |
| 480-177077-8 | MW-11S | Total/NA | Water | 8260C | |
| 480-177077-9 | MW-04S | Total/NA | Water | 8260C | |
| 480-177077-10 | MW-03I | Total/NA | Water | 8260C | |
| 480-177077-11 | MW-08S | Total/NA | Water | 8260C | |
| 480-177077-12 | TRIP BLANK | Total/NA | Water | 8260C | |
| MB 480-555715/7 | Method Blank | Total/NA | Water | 8260C | |
| LCS 480-555715/29 | Lab Control Sample | Total/NA | Water | 8260C | |
| 480-177077-3 MS | MW-02D | Total/NA | Water | 8260C | |
| 480-177077-3 MSD | MW-02D | Total/NA | Water | 8260C | |

## GC/MS Semi VOA

### Prep Batch: 555817

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-177077-1 | MW-02I | Total/NA | Water | 3510C | |
| 480-177077-2 | MW-02S | Total/NA | Water | 3510C | |
| 480-177077-3 | MW-02D | Total/NA | Water | 3510C | |
| 480-177077-4 | DUP | Total/NA | Water | 3510C | |
| 480-177077-7 | MW-06 | Total/NA | Water | 3510C | |
| 480-177077-10 | MW-03I | Total/NA | Water | 3510C | |
| MB 480-555817/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 480-555817/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| 480-177077-3 MS | MW-02D | Total/NA | Water | 3510C | |
| 480-177077-3 MSD | MW-02D | Total/NA | Water | 3510C | |

### Analysis Batch: 556213

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-177077-1 | MW-02I | Total/NA | Water | 8270D SIM ID | 555817 |
| 480-177077-2 | MW-02S | Total/NA | Water | 8270D SIM ID | 555817 |
| 480-177077-3 | MW-02D | Total/NA | Water | 8270D SIM ID | 555817 |
| 480-177077-4 | DUP | Total/NA | Water | 8270D SIM ID | 555817 |
| 480-177077-7 | MW-06 | Total/NA | Water | 8270D SIM ID | 555817 |
| 480-177077-10 | MW-03I | Total/NA | Water | 8270D SIM ID | 555817 |
| MB 480-555817/1-A | Method Blank | Total/NA | Water | 8270D SIM ID | 555817 |
| LCS 480-555817/2-A | Lab Control Sample | Total/NA | Water | 8270D SIM ID | 555817 |
| 480-177077-3 MS | MW-02D | Total/NA | Water | 8270D SIM ID | 555817 |
| 480-177077-3 MSD | MW-02D | Total/NA | Water | 8270D SIM ID | 555817 |

# QC Association Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## LCMS

### Prep Batch: 425572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-177077-1 | MW-02I | Total/NA | Water | 3535 | |
| 480-177077-2 | MW-02S | Total/NA | Water | 3535 | |
| 480-177077-3 | MW-02D | Total/NA | Water | 3535 | |
| 480-177077-4 | DUP | Total/NA | Water | 3535 | |
| 480-177077-7 | MW-06 | Total/NA | Water | 3535 | |
| 480-177077-10 | MW-03I | Total/NA | Water | 3535 | |
| MB 320-425572/1-A | Method Blank | Total/NA | Water | 3535 | |
| LCS 320-425572/2-A | Lab Control Sample | Total/NA | Water | 3535 | |
| 480-177077-3 MS | MW-02D | Total/NA | Water | 3535 | |
| 480-177077-3 MSD | MW-02D | Total/NA | Water | 3535 | |

### Analysis Batch: 425872

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 480-177077-1 | MW-02I | Total/NA | Water | 537 (modified) | 425572 |
| 480-177077-2 | MW-02S | Total/NA | Water | 537 (modified) | 425572 |
| 480-177077-3 | MW-02D | Total/NA | Water | 537 (modified) | 425572 |
| 480-177077-4 | DUP | Total/NA | Water | 537 (modified) | 425572 |
| 480-177077-7 | MW-06 | Total/NA | Water | 537 (modified) | 425572 |
| 480-177077-10 | MW-03I | Total/NA | Water | 537 (modified) | 425572 |
| MB 320-425572/1-A | Method Blank | Total/NA | Water | 537 (modified) | 425572 |
| LCS 320-425572/2-A | Lab Control Sample | Total/NA | Water | 537 (modified) | 425572 |
| 480-177077-3 MS | MW-02D | Total/NA | Water | 537 (modified) | 425572 |
| 480-177077-3 MSD | MW-02D | Total/NA | Water | 537 (modified) | 425572 |

# Lab Chronicle

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Client Sample ID: MW-02I
**Lab Sample ID: 480-177077-1**
**Date Collected: 10/21/20 09:00**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555654 | 10/25/20 15:31 | RJF | TAL BUF |
| Total/NA | Prep | 3510C | | | 555817 | 10/26/20 15:19 | ATG | TAL BUF |
| Total/NA | Analysis | 8270D SIM ID | | 1 | 556213 | 10/28/20 17:58 | JMM | TAL BUF |
| Total/NA | Prep | 3535 | | | 425572 | 10/26/20 18:56 | AP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 425872 | 10/27/20 21:30 | D1R | TAL SAC |

## Client Sample ID: MW-02S
**Lab Sample ID: 480-177077-2**
**Date Collected: 10/21/20 10:25**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555654 | 10/25/20 15:55 | RJF | TAL BUF |
| Total/NA | Prep | 3510C | | | 555817 | 10/26/20 15:19 | ATG | TAL BUF |
| Total/NA | Analysis | 8270D SIM ID | | 1 | 556213 | 10/28/20 18:21 | JMM | TAL BUF |
| Total/NA | Prep | 3535 | | | 425572 | 10/26/20 18:56 | AP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 425872 | 10/27/20 21:39 | D1R | TAL SAC |

## Client Sample ID: MW-02D
**Lab Sample ID: 480-177077-3**
**Date Collected: 10/23/20 11:05**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555654 | 10/25/20 16:19 | RJF | TAL BUF |
| Total/NA | Prep | 3510C | | | 555817 | 10/26/20 15:19 | ATG | TAL BUF |
| Total/NA | Analysis | 8270D SIM ID | | 1 | 556213 | 10/28/20 17:11 | JMM | TAL BUF |
| Total/NA | Prep | 3535 | | | 425572 | 10/26/20 18:56 | AP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 425872 | 10/27/20 22:06 | D1R | TAL SAC |

## Client Sample ID: DUP
**Lab Sample ID: 480-177077-4**
**Date Collected: 10/22/20 10:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555715 | 10/26/20 12:21 | RJF | TAL BUF |
| Total/NA | Prep | 3510C | | | 555817 | 10/26/20 15:19 | ATG | TAL BUF |
| Total/NA | Analysis | 8270D SIM ID | | 1 | 556213 | 10/28/20 18:45 | JMM | TAL BUF |
| Total/NA | Prep | 3535 | | | 425572 | 10/26/20 18:56 | AP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 425872 | 10/27/20 22:34 | D1R | TAL SAC |

## Client Sample ID: MW-09S
**Lab Sample ID: 480-177077-5**
**Date Collected: 10/21/20 11:15**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 10 | 555715 | 10/26/20 12:45 | RJF | TAL BUF |

# Lab Chronicle

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Client Sample ID: MW-10S
**Lab Sample ID: 480-177077-6**
**Date Collected: 10/21/20 11:45**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 4 | 555715 | 10/26/20 13:10 | RJF | TAL BUF |

## Client Sample ID: MW-06
**Lab Sample ID: 480-177077-7**
**Date Collected: 10/21/20 11:55**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555715 | 10/26/20 13:35 | RJF | TAL BUF |
| Total/NA | Prep | 3510C | | | 555817 | 10/26/20 15:19 | ATG | TAL BUF |
| Total/NA | Analysis | 8270D SIM ID | | 1 | 556213 | 10/28/20 19:08 | JMM | TAL BUF |
| Total/NA | Prep | 3535 | | | 425572 | 10/26/20 18:56 | AP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 425872 | 10/27/20 22:43 | D1R | TAL SAC |

## Client Sample ID: MW-11S
**Lab Sample ID: 480-177077-8**
**Date Collected: 10/21/20 13:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555715 | 10/26/20 14:00 | RJF | TAL BUF |

## Client Sample ID: MW-04S
**Lab Sample ID: 480-177077-9**
**Date Collected: 10/21/20 14:10**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 4 | 555715 | 10/26/20 14:24 | RJF | TAL BUF |

## Client Sample ID: MW-03I
**Lab Sample ID: 480-177077-10**
**Date Collected: 10/21/20 14:30**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555715 | 10/26/20 14:49 | RJF | TAL BUF |
| Total/NA | Prep | 3510C | | | 555817 | 10/26/20 15:19 | ATG | TAL BUF |
| Total/NA | Analysis | 8270D SIM ID | | 1 | 556213 | 10/28/20 19:31 | JMM | TAL BUF |
| Total/NA | Prep | 3535 | | | 425572 | 10/26/20 18:56 | AP | TAL SAC |
| Total/NA | Analysis | 537 (modified) | | 1 | 425872 | 10/27/20 22:52 | D1R | TAL SAC |

## Client Sample ID: MW-08S
**Lab Sample ID: 480-177077-11**
**Date Collected: 10/22/20 11:00**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 4 | 555715 | 10/26/20 15:14 | RJF | TAL BUF |

# Lab Chronicle

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Client Sample ID: TRIP BLANK
**Lab Sample ID: 480-177077-12**
**Date Collected: 10/22/20 00:00**
**Matrix: Water**
**Date Received: 10/24/20 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260C | | 1 | 555715 | 10/26/20 15:38 | RJF | TAL BUF |

**Laboratory References:**

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

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Accreditation/Certification Summary

Client: New York State D.E.C. Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New York | NELAP | 10026 | 10-28-20 |

## Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| New York | NELAP | 11666 | 04-01-21 |

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 |
|---|---|---|---|
| 537 (modified) | 3535 | Water | 6:2 FTS |
| 537 (modified) | 3535 | Water | 8:2 FTS |
| 537 (modified) | 3535 | Water | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) |
| 537 (modified) | 3535 | Water | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) |
| 537 (modified) | 3535 | Water | Perfluorobutanesulfonic acid (PFBS) |
| 537 (modified) | 3535 | Water | Perfluorobutanoic acid (PFBA) |
| 537 (modified) | 3535 | Water | Perfluorodecanesulfonic acid (PFDS) |
| 537 (modified) | 3535 | Water | Perfluorodecanoic acid (PFDA) |
| 537 (modified) | 3535 | Water | Perfluorododecanoic acid (PFDoA) |
| 537 (modified) | 3535 | Water | Perfluoroheptanesulfonic Acid (PFHpS) |
| 537 (modified) | 3535 | Water | Perfluoroheptanoic acid (PFHpA) |
| 537 (modified) | 3535 | Water | Perfluorohexanesulfonic acid (PFHxS) |
| 537 (modified) | 3535 | Water | Perfluorohexanoic acid (PFHxA) |
| 537 (modified) | 3535 | Water | Perfluorononanoic acid (PFNA) |
| 537 (modified) | 3535 | Water | Perfluorooctanesulfonamide (FOSA) |
| 537 (modified) | 3535 | Water | Perfluorooctanesulfonic acid (PFOS) |
| 537 (modified) | 3535 | Water | Perfluorooctanoic acid (PFOA) |
| 537 (modified) | 3535 | Water | Perfluoropentanoic acid (PFPeA) |
| 537 (modified) | 3535 | Water | Perfluorotetradecanoic acid (PFTeA) |
| 537 (modified) | 3535 | Water | Perfluorotridecanoic acid (PFTriA) |
| 537 (modified) | 3535 | Water | Perfluoroundecanoic acid (PFUnA) |

# Method Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260C | Volatile Organic Compounds by GC/MS | SW846 | TAL BUF |
| 8270D SIM ID | Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) | SW846 | TAL BUF |
| 537 (modified) | Fluorinated Alkyl Substances | EPA | TAL SAC |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | TAL BUF |
| 3535 | Solid-Phase Extraction (SPE) | SW846 | TAL SAC |
| 5030C | Purge and Trap | SW846 | TAL BUF |

**Protocol References:**

EPA = US Environmental Protection Agency

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

**Laboratory References:**

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

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Sample Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 480-177077-1 | MW-02I | Water | 10/21/20 09:00 | 10/24/20 08:00 | |
| 480-177077-2 | MW-02S | Water | 10/21/20 10:25 | 10/24/20 08:00 | |
| 480-177077-3 | MW-02D | Water | 10/23/20 11:05 | 10/24/20 08:00 | |
| 480-177077-4 | DUP | Water | 10/22/20 10:30 | 10/24/20 08:00 | |
| 480-177077-5 | MW-09S | Water | 10/21/20 11:15 | 10/24/20 08:00 | |
| 480-177077-6 | MW-10S | Water | 10/21/20 11:45 | 10/24/20 08:00 | |
| 480-177077-7 | MW-06 | Water | 10/21/20 11:55 | 10/24/20 08:00 | |
| 480-177077-8 | MW-11S | Water | 10/21/20 13:30 | 10/24/20 08:00 | |
| 480-177077-9 | MW-04S | Water | 10/21/20 14:10 | 10/24/20 08:00 | |
| 480-177077-10 | MW-03I | Water | 10/21/20 14:30 | 10/24/20 08:00 | |
| 480-177077-11 | MW-08S | Water | 10/22/20 11:00 | 10/24/20 08:00 | |
| 480-177077-12 | TRIP BLANK | Water | 10/22/20 00:00 | 10/24/20 08:00 | |

**Eurofins TestAmerica, Buffalo**
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Albany #224

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Lexie Lill + Sam Pereira | Lab PM: Stone, Judy L | Carrier Tracking No(s): | COC No: 480-150704-33468.1 |
|---|---|---|---|---|
| Client Contact: Nate Kranes | Phone: 518-641-8478 | E-Mail: Judy.Stone@Eurofinset.com | | Page: Page 1 of 2 |
| Company: TRC Environmental Corporation | | | | Job #: |

**Analysis Requested**

| | |
|---|---|
| Address: 215 Greenfield Parkway | Due Date Requested: |
| City: Liverpool | TAT Requested (days): Standard |
| State, Zip: NY, 13088 | |
| Phone: | PO #: CallOut SMP1215 |
| Email: NKranes@trccompanies.com | WO #: SMP1215 |
| Project Name: SMP B - Mahopac Business Dist. | Project #: 48022480 |
| Site: Mahopac Business District Wells | SSOW#: |

**Preservation Codes:**

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3

480-177077 Chain of Custody

| Sample Identification | 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) | 8260C - TCL VOAs + TICs | PFC_IDA - PFAS, Standard List (21 Analytes) | 8270D_SIM_Ion_1,4-Dioxane | Total N | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | N | N | | |
| MW-02I | 10/21/20 | 900 | G | Water | | | X | X | X | | |
| MW-02S | 10/21/20 | 1025 | G | Water | | | X | X | X | | |
| MW-02D | 10/23/20 | 1105 | G | Water | | X | X | X | X | | |
| DUP | 10/22/20 | 1030 | G | Water | | | X | X | X | | |
| MW-09S | 10/21/20 | 1115 | G | Water | | | X | | | | |
| MW-10S | 10/21/20 | 1145 | G | Water | | | X | | | | |
| MW-06 | 10/21/20 | 1155 | G | Water | | | X | X | X | | |
| MW-11S | 10/21/20 | 1330 | G | Water | | | X | | | | |
| MW-04S | 10/21/20 | 1410 | G | Water | | | X | | | | |
| MW-03I | 10/21/20 | 1430 | G | Water | | | X | X | X | | |
| MW-08S | 10/22/20 | 1100 | G | Water | | | X | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

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

Special Instructions/QC Requirements:

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

| | Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|---|
| 1 | Lexie Lill / Sam Pereira | 10/23/20 1445 | TRC | Karl Ladau | 10/23/20 1445 | Eurofins |
| 2 | Karl Ladau | 10/23/20 1700 | Eurofins | Carl Mc | 10/24/20 0800 | TAS |
| 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: | #1 3.1, 2.5, 2.9 |
|---|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Buffalo**
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Albany
#224

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Lexie Lill + Sam Pereira | Lab PM: Stone, Judy L | Carrier Tracking No(s): | COC No: 480-150704-33468.2 |
|---|---|---|---|---|
| Client Contact: Nate Kranes | Phone: 518-641-8478 | E-Mail: Judy.Stone@Eurofinset.com | | Page: Page 2 of 2 |
| Company: TRC Environmental Corporation | | Analysis Requested | | Job #: |
| Address: 215 Greenfield Parkway | Due Date Requested: | | | Preservation Codes: |
| City: Liverpool | TAT Requested (days): Standard | | | A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify) |
| State, Zip: NY, 13088 | PO #: CallOut SMP1215 | | | Other: |
| Phone: | WO #: SMP1215 | | | |
| Email: NKranes@trccompanies.com | Project #: 48022480 | | | |
| Project Name: SMP B - Mahopac Business Dist. | SSOW#: | | | |
| Site: Mahopac Business District Wells | | | | |

| Sample Identification | 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) | 8260C - TCL VOAs + TICs | PFC_IDA - PFAS, Standard List (21 Analytes) | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | N | | |
| TRIP BLANK | | | | Water | | | X | | | |
| | | | | Water | | | | | | |
| | | | | Water | | | | | | |
| | | | | Water | | | | | | |
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| | | | | Water | | | | | | |
| | | | | Water | | | | | | |
| | | | | Water | | | | | | |
| | | | | Water | | | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

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

Special Instructions/QC Requirements:

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

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Lexie Lill / Sam Pereira | 10/23/20 1445 | TRC | Karl Zacher | 10/23/20 1445 | Eurofins |
| 2 | Relinquished by: Karl Zacher | Date/Time: 10/23/20 1700 | Company Eurofins | Received by: | Date/Time: 10/24/20 0800 | Company TAB |
| 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:

Ver: 01/16/2019

**Eurofins TestAmerica, Buffalo**
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Albany #224

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Lexie Lill + Sam Pericak | Lab PM: Stone, Judy L | Carrier Tracking No(s): | COC No: 480-150704-33468.1 |
|---|---|---|---|---|
| Client Contact: Nate Kranes | Phone: 518-641-8478 | E-Mail: Judy.Stone@Eurofinset.com | | Page: Page 1 of 2 |
| Company: TRC Environmental Corporation | | | | Job #: |
| Address: 215 Greenfield Parkway | Due Date Requested: | | | |
| City: Liverpool | TAT Requested (days): Standard | | | |
| State, Zip: NY, 13088 | | | | |
| Phone: | PO #: CallOut SMP1215 | | | |
| Email: NKranes@trccompanies.com | WO #: SMP1215 | | | |
| Project Name: SMP B - Mahopac Business Dist. | Project #: 48022480 | | | |
| Site: Mahopac Business District Wells | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification | 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) | 8260C - TCL VOAs + TICs | PFC_IDA - PFAS, Standard List (21 Analytes) | 8270D_SIM_ms_1p-1,4-Dioxane | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservation Code: | | | | | | | A | N | N | | |
| MW-02I | 10/21/20 | 900 | G | Water | | | X | X | X | | |
| MW-02S | 10/21/20 | 1025 | G | Water | | | X | X | X | | |
| MW-02D | 10/23/20 | 1105 | G | Water | | X | X | X | X | | |
| DUP | 10/22/20 | 1030 | G | Water | | | X | X | X | | |
| MW-09S | 10/21/20 | 1115 | G | Water | | | X | | | | |
| MW-10S | 10/21/20 | 1145 | G | Water | | | X | | | | |
| MW-06 | 10/21/20 | 1155 | G | Water | | | X | X | X | | |
| MW-11S | 10/21/20 | 1330 | G | Water | | | X | | | | |
| MW-04S | 10/21/20 | 1410 | G | Water | | | X | | | | |
| MW-03I | 10/21/20 | 1430 | G | Water | | | X | X | X | | |
| MW-08S | 10/22/20 | 1100 | G | Water | | | X | | | | |

480-177077 Chain of Custody

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

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

Special Instructions/QC Requirements:

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

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Lexie Lill / Sam Pericak | 10/23/20 1445 | TRC | Karl Zadra | 10/23/20 1445 | Eurofins |
| Relinquished by: Karl Zadra | Date/Time: 10/23/20 1700 | Company Eurofins | Received by: | Date/Time: 10/24/20 905 | Company ESA Stc |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: Sgl

Cooler Temperature(s) °C and Other Remarks: -0.1 Cx0.3

Ver: 01/16/2019

**Eurofins TestAmerica, Buffalo**
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Albany #224

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Lexie Gill + Sara Pereira | Lab PM: Stone, Judy L | Carrier Tracking No(s): | COC No: 480-150704-33468.2 |
|---|---|---|---|---|
| Client Contact: Nate Kranes | Phone: 518-641-8478 | E-Mail: Judy.Stone@Eurofinset.com | | Page: Page 2 of 2 |
| Company: TRC Environmental Corporation | | | | Job #: |
| Address: 215 Greenfield Parkway | Due Date Requested: | | | |
| City: Liverpool | TAT Requested (days): Standard | | | |
| State, Zip: NY, 13088 | PO #: CallOut SMP1215 | | | |
| Phone: | WO #: SMP1215 | | | |
| Email: NKranes@trccompanies.com | Project #: 48022480 | | | |
| Project Name: SMP B - Mahopac Business Dist. | SSOW#: | | | |
| Site: Mahopac Business District Wells | | | | |

**Analysis Requested**

Preservation Codes:

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | 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) | 8260C - TCL VOAs + TICs | PFC_IDA - PFAS, Standard List (21 Analytes) | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | A | N | | |
| TRIP BLANK | | | | Water | | | X | | | |
| | | | | Water | | | | | | |
| | | | | Water | | | | | | |
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| | | | | Water | | | | | | |
| | | | | Water | | | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

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

Special Instructions/QC Requirements:

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

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Lexie Gill / Sara Pereira | 10/23/20 1445 | TRC | Karl Zacher | 10/23/20 1445 | Eurofins |
| Relinquished by: Karl Zacher | Date/Time: 10/23/20 1700 | Company Eurofins | Received by: | Date/Time: 10/24/20 915 | Company EA SES |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: △ Yes △ No | Custody Seal No.: Seal | Cooler Temperature(s) °C and Other Remarks: -0.1 CF 0.3 |
|---|---|---|

Ver: 01/16/2019

eurofins | Environment Testing TestAmerica

# Sacramento Sample Receiving Notes

480-177077 Field Sheet

Tracking #: 1891 4486 3360

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other_____

Job:_____

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: AM13 Corr. Factor: (+) / - ) 0.4 °C

Ice ✓ Wet_____ Gel_____ Other_____

Cooler Custody Seal: SCS

Cooler ID:_____

Temp Observed: 0.1 °C Corrected: 0.5 °C

From: Temp Blank ☑ Sample ☐

| Opening/Processing The Shipment | Yes | No | NA |
|---|---|---|---|
| Cooler compromised/tampered with? | ☐ | ☐ | ☐ |
| Cooler Temperature is acceptable? | ☑ | ☐ | ☐ |

Initials: ST Date: 10/24/20

| Unpacking/Labeling The Samples | Yes | No | NA |
|---|---|---|---|
| CoC is complete w/o discrepancies? | ☑ | ☐ | ☐ |
| Samples compromised/tampered with? | ☐ | ☑ | ☐ |
| Sample containers have legible labels? | ☑ | ☐ | ☐ |
| Sample custody seal? | ☐ | ☐ | ☑ |
| Containers are not broken or leaking? | ☑ | ☐ | ☐ |
| Sample date/times are provided? | ☑ | ☐ | ☐ |
| Appropriate containers are used? | ☑ | ☐ | ☐ |
| Sample bottles are completely filled? | ☑ | ☐ | ☐ |
| Sample preservatives verified? | ☐ | ☐ | ☑ |
| 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: DM Date: 10/24/20

Notes:_____

Trizma Lot #(s):_____

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

Initials: DM Date: 10/24/20

# Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-177077-1

**Login Number: 177077** **List Source: Eurofins TestAmerica, Buffalo**
**List Number: 1**
**Creator: Yeager, Brian A**

| 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 | |
| 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 | |
| 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 | TRC |
| Samples received within 48 hours of sampling. | True | |
| Samples requiring field filtration have been filtered in the field. | True | |
| Chlorine Residual checked. | N/A | |

# Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-177077-1

**Login Number: 177077**
**List Number: 2**
**Creator: Her, David A**

**List Source: Eurofins TestAmerica, Sacramento**
**List Creation: 10/24/20 01:56 PM**

| 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. | True | Seal |
| 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. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.3c |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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January 23, 2023

Jenna Raup
NYDEC_TRC Environmental Corporation- Clifton Park
10 Maxwell Drive, Suite 200
Clifton Park, NY 12065

Project Location: South Lake Boulevard, Mahopac, NY
Client Job Number:
Project Number: 340013
Laboratory Work Order Number: 22K0850

Enclosed are results of analyses for samples as received by the laboratory on November 4, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Raymond J. McCarthy
Project Manager

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NYDEC_TRC Environmental Corporation- Clifton l
10 Maxwell Drive, Suite 200
Clifton Park, NY 12065
ATTN: Jenna Raup

REPORT DATE: 1/23/2023

PURCHASE ORDER NUMBER: 145617

PROJECT NUMBER: 340013

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 22K0850

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: South Lake Boulevard, Mahopac, NY

| FIELD SAMPLE # | LAB ID: | MATRIX | SAMPLE DESCRIPTION | TEST | SUB LAB |
|---|---|---|---|---|---|
| MBDW-MW-2I | 22K0850-01 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| MBDW-MW-2S | 22K0850-02 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| MBDW-MW-3I | 22K0850-03 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| DUP-01 | 22K0850-04 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| MBDW-MW-6S | 22K0850-05 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| MBDW-MW-6I | 22K0850-06 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| MBDW-MW-2D | 22K0850-07 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| EB-01 | 22K0850-08 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| | | | | SW-846 8260D | |
| FB-01 | 22K0850-09 | Ground Water | | Draft Method 1633 | WA C1203/FL E87412/+ Additional |
| TB-01 | 22K0850-10 | Ground Water | | SW-846 8260D | |

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**CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

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**SW-846 8260D**

**Qualifications:**

**L-02**

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

**Analyte & Samples(s) Qualified:**

**1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**Carbon Disulfide**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**Methyl Acetate**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**trans-1,2-Dichloroethylene**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**Vinyl Chloride**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

**Analyte & Samples(s) Qualified:**

**Bromomethane**
B322285-BS1

**MS-15**

Matrix spike and matrix spike duplicate recoveries are outside of control limits. Data validation is not affected since results for this compound in this sample are "not detected", and recovery bias is on the high side.

**Analyte & Samples(s) Qualified:**

**Bromomethane**
B322285-MS1, B322285-MSD1

**Carbon Disulfide**
B322285-MS1, B322285-MSD1

**trans-1,2-Dichloroethylene**
B322285-MS1, B322285-MSD1

**Vinyl Chloride**
B322285-MS1, B322285-MSD1

**MS-22**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria.

**Analyte & Samples(s) Qualified:**

**1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**
B322285-MSD1

**Methyl Acetate**
B322285-MS1

**MS-23**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.

**Analyte & Samples(s) Qualified:**

**1,1-Dichloroethane**
B322285-MSD1

**MS-24**

Either matrix spike or matrix spike duplicate is outside of control limits, but the other is within limits. Analysis is in control based on laboratory fortified blank recovery.

**Analyte & Samples(s) Qualified:**

**Methyl tert-Butyl Ether (MTBE)**
B322285-MSD1

**R-06**

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

**Analyte & Samples(s) Qualified:**

**1,1-Dichloroethane**
22K0850-01[MBDW-MW-2I], B322285-MS1, B322285-MSD1

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**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:**

**1,2-Dibromo-3-chloropropane (DBCP)**
22K0850-01[MBDW-MW-2I], 22K0850-02[MBDW-MW-2S], 22K0850-03[MBDW-MW-3I], 22K0850-04[DUP-01], 22K0850-05[MBDW-MW-6S], 22K0850-06[MBDW-MW-6I], 22K0850-07[MBDW-MW-2D], 22K0850-08[EB-01], 22K0850-10[TB-01], B322285-BLK1, B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**V-20**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

**Analyte & Samples(s) Qualified:**

**1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**Bromomethane**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

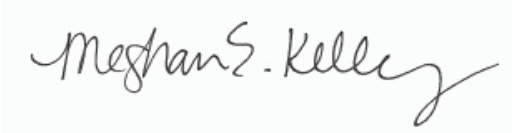
**Carbon Disulfide**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**Methyl Acetate**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**trans-1,2-Dichloroethylene**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

**Vinyl Chloride**
B322285-BS1, B322285-BSD1, B322285-MS1, B322285-MSD1, S079009-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2I**

**Sample ID: 22K0850-01** Start Date/Time: 11/1/2022 11:35:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 11:40:00AM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 2.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | R-06 | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| trans-1,2-Dichloroethylene | 0.30 | 1.0 | 0.17 | µg/L | 1 | J | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Methyl tert-Butyl Ether (MTBE) | 1.1 | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2I**

**Sample ID: 22K0850-01** Start Date/Time: 11/1/2022 11:35:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 11:40:00AM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:25 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | | |
|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 | | 11/8/22 1:25 | |
| Toluene-d8 | 100 | 70-130 | | 11/8/22 1:25 | |
| 4-Bromofluorobenzene | 99.4 | 70-130 | | 11/8/22 1:25 | |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2I**

**Sample ID: 22K0850-01** Start Date/Time: 11/1/2022 11:35:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 11:40:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2I**

**Sample ID: 22K0850-01** Start Date/Time: 11/1/2022 11:35:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 11:40:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 12/9/22 15:51 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 12/9/22 15:51 |
| 13C5-PFPeA | | - | | 12/9/22 15:51 |
| 13C5-PFHxA | | - | | 12/9/22 15:51 |
| 13C4-PFHpA | | - | | 12/9/22 15:51 |
| 13C8-PFOA | | - | | 12/9/22 15:51 |
| 13C9-PFNA | | - | | 12/9/22 15:51 |
| 13C6-PFDA | | - | | 12/9/22 15:51 |
| 13C7-PFUnA | | - | | 12/9/22 15:51 |
| 13C2-PFDoA | | - | | 12/9/22 15:51 |
| 13C2-PFTeDA | | - | | 12/9/22 15:51 |
| 13C3-PFBS | | - | | 12/9/22 15:51 |
| 13C3-PFHxS | | - | | 12/9/22 15:51 |
| 13C8-PFOS | | - | | 12/9/22 15:51 |
| 13C2-4:2FTS | | - | | 12/9/22 15:51 |
| 13C2-6:2FTS | | - | | 12/9/22 15:51 |
| 13C2-8:2FTS | | - | | 12/9/22 15:51 |
| 13C8-PFOSA | | - | | 12/9/22 15:51 |
| D3-NMeFOSA | | - | | 12/9/22 15:51 |
| D5-NEtFOSA | | - | | 12/9/22 15:51 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2I**

**Sample ID: 22K0850-01** Start Date/Time: 11/1/2022 11:35:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 11:40:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 12/9/22 15:51 | |
| D5-NEtFOSAA | | | - | | | | | 12/9/22 15:51 | |
| D7-NMeFOSE | | | - | | | | | 12/9/22 15:51 | |
| D9-NEtFOSE | | | - | | | | | 12/9/22 15:51 | |
| 13C3-HFPO-DA | | | - | | | | | 12/9/22 15:51 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2S**

**Sample ID: 22K0850-02** Start Date/Time: 11/1/2022 12:40:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 12:45:00PM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 2.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Methyl tert-Butyl Ether (MTBE) | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2S**

**Sample ID: 22K0850-02** Start Date/Time: 11/1/2022 12:40:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 12:45:00PM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 1:52 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 | | 11/8/22 1:52 |
| Toluene-d8 | 99.6 | 70-130 | | 11/8/22 1:52 |
| 4-Bromofluorobenzene | 99.1 | 70-130 | | 11/8/22 1:52 |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2S**

**Sample ID: 22K0850-02** Start Date/Time: 11/1/2022 12:40:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 12:45:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2S**

**Sample ID: 22K0850-02** Start Date/Time: 11/1/2022 12:40:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 12:45:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:01 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 1/4/23 22:01 |
| 13C5-PFPeA | | - | | 1/4/23 22:01 |
| 13C5-PFHxA | | - | | 1/4/23 22:01 |
| 13C4-PFHpA | | - | | 1/4/23 22:01 |
| 13C8-PFOA | | - | | 1/4/23 22:01 |
| 13C9-PFNA | | - | | 1/4/23 22:01 |
| 13C6-PFDA | | - | | 1/4/23 22:01 |
| 13C7-PFUnA | | - | | 1/4/23 22:01 |
| 13C2-PFDoA | | - | | 1/4/23 22:01 |
| 13C2-PFTeDA | | - | | 1/4/23 22:01 |
| 13C3-PFBS | | - | | 1/4/23 22:01 |
| 13C3-PFHxS | | - | | 1/4/23 22:01 |
| 13C8-PFOS | | - | | 1/4/23 22:01 |
| 13C2-4:2FTS | | - | | 1/4/23 22:01 |
| 13C2-6:2FTS | | - | | 1/4/23 22:01 |
| 13C2-8:2FTS | | - | | 1/4/23 22:01 |
| 13C8-PFOSA | | - | | 1/4/23 22:01 |
| D3-NMeFOSA | | - | | 1/4/23 22:01 |
| D5-NEtFOSA | | - | | 1/4/23 22:01 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2S**

**Sample ID: 22K0850-02** Start Date/Time: 11/1/2022 12:40:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 12:45:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 1/4/23 22:01 | |
| D5-NEtFOSAA | | | - | | | | | 1/4/23 22:01 | |
| D7-NMeFOSE | | | - | | | | | 1/4/23 22:01 | |
| D9-NEtFOSE | | | - | | | | | 1/4/23 22:01 | |
| 13C3-HFPO-DA | | | - | | | | | 1/4/23 22:01 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-3I**

**Sample ID: 22K0850-03** Start Date/Time: 11/1/2022 2:05:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 2:10:00PM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 2.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Methyl tert-Butyl Ether (MTBE) | 0.44 | 1.0 | 0.17 | µg/L | 1 | J | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-3I**

**Sample ID: 22K0850-03** Start Date/Time: 11/1/2022 2:05:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 2:10:00PM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:19 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 | | 11/8/22 2:19 |
| Toluene-d8 | 99.4 | 70-130 | | 11/8/22 2:19 |
| 4-Bromofluorobenzene | 98.4 | 70-130 | | 11/8/22 2:19 |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-3I**

**Sample ID: 22K0850-03** Start Date/Time: 11/1/2022 2:05:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 2:10:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-3I**

**Sample ID: 22K0850-03** Start Date/Time: 11/1/2022 2:05:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 2:10:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:24 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 1/4/23 22:24 |
| 13C5-PFPeA | | - | | 1/4/23 22:24 |
| 13C5-PFHxA | | - | | 1/4/23 22:24 |
| 13C4-PFHpA | | - | | 1/4/23 22:24 |
| 13C8-PFOA | | - | | 1/4/23 22:24 |
| 13C9-PFNA | | - | | 1/4/23 22:24 |
| 13C6-PFDA | | - | | 1/4/23 22:24 |
| 13C7-PFUnA | | - | | 1/4/23 22:24 |
| 13C2-PFDoA | | - | | 1/4/23 22:24 |
| 13C2-PFTeDA | | - | | 1/4/23 22:24 |
| 13C3-PFBS | | - | | 1/4/23 22:24 |
| 13C3-PFHxS | | - | | 1/4/23 22:24 |
| 13C8-PFOS | | - | | 1/4/23 22:24 |
| 13C2-4:2FTS | | - | | 1/4/23 22:24 |
| 13C2-6:2FTS | | - | | 1/4/23 22:24 |
| 13C2-8:2FTS | | - | | 1/4/23 22:24 |
| 13C8-PFOSA | | - | | 1/4/23 22:24 |
| D3-NMeFOSA | | - | | 1/4/23 22:24 |
| D5-NEtFOSA | | - | | 1/4/23 22:24 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-3I**

**Sample ID: 22K0850-03** Start Date/Time: 11/1/2022 2:05:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/1/2022 2:10:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 1/4/23 22:24 | |
| D5-NEtFOSAA | | | - | | | | | 1/4/23 22:24 | |
| D7-NMeFOSE | | | - | | | | | 1/4/23 22:24 | |
| D9-NEtFOSE | | | - | | | | | 1/4/23 22:24 | |
| 13C3-HFPO-DA | | | - | | | | | 1/4/23 22:24 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: DUP-01** Sampled: 11/1/2022 12:00

**Sample ID: 22K0850-04**

Sample Matrix: Ground Water

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 2.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Methyl tert-Butyl Ether (MTBE) | 0.76 | 1.0 | 0.17 | µg/L | 1 | J | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: DUP-01** Sampled: 11/1/2022 12:00

**Sample ID: 22K0850-04**

Sample Matrix: Ground Water

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 2:47 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 | | 11/8/22 2:47 |
| Toluene-d8 | 99.6 | 70-130 | | 11/8/22 2:47 |
| 4-Bromofluorobenzene | 96.6 | 70-130 | | 11/8/22 2:47 |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: DUP-01** Sampled: 11/1/2022 12:00

**Sample ID: 22K0850-04**

Sample Matrix: Ground Water

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: DUP-01** Sampled: 11/1/2022 12:00

**Sample ID: 22K0850-04**

Sample Matrix: Ground Water

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 22:47 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 1/4/23 22:47 |
| 13C5-PFPeA | | - | | 1/4/23 22:47 |
| 13C5-PFHxA | | - | | 1/4/23 22:47 |
| 13C4-PFHpA | | - | | 1/4/23 22:47 |
| 13C8-PFOA | | - | | 1/4/23 22:47 |
| 13C9-PFNA | | - | | 1/4/23 22:47 |
| 13C6-PFDA | | - | | 1/4/23 22:47 |
| 13C7-PFUnA | | - | | 1/4/23 22:47 |
| 13C2-PFDoA | | - | | 1/4/23 22:47 |
| 13C2-PFTeDA | | - | | 1/4/23 22:47 |
| 13C3-PFBS | | - | | 1/4/23 22:47 |
| 13C3-PFHxS | | - | | 1/4/23 22:47 |
| 13C8-PFOS | | - | | 1/4/23 22:47 |
| 13C2-4:2FTS | | - | | 1/4/23 22:47 |
| 13C2-6:2FTS | | - | | 1/4/23 22:47 |
| 13C2-8:2FTS | | - | | 1/4/23 22:47 |
| 13C8-PFOSA | | - | | 1/4/23 22:47 |
| D3-NMeFOSA | | - | | 1/4/23 22:47 |
| D5-NEtFOSA | | - | | 1/4/23 22:47 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: DUP-01** Sampled: 11/1/2022 12:00

**Sample ID: 22K0850-04**

Sample Matrix: Ground Water

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 1/4/23 22:47 | |
| D5-NEtFOSAA | | | - | | | | | 1/4/23 22:47 | |
| D7-NMeFOSE | | | - | | | | | 1/4/23 22:47 | |
| D9-NEtFOSE | | | - | | | | | 1/4/23 22:47 | |
| 13C3-HFPO-DA | | | - | | | | | 1/4/23 22:47 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6S**

**Sample ID: 22K0850-05** Start Date/Time: 11/2/2022 10:25:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 10:30:00AM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 2.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Methyl tert-Butyl Ether (MTBE) | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Tetrachloroethylene | 1.0 | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6S**

**Sample ID: 22K0850-05** Start Date/Time: 11/2/2022 10:25:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 10:30:00AM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:15 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 108 | 70-130 | | 11/8/22 3:15 |
| Toluene-d8 | 101 | 70-130 | | 11/8/22 3:15 |
| 4-Bromofluorobenzene | 97.9 | 70-130 | | 11/8/22 3:15 |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6S**

**Sample ID: 22K0850-05** Start Date/Time: 11/2/2022 10:25:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 10:30:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6S**

**Sample ID: 22K0850-05** Start Date/Time: 11/2/2022 10:25:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 10:30:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:11 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 1/4/23 23:11 |
| 13C5-PFPeA | | - | | 1/4/23 23:11 |
| 13C5-PFHxA | | - | | 1/4/23 23:11 |
| 13C4-PFHpA | | - | | 1/4/23 23:11 |
| 13C8-PFOA | | - | | 1/4/23 23:11 |
| 13C9-PFNA | | - | | 1/4/23 23:11 |
| 13C6-PFDA | | - | | 1/4/23 23:11 |
| 13C7-PFUnA | | - | | 1/4/23 23:11 |
| 13C2-PFDoA | | - | | 1/4/23 23:11 |
| 13C2-PFTeDA | | - | | 1/4/23 23:11 |
| 13C3-PFBS | | - | | 1/4/23 23:11 |
| 13C3-PFHxS | | - | | 1/4/23 23:11 |
| 13C8-PFOS | | - | | 1/4/23 23:11 |
| 13C2-4:2FTS | | - | | 1/4/23 23:11 |
| 13C2-6:2FTS | | - | | 1/4/23 23:11 |
| 13C2-8:2FTS | | - | | 1/4/23 23:11 |
| 13C8-PFOSA | | - | | 1/4/23 23:11 |
| D3-NMeFOSA | | - | | 1/4/23 23:11 |
| D5-NEtFOSA | | - | | 1/4/23 23:11 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6S**

**Sample ID: 22K0850-05** Start Date/Time: 11/2/2022 10:25:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 10:30:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 1/4/23 23:11 | |
| D5-NEtFOSAA | | | - | | | | | 1/4/23 23:11 | |
| D7-NMeFOSE | | | - | | | | | 1/4/23 23:11 | |
| D9-NEtFOSE | | | - | | | | | 1/4/23 23:11 | |
| 13C3-HFPO-DA | | | - | | | | | 1/4/23 23:11 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6I**

**Sample ID: 22K0850-06** Start Date/Time: 11/2/2022 11:40:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 11:45:00AM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 2.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Methyl tert-Butyl Ether (MTBE) | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6I**

**Sample ID: 22K0850-06** Start Date/Time: 11/2/2022 11:40:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 11:45:00AM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 3:42 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 106 | 70-130 | | 11/8/22 3:42 |
| Toluene-d8 | 100 | 70-130 | | 11/8/22 3:42 |
| 4-Bromofluorobenzene | 96.0 | 70-130 | | 11/8/22 3:42 |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6I**

**Sample ID: 22K0850-06** Start Date/Time: 11/2/2022 11:40:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 11:45:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6I**

**Sample ID: 22K0850-06** Start Date/Time: 11/2/2022 11:40:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 11:45:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:34 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 1/4/23 23:34 |
| 13C5-PFPeA | | - | | 1/4/23 23:34 |
| 13C5-PFHxA | | - | | 1/4/23 23:34 |
| 13C4-PFHpA | | - | | 1/4/23 23:34 |
| 13C8-PFOA | | - | | 1/4/23 23:34 |
| 13C9-PFNA | | - | | 1/4/23 23:34 |
| 13C6-PFDA | | - | | 1/4/23 23:34 |
| 13C7-PFUnA | | - | | 1/4/23 23:34 |
| 13C2-PFDoA | | - | | 1/4/23 23:34 |
| 13C2-PFTeDA | | - | | 1/4/23 23:34 |
| 13C3-PFBS | | - | | 1/4/23 23:34 |
| 13C3-PFHxS | | - | | 1/4/23 23:34 |
| 13C8-PFOS | | - | | 1/4/23 23:34 |
| 13C2-4:2FTS | | - | | 1/4/23 23:34 |
| 13C2-6:2FTS | | - | | 1/4/23 23:34 |
| 13C2-8:2FTS | | - | | 1/4/23 23:34 |
| 13C8-PFOSA | | - | | 1/4/23 23:34 |
| D3-NMeFOSA | | - | | 1/4/23 23:34 |
| D5-NEtFOSA | | - | | 1/4/23 23:34 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-6I**

**Sample ID: 22K0850-06** Start Date/Time: 11/2/2022 11:40:00AM

Sample Matrix: Ground Water Stop Date/Time: 11/2/2022 11:45:00AM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 1/4/23 23:34 | |
| D5-NEtFOSAA | | | - | | | | | 1/4/23 23:34 | |
| D7-NMeFOSE | | | - | | | | | 1/4/23 23:34 | |
| D9-NEtFOSE | | | - | | | | | 1/4/23 23:34 | |
| 13C3-HFPO-DA | | | - | | | | | 1/4/23 23:34 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2D**

**Sample ID: 22K0850-07** Start Date/Time: 11/3/2022 2:00:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/3/2022 2:05:00PM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 3.8 | 50 | 2.0 | µg/L | 1 | J | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Methyl tert-Butyl Ether (MTBE) | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2D**

**Sample ID: 22K0850-07** Start Date/Time: 11/3/2022 2:00:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/3/2022 2:05:00PM

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 4:09 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | 70-130 | | 11/8/22 4:09 |
| Toluene-d8 | 100 | 70-130 | | 11/8/22 4:09 |
| 4-Bromofluorobenzene | 98.7 | 70-130 | | 11/8/22 4:09 |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2D**

**Sample ID: 22K0850-07** Start Date/Time: 11/3/2022 2:00:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/3/2022 2:05:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2D**

**Sample ID: 22K0850-07** Start Date/Time: 11/3/2022 2:00:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/3/2022 2:05:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/4/23 23:57 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 1/4/23 23:57 |
| 13C5-PFPeA | | - | | 1/4/23 23:57 |
| 13C5-PFHxA | | - | | 1/4/23 23:57 |
| 13C4-PFHpA | | - | | 1/4/23 23:57 |
| 13C8-PFOA | | - | | 1/4/23 23:57 |
| 13C9-PFNA | | - | | 1/4/23 23:57 |
| 13C6-PFDA | | - | | 1/4/23 23:57 |
| 13C7-PFUnA | | - | | 1/4/23 23:57 |
| 13C2-PFDoA | | - | | 1/4/23 23:57 |
| 13C2-PFTeDA | | - | | 1/4/23 23:57 |
| 13C3-PFBS | | - | | 1/4/23 23:57 |
| 13C3-PFHxS | | - | | 1/4/23 23:57 |
| 13C8-PFOS | | - | | 1/4/23 23:57 |
| 13C2-4:2FTS | | - | | 1/4/23 23:57 |
| 13C2-6:2FTS | | - | | 1/4/23 23:57 |
| 13C2-8:2FTS | | - | | 1/4/23 23:57 |
| 13C8-PFOSA | | - | | 1/4/23 23:57 |
| D3-NMeFOSA | | - | | 1/4/23 23:57 |
| D5-NEtFOSA | | - | | 1/4/23 23:57 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: MBDW-MW-2D**

**Sample ID: 22K0850-07** Start Date/Time: 11/3/2022 2:00:00PM

Sample Matrix: Ground Water Stop Date/Time: 11/3/2022 2:05:00PM

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 1/4/23 23:57 | |
| D5-NEtFOSAA | | | - | | | | | 1/4/23 23:57 | |
| D7-NMeFOSE | | | - | | | | | 1/4/23 23:57 | |
| D9-NEtFOSE | | | - | | | | | 1/4/23 23:57 | |
| 13C3-HFPO-DA | | | - | | | | | 1/4/23 23:57 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: EB-01** Sampled: 11/3/2022 12:00

**Sample ID: 22K0850-08**

Sample Matrix: Ground Water

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 4.0 | 50 | 2.0 | µg/L | 1 | J | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Chloroform | 2.1 | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Methyl tert-Butyl Ether (MTBE) | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Toluene | 0.27 | 1.0 | 0.22 | µg/L | 1 | J | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: EB-01** Sampled: 11/3/2022 12:00

**Sample ID: 22K0850-08**

Sample Matrix: Ground Water

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:30 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 108 | 70-130 | | 11/8/22 0:30 |
| Toluene-d8 | 97.5 | 70-130 | | 11/8/22 0:30 |
| 4-Bromofluorobenzene | 98.4 | 70-130 | | 11/8/22 0:30 |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: EB-01** Sampled: 11/3/2022 12:00

**Sample ID: 22K0850-08**

Sample Matrix: Ground Water

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanoic acid (PFBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluoropentanoic acid (PFPeA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorohexanoic acid (PFHxA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluoroheptanoic acid (PFHpA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorooctanoic acid (PFOA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorononanoic acid (PFNA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorodecanoic acid (PFDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluoroundecanoic acid (PFUnA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorododecanoic acid (PFDoA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorotridecanoic acid (PFTrDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorotetradecanoic acid (PFTeDA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorobutanesulfonic acid (PFBS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluoropetanesulfonic acid (PFPeS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorohexanesulfonic acid (PFHxS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluoroheptanesulfonic acid (PFHpS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorooctanesulfonic acid (PFOS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorononanesulfonic acid (PFNS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorodecanesulfonic acid (PFDS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorododecanesulfonic acid (PFDoS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluorooctanesulfonamide (PFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| N-methyl perfluoroocatnesulfonamide (NMeFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| N-ethyl perfluorooctanesulfonamide (NEtFOSA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| N-MeFOSAA (NMeFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| N-EtFOSAA (NEtFOSAA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| N-methylperfluorooctanesulfonamidoethanol(NMeFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 9Cl-PF3ONS (F53B Minor) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 11Cl-PF3OUdS (F53B Major) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: EB-01** Sampled: 11/3/2022 12:00

**Sample ID: 22K0850-08**

Sample Matrix: Ground Water

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| Perfluoro-4-methoxybutanoic acid (PFMBA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C4-PFBA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C5-PFPeA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C5-PFHxA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C4-PFHpA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C8-PFOA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C9-PFNA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C6-PFDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C7-PFUnA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C2-PFDoA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C2-PFTeDA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C3-PFBS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C3-PFHxS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C8-PFOS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C2-4:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C2-6:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C2-8:2FTS (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C8-PFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| D3-NMeFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| D5-NEtFOSA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| D3-NMeFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| D5-NEtFOSAA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| D7-NMeFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| D9-NEtFOSE (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |
| 13C3-HFPO-DA (ISTD) | d Subcontra | | ng/L | 1 | | Draft Method 1633 | 11/22/22 | 1/5/23 0:20 | ALS |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 13C4-PFBA | | - | | 1/5/23 0:20 |
| 13C5-PFPeA | | - | | 1/5/23 0:20 |
| 13C5-PFHxA | | - | | 1/5/23 0:20 |
| 13C4-PFHpA | | - | | 1/5/23 0:20 |
| 13C8-PFOA | | - | | 1/5/23 0:20 |
| 13C9-PFNA | | - | | 1/5/23 0:20 |
| 13C6-PFDA | | - | | 1/5/23 0:20 |
| 13C7-PFUnA | | - | | 1/5/23 0:20 |
| 13C2-PFDoA | | - | | 1/5/23 0:20 |
| 13C2-PFTeDA | | - | | 1/5/23 0:20 |
| 13C3-PFBS | | - | | 1/5/23 0:20 |
| 13C3-PFHxS | | - | | 1/5/23 0:20 |
| 13C8-PFOS | | - | | 1/5/23 0:20 |
| 13C2-4:2FTS | | - | | 1/5/23 0:20 |
| 13C2-6:2FTS | | - | | 1/5/23 0:20 |
| 13C2-8:2FTS | | - | | 1/5/23 0:20 |
| 13C8-PFOSA | | - | | 1/5/23 0:20 |
| D3-NMeFOSA | | - | | 1/5/23 0:20 |
| D5-NEtFOSA | | - | | 1/5/23 0:20 |

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: EB-01** Sampled: 11/3/2022 12:00

**Sample ID: 22K0850-08**

Sample Matrix: Ground Water

**Semivolatile Organic Compounds by - LC/MS-MS**

| Analyte | Results | RL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Surrogates** | | **% Recovery** | **Recovery Limits** | | **Flag/Qual** | | | | |
| D3-NMeFOSAA | | | - | | | | | 1/5/23 0:20 | |
| D5-NEtFOSAA | | | - | | | | | 1/5/23 0:20 | |
| D7-NMeFOSE | | | - | | | | | 1/5/23 0:20 | |
| D9-NEtFOSE | | | - | | | | | 1/5/23 0:20 | |
| 13C3-HFPO-DA | | | - | | | | | 1/5/23 0:20 | |

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Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: TB-01** Sampled: 11/2/2022 00:00

**Sample ID: 22K0850-10**

Sample Matrix: Ground Water

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | ND | 50 | 2.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Benzene | ND | 1.0 | 0.20 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Bromochloromethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Bromodichloromethane | ND | 0.50 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Bromoform | ND | 2.0 | 0.38 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Bromomethane | ND | 2.0 | 1.5 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 2-Butanone (MEK) | ND | 20 | 1.6 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Carbon Disulfide | ND | 5.0 | 1.4 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Carbon Tetrachloride | ND | 5.0 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Chlorobenzene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Chlorodibromomethane | ND | 0.50 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Chloroethane | ND | 2.0 | 0.32 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Chloroform | ND | 2.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Chloromethane | ND | 2.0 | 0.52 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Cyclohexane | ND | 5.0 | 1.8 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | 0.80 | µg/L | 1 | V-05 | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,2-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,3-Dichlorobenzene | ND | 1.0 | 0.12 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,4-Dichlorobenzene | ND | 1.0 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,1-Dichloroethane | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,2-Dichloroethane | ND | 1.0 | 0.31 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,1-Dichloroethylene | ND | 1.0 | 0.14 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| cis-1,2-Dichloroethylene | ND | 1.0 | 0.15 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| trans-1,2-Dichloroethylene | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,2-Dichloropropane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| cis-1,3-Dichloropropene | ND | 0.50 | 0.16 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| trans-1,3-Dichloropropene | ND | 0.50 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,4-Dioxane | ND | 50 | 21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Ethylbenzene | ND | 1.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 2-Hexanone (MBK) | ND | 10 | 1.1 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Isopropylbenzene (Cumene) | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Methyl Acetate | ND | 1.0 | 0.45 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Methyl tert-Butyl Ether (MTBE) | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Methyl Cyclohexane | ND | 1.0 | 0.24 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Methylene Chloride | ND | 5.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | 1.3 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Styrene | ND | 1.0 | 0.11 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | 0.13 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Tetrachloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Toluene | ND | 1.0 | 0.22 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,2,3-Trichlorobenzene | ND | 5.0 | 0.30 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 0.25 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: South Lake Boulevard, Mahopac, Sample Description: Work Order: 22K0850

Date Received: 11/4/2022

**Field Sample #: TB-01** Sampled: 11/2/2022 00:00

**Sample ID: 22K0850-10**

Sample Matrix: Ground Water

**Volatile Organic Compounds by GC/MS**

| Analyte | Results | RL | DL | Units | Dilution | Flag/Qual | Method | Date Prepared | Date/Time Analyzed | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ND | 1.0 | 0.17 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,1,2-Trichloroethane | ND | 1.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Trichloroethylene | ND | 1.0 | 0.19 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | 0.18 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 2.0 | 0.23 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Vinyl Chloride | ND | 2.0 | 0.21 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |
| Xylenes (total) | ND | 1.0 | 1.0 | µg/L | 1 | | SW-846 8260D | 11/7/22 | 11/8/22 0:58 | EEH |

| Surrogates | % Recovery | Recovery Limits | Flag/Qual | |
|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | 70-130 | | 11/8/22 0:58 |
| Toluene-d8 | 99.4 | 70-130 | | 11/8/22 0:58 |
| 4-Bromofluorobenzene | 97.0 | 70-130 | | 11/8/22 0:58 |

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## Sample Extraction Data

**Prep Method: SW-846 5030B** **Analytical Method: SW-846 8260D**

| Lab Number [Field ID] | Batch | Initial [mL] | Final [mL] | Date |
|---|---|---|---|---|
| 22K0850-01 [MBDW-MW-2I] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-02 [MBDW-MW-2S] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-03 [MBDW-MW-3I] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-04 [DUP-01] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-05 [MBDW-MW-6S] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-06 [MBDW-MW-6I] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-07 [MBDW-MW-2D] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-08 [EB-01] | B322285 | 5 | 5.00 | 11/07/22 |
| 22K0850-10 [TB-01] | B322285 | 5 | 5.00 | 11/07/22 |

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**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B322285 - SW-846 5030B** | | | | | | | | | | |
| **Blank (B322285-BLK1)** | | | | Prepared: 11/07/22 Analyzed: 11/08/22 | | | | | | |
| Acetone | ND | 50 | µg/L | | | | | | | |
| Benzene | ND | 1.0 | µg/L | | | | | | | |
| Bromochloromethane | ND | 1.0 | µg/L | | | | | | | |
| Bromodichloromethane | ND | 0.50 | µg/L | | | | | | | |
| Bromoform | ND | 1.0 | µg/L | | | | | | | |
| Bromomethane | ND | 2.0 | µg/L | | | | | | | |
| 2-Butanone (MEK) | ND | 20 | µg/L | | | | | | | |
| Carbon Disulfide | ND | 5.0 | µg/L | | | | | | | |
| Carbon Tetrachloride | ND | 5.0 | µg/L | | | | | | | |
| Chlorobenzene | ND | 1.0 | µg/L | | | | | | | |
| Chlorodibromomethane | ND | 0.50 | µg/L | | | | | | | |
| Chloroethane | ND | 2.0 | µg/L | | | | | | | |
| Chloroform | ND | 2.0 | µg/L | | | | | | | |
| Chloromethane | ND | 2.0 | µg/L | | | | | | | |
| Cyclohexane | ND | 5.0 | µg/L | | | | | | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 5.0 | µg/L | | | | | | | V-05 |
| 1,2-Dibromoethane (EDB) | ND | 0.50 | µg/L | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | µg/L | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | µg/L | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | µg/L | | | | | | | |
| Dichlorodifluoromethane (Freon 12) | ND | 2.0 | µg/L | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | µg/L | | | | | | | |
| 1,2-Dichloroethane | ND | 1.0 | µg/L | | | | | | | |
| 1,1-Dichloroethylene | ND | 1.0 | µg/L | | | | | | | |
| cis-1,2-Dichloroethylene | ND | 1.0 | µg/L | | | | | | | |
| trans-1,2-Dichloroethylene | ND | 1.0 | µg/L | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | µg/L | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.50 | µg/L | | | | | | | |
| trans-1,3-Dichloropropene | ND | 0.50 | µg/L | | | | | | | |
| 1,4-Dioxane | ND | 50 | µg/L | | | | | | | |
| Ethylbenzene | ND | 1.0 | µg/L | | | | | | | |
| 2-Hexanone (MBK) | ND | 10 | µg/L | | | | | | | |
| Isopropylbenzene (Cumene) | ND | 1.0 | µg/L | | | | | | | |
| Methyl Acetate | ND | 1.0 | µg/L | | | | | | | |
| Methyl tert-Butyl Ether (MTBE) | ND | 1.0 | µg/L | | | | | | | |
| Methyl Cyclohexane | ND | 1.0 | µg/L | | | | | | | |
| Methylene Chloride | ND | 5.0 | µg/L | | | | | | | |
| 4-Methyl-2-pentanone (MIBK) | ND | 10 | µg/L | | | | | | | |
| Styrene | ND | 1.0 | µg/L | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | µg/L | | | | | | | |
| Tetrachloroethylene | ND | 1.0 | µg/L | | | | | | | |
| Toluene | ND | 1.0 | µg/L | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 5.0 | µg/L | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | µg/L | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | µg/L | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | µg/L | | | | | | | |
| Trichloroethylene | ND | 1.0 | µg/L | | | | | | | |
| Trichlorofluoromethane (Freon 11) | ND | 2.0 | µg/L | | | | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND | 1.0 | µg/L | | | | | | | |
| Vinyl Chloride | ND | 2.0 | µg/L | | | | | | | |
| m+p Xylene | ND | 2.0 | µg/L | | | | | | | |

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**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | | %REC Limits | RPD | RPD Limit | Notes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B322285 - SW-846 5030B** | | | | | | | | | | | | |
| **Blank (B322285-BLK1)** | | | | Prepared: 11/07/22 Analyzed: 11/08/22 | | | | | | | | |
| o-Xylene | ND | 1.0 | µg/L | | | | | | | | | |
| Xylenes (total) | ND | 1.0 | µg/L | | | | | | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | *25.8* | | µg/L | 25.0 | | 103 | | 70-130 | | | | |
| Surrogate: Toluene-d8 | *24.6* | | µg/L | 25.0 | | 98.6 | | 70-130 | | | | |
| Surrogate: 4-Bromofluorobenzene | *24.9* | | µg/L | 25.0 | | 99.4 | | 70-130 | | | | |
| **LCS (B322285-BS1)** | | | | Prepared & Analyzed: 11/07/22 | | | | | | | | |
| Acetone | 111 | 50 | µg/L | 100 | | 111 | | 70-160 | | | | † |
| Benzene | 9.50 | 1.0 | µg/L | 10.0 | | 95.0 | | 70-130 | | | | |
| Bromochloromethane | 10.6 | 1.0 | µg/L | 10.0 | | 106 | | 70-130 | | | | |
| Bromodichloromethane | 10.3 | 0.50 | µg/L | 10.0 | | 103 | | 70-130 | | | | |
| Bromoform | 9.13 | 1.0 | µg/L | 10.0 | | 91.3 | | 70-130 | | | | |
| **Bromomethane** | 17.4 | 2.0 | µg/L | 10.0 | | **174** | * | 40-160 | | | L-07, V-20 | † |
| 2-Butanone (MEK) | 99.7 | 20 | µg/L | 100 | | 99.7 | | 40-160 | | | | † |
| **Carbon Disulfide** | 139 | 5.0 | µg/L | 100 | | **139** | * | 70-130 | | | L-02, V-20 | |
| Carbon Tetrachloride | 10.3 | 5.0 | µg/L | 10.0 | | 103 | | 70-130 | | | | |
| Chlorobenzene | 10.1 | 1.0 | µg/L | 10.0 | | 101 | | 70-130 | | | | |
| Chlorodibromomethane | 9.96 | 0.50 | µg/L | 10.0 | | 99.6 | | 70-130 | | | | |
| Chloroethane | 12.2 | 2.0 | µg/L | 10.0 | | 122 | | 70-130 | | | | |
| Chloroform | 10.7 | 2.0 | µg/L | 10.0 | | 107 | | 70-130 | | | | |
| Chloromethane | 14.1 | 2.0 | µg/L | 10.0 | | 141 | | 40-160 | | | | † |
| Cyclohexane | 11.0 | 5.0 | µg/L | 10.0 | | 110 | | 70-130 | | | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 8.00 | 5.0 | µg/L | 10.0 | | 80.0 | | 70-130 | | | V-05 | |
| 1,2-Dibromoethane (EDB) | 10.6 | 0.50 | µg/L | 10.0 | | 106 | | 70-130 | | | | |
| 1,2-Dichlorobenzene | 9.57 | 1.0 | µg/L | 10.0 | | 95.7 | | 70-130 | | | | |
| 1,3-Dichlorobenzene | 9.34 | 1.0 | µg/L | 10.0 | | 93.4 | | 70-130 | | | | |
| 1,4-Dichlorobenzene | 9.41 | 1.0 | µg/L | 10.0 | | 94.1 | | 70-130 | | | | |
| Dichlorodifluoromethane (Freon 12) | 8.35 | 2.0 | µg/L | 10.0 | | 83.5 | | 40-160 | | | | † |
| 1,1-Dichloroethane | 9.94 | 1.0 | µg/L | 10.0 | | 99.4 | | 70-130 | | | | |
| 1,2-Dichloroethane | 10.1 | 1.0 | µg/L | 10.0 | | 101 | | 70-130 | | | | |
| 1,1-Dichloroethylene | 10.1 | 1.0 | µg/L | 10.0 | | 101 | | 70-130 | | | | |
| cis-1,2-Dichloroethylene | 10.1 | 1.0 | µg/L | 10.0 | | 101 | | 70-130 | | | | |
| **trans-1,2-Dichloroethylene** | 13.8 | 1.0 | µg/L | 10.0 | | **138** | * | 70-130 | | | L-02, V-20 | |
| 1,2-Dichloropropane | 10.0 | 1.0 | µg/L | 10.0 | | 100 | | 70-130 | | | | |
| cis-1,3-Dichloropropene | 9.22 | 0.50 | µg/L | 10.0 | | 92.2 | | 70-130 | | | | |
| trans-1,3-Dichloropropene | 9.11 | 0.50 | µg/L | 10.0 | | 91.1 | | 70-130 | | | | |
| 1,4-Dioxane | 85.4 | 50 | µg/L | 100 | | 85.4 | | 40-130 | | | | † |
| Ethylbenzene | 9.69 | 1.0 | µg/L | 10.0 | | 96.9 | | 70-130 | | | | |
| 2-Hexanone (MBK) | 105 | 10 | µg/L | 100 | | 105 | | 70-160 | | | | † |
| Isopropylbenzene (Cumene) | 9.98 | 1.0 | µg/L | 10.0 | | 99.8 | | 70-130 | | | | |
| **Methyl Acetate** | 18.9 | 1.0 | µg/L | 10.0 | | **189** | * | 70-130 | | | L-02, V-20 | |
| Methyl tert-Butyl Ether (MTBE) | 11.8 | 1.0 | µg/L | 10.0 | | 118 | | 70-130 | | | | |
| Methyl Cyclohexane | 10.1 | 1.0 | µg/L | 10.0 | | 101 | | 70-130 | | | | |
| Methylene Chloride | 11.2 | 5.0 | µg/L | 10.0 | | 112 | | 70-130 | | | | |
| 4-Methyl-2-pentanone (MIBK) | 103 | 10 | µg/L | 100 | | 103 | | 70-160 | | | | † |
| Styrene | 9.59 | 1.0 | µg/L | 10.0 | | 95.9 | | 70-130 | | | | |
| 1,1,2,2-Tetrachloroethane | 9.68 | 0.50 | µg/L | 10.0 | | 96.8 | | 70-130 | | | | |
| Tetrachloroethylene | 9.99 | 1.0 | µg/L | 10.0 | | 99.9 | | 70-130 | | | | |
| Toluene | 9.77 | 1.0 | µg/L | 10.0 | | 97.7 | | 70-130 | | | | |
| 1,2,3-Trichlorobenzene | 9.45 | 5.0 | µg/L | 10.0 | | 94.5 | | 70-130 | | | | |
| 1,2,4-Trichlorobenzene | 8.83 | 1.0 | µg/L | 10.0 | | 88.3 | | 70-130 | | | | |
| 1,1,1-Trichloroethane | 10.4 | 1.0 | µg/L | 10.0 | | 104 | | 70-130 | | | | |

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**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | | %REC Limits | RPD | RPD Limit | Notes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B322285 - SW-846 5030B** | | | | | | | | | | | | |
| **LCS (B322285-BS1)** | | | | Prepared & Analyzed: 11/07/22 | | | | | | | | |
| 1,1,2-Trichloroethane | 11.0 | 1.0 | µg/L | 10.0 | | 110 | | 70-130 | | | | |
| Trichloroethylene | 10.6 | 1.0 | µg/L | 10.0 | | 106 | | 70-130 | | | | |
| Trichlorofluoromethane (Freon 11) | 11.0 | 2.0 | µg/L | 10.0 | | 110 | | 70-130 | | | | |
| **1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)** | 13.3 | 1.0 | µg/L | 10.0 | | **133** | * | 70-130 | | | L-02, V-20 | |
| **Vinyl Chloride** | 23.2 | 2.0 | µg/L | 10.0 | | **232** | * | 40-160 | | | L-02, V-20 | † |
| m+p Xylene | 19.6 | 2.0 | µg/L | 20.0 | | 97.8 | | 70-130 | | | | |
| o-Xylene | 9.87 | 1.0 | µg/L | 10.0 | | 98.7 | | 70-130 | | | | |
| Xylenes (total) | 29.4 | 1.0 | µg/L | 30.0 | | 98.1 | | 0-200 | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | *26.0* | | µg/L | 25.0 | | 104 | | 70-130 | | | | |
| Surrogate: Toluene-d8 | *24.8* | | µg/L | 25.0 | | 99.2 | | 70-130 | | | | |
| Surrogate: 4-Bromofluorobenzene | *26.5* | | µg/L | 25.0 | | 106 | | 70-130 | | | | |
| **LCS Dup (B322285-BSD1)** | | | | Prepared & Analyzed: 11/07/22 | | | | | | | | |
| Acetone | 111 | 50 | µg/L | 100 | | 111 | | 70-160 | 0.0903 | 25 | | † |
| Benzene | 9.58 | 1.0 | µg/L | 10.0 | | 95.8 | | 70-130 | 0.839 | 25 | | |
| Bromochloromethane | 10.6 | 1.0 | µg/L | 10.0 | | 106 | | 70-130 | 0.00 | 25 | | |
| Bromodichloromethane | 10.6 | 0.50 | µg/L | 10.0 | | 106 | | 70-130 | 2.20 | 25 | | |
| Bromoform | 9.11 | 1.0 | µg/L | 10.0 | | 91.1 | | 70-130 | 0.219 | 25 | | |
| Bromomethane | 16.0 | 2.0 | µg/L | 10.0 | | 160 | | 40-160 | 7.97 | 25 | V-20 | † |
| 2-Butanone (MEK) | 99.1 | 20 | µg/L | 100 | | 99.1 | | 40-160 | 0.574 | 25 | | † |
| **Carbon Disulfide** | 141 | 5.0 | µg/L | 100 | | **141** | * | 70-130 | 1.41 | 25 | L-02, V-20 | |
| Carbon Tetrachloride | 10.7 | 5.0 | µg/L | 10.0 | | 107 | | 70-130 | 3.63 | 25 | | |
| Chlorobenzene | 10.2 | 1.0 | µg/L | 10.0 | | 102 | | 70-130 | 1.48 | 25 | | |
| Chlorodibromomethane | 10.3 | 0.50 | µg/L | 10.0 | | 103 | | 70-130 | 3.16 | 25 | | |
| Chloroethane | 12.7 | 2.0 | µg/L | 10.0 | | 127 | | 70-130 | 4.34 | 25 | | |
| Chloroform | 10.8 | 2.0 | µg/L | 10.0 | | 108 | | 70-130 | 1.21 | 25 | | |
| Chloromethane | 13.8 | 2.0 | µg/L | 10.0 | | 138 | | 40-160 | 2.22 | 25 | | † |
| Cyclohexane | 10.9 | 5.0 | µg/L | 10.0 | | 109 | | 70-130 | 0.549 | 25 | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 8.18 | 5.0 | µg/L | 10.0 | | 81.8 | | 70-130 | 2.22 | 25 | V-05 | |
| 1,2-Dibromoethane (EDB) | 10.3 | 0.50 | µg/L | 10.0 | | 103 | | 70-130 | 2.20 | 25 | | |
| 1,2-Dichlorobenzene | 9.50 | 1.0 | µg/L | 10.0 | | 95.0 | | 70-130 | 0.734 | 25 | | |
| 1,3-Dichlorobenzene | 9.70 | 1.0 | µg/L | 10.0 | | 97.0 | | 70-130 | 3.78 | 25 | | |
| 1,4-Dichlorobenzene | 9.37 | 1.0 | µg/L | 10.0 | | 93.7 | | 70-130 | 0.426 | 25 | | |
| Dichlorodifluoromethane (Freon 12) | 8.52 | 2.0 | µg/L | 10.0 | | 85.2 | | 40-160 | 2.02 | 25 | | † |
| 1,1-Dichloroethane | 10.0 | 1.0 | µg/L | 10.0 | | 100 | | 70-130 | 1.00 | 25 | | |
| 1,2-Dichloroethane | 10.1 | 1.0 | µg/L | 10.0 | | 101 | | 70-130 | 0.495 | 25 | | |
| 1,1-Dichloroethylene | 10.2 | 1.0 | µg/L | 10.0 | | 102 | | 70-130 | 1.38 | 25 | | |
| cis-1,2-Dichloroethylene | 10.5 | 1.0 | µg/L | 10.0 | | 105 | | 70-130 | 4.07 | 25 | | |
| **trans-1,2-Dichloroethylene** | 14.0 | 1.0 | µg/L | 10.0 | | **140** | * | 70-130 | 1.65 | 25 | L-02, V-20 | |
| 1,2-Dichloropropane | 9.84 | 1.0 | µg/L | 10.0 | | 98.4 | | 70-130 | 1.71 | 25 | | |
| cis-1,3-Dichloropropene | 9.29 | 0.50 | µg/L | 10.0 | | 92.9 | | 70-130 | 0.756 | 25 | | |
| trans-1,3-Dichloropropene | 9.14 | 0.50 | µg/L | 10.0 | | 91.4 | | 70-130 | 0.329 | 25 | | |
| 1,4-Dioxane | 89.8 | 50 | µg/L | 100 | | 89.8 | | 40-130 | 4.98 | 50 | | † ‡ |
| Ethylbenzene | 10.0 | 1.0 | µg/L | 10.0 | | 100 | | 70-130 | 3.15 | 25 | | |
| 2-Hexanone (MBK) | 103 | 10 | µg/L | 100 | | 103 | | 70-160 | 1.64 | 25 | | † |
| Isopropylbenzene (Cumene) | 10.2 | 1.0 | µg/L | 10.0 | | 102 | | 70-130 | 2.38 | 25 | | |
| **Methyl Acetate** | 18.5 | 1.0 | µg/L | 10.0 | | **185** | * | 70-130 | 2.20 | 25 | L-02, V-20 | |
| Methyl tert-Butyl Ether (MTBE) | 10.6 | 1.0 | µg/L | 10.0 | | 106 | | 70-130 | 10.9 | 25 | | |
| Methyl Cyclohexane | 10.2 | 1.0 | µg/L | 10.0 | | 102 | | 70-130 | 0.787 | 25 | | |
| Methylene Chloride | 11.4 | 5.0 | µg/L | 10.0 | | 114 | | 70-130 | 1.06 | 25 | | |
| 4-Methyl-2-pentanone (MIBK) | 103 | 10 | µg/L | 100 | | 103 | | 70-160 | 0.670 | 25 | | † |
| Styrene | 10.3 | 1.0 | µg/L | 10.0 | | 103 | | 70-130 | 7.04 | 25 | | |

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**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | | %REC Limits | RPD | RPD Limit | Notes | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B322285 - SW-846 5030B** | | | | | | | | | | | | |
| **LCS Dup (B322285-BSD1)** | | | | Prepared & Analyzed: 11/07/22 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 9.31 | 0.50 | µg/L | 10.0 | | 93.1 | | 70-130 | 3.90 | 25 | | |
| Tetrachloroethylene | 10.0 | 1.0 | µg/L | 10.0 | | 100 | | 70-130 | 0.300 | 25 | | |
| Toluene | 9.92 | 1.0 | µg/L | 10.0 | | 99.2 | | 70-130 | 1.52 | 25 | | |
| 1,2,3-Trichlorobenzene | 8.88 | 5.0 | µg/L | 10.0 | | 88.8 | | 70-130 | 6.22 | 25 | | |
| 1,2,4-Trichlorobenzene | 8.22 | 1.0 | µg/L | 10.0 | | 82.2 | | 70-130 | 7.16 | 25 | | |
| 1,1,1-Trichloroethane | 10.7 | 1.0 | µg/L | 10.0 | | 107 | | 70-130 | 2.27 | 25 | | |
| 1,1,2-Trichloroethane | 10.6 | 1.0 | µg/L | 10.0 | | 106 | | 70-130 | 3.88 | 25 | | |
| Trichloroethylene | 11.5 | 1.0 | µg/L | 10.0 | | 115 | | 70-130 | 7.79 | 25 | | |
| Trichlorofluoromethane (Freon 11) | 11.3 | 2.0 | µg/L | 10.0 | | 113 | | 70-130 | 2.15 | 25 | | |
| **1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)** | 13.6 | 1.0 | µg/L | 10.0 | | **136** | * | 70-130 | 1.86 | 25 | L-02, V-20 | |
| **Vinyl Chloride** | 21.7 | 2.0 | µg/L | 10.0 | | **217** | * | 40-160 | 6.37 | 25 | L-02, V-20 | † |
| m+p Xylene | 19.9 | 2.0 | µg/L | 20.0 | | 99.7 | | 70-130 | 1.92 | 25 | | |
| o-Xylene | 10.2 | 1.0 | µg/L | 10.0 | | 102 | | 70-130 | 2.99 | 25 | | |
| Xylenes (total) | 30.1 | 1.0 | µg/L | 30.0 | | 100 | | 0-200 | 2.28 | | | |
| Surrogate: 1,2-Dichloroethane-d4 | *25.5* | | µg/L | 25.0 | | 102 | | 70-130 | | | | |
| Surrogate: Toluene-d8 | *24.6* | | µg/L | 25.0 | | 98.2 | | 70-130 | | | | |
| Surrogate: 4-Bromofluorobenzene | *26.4* | | µg/L | 25.0 | | 105 | | 70-130 | | | | |
| **Matrix Spike (B322285-MS1)** | **Source: 22K0850-01** | | | Prepared: 11/07/22 Analyzed: 11/08/22 | | | | | | | | |
| Acetone | 112 | 50 | µg/L | 100 | ND | 112 | | 70-130 | | | | |
| Benzene | 9.82 | 1.0 | µg/L | 10.0 | ND | 98.2 | | 70-130 | | | | |
| Bromochloromethane | 10.7 | 1.0 | µg/L | 10.0 | ND | 107 | | 70-130 | | | | |
| Bromodichloromethane | 10.4 | 0.50 | µg/L | 10.0 | ND | 104 | | 70-130 | | | | |
| Bromoform | 8.50 | 1.0 | µg/L | 10.0 | ND | 85.0 | | 70-130 | | | | |
| **Bromomethane** | 16.3 | 2.0 | µg/L | 10.0 | ND | **163** | * | 70-130 | | | MS-15, V-20 | |
| 2-Butanone (MEK) | 106 | 20 | µg/L | 100 | ND | 106 | | 70-130 | | | | |
| **Carbon Disulfide** | 152 | 5.0 | µg/L | 100 | ND | **152** | * | 70-130 | | | L-02, MS-15, V-20 | |
| Carbon Tetrachloride | 11.0 | 5.0 | µg/L | 10.0 | ND | 110 | | 70-130 | | | | |
| Chlorobenzene | 10.1 | 1.0 | µg/L | 10.0 | ND | 101 | | 70-130 | | | | |
| Chlorodibromomethane | 10.1 | 0.50 | µg/L | 10.0 | ND | 101 | | 70-130 | | | | |
| Chloroethane | 12.1 | 2.0 | µg/L | 10.0 | ND | 121 | | 70-130 | | | | |
| Chloroform | 10.6 | 2.0 | µg/L | 10.0 | ND | 106 | | 70-130 | | | | |
| Chloromethane | 12.2 | 2.0 | µg/L | 10.0 | ND | 122 | | 70-130 | | | | |
| Cyclohexane | 11.4 | 5.0 | µg/L | 10.0 | ND | 114 | | 70-130 | | | | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 8.54 | 5.0 | µg/L | 10.0 | ND | 85.4 | | 70-130 | | | V-05 | |
| 1,2-Dibromoethane (EDB) | 10.4 | 0.50 | µg/L | 10.0 | ND | 104 | | 70-130 | | | | |
| 1,2-Dichlorobenzene | 9.44 | 1.0 | µg/L | 10.0 | ND | 94.4 | | 70-130 | | | | |
| 1,3-Dichlorobenzene | 9.18 | 1.0 | µg/L | 10.0 | ND | 91.8 | | 70-130 | | | | |
| 1,4-Dichlorobenzene | 9.20 | 1.0 | µg/L | 10.0 | ND | 92.0 | | 70-130 | | | | |
| Dichlorodifluoromethane (Freon 12) | 8.68 | 2.0 | µg/L | 10.0 | ND | 86.8 | | 70-130 | | | | |
| 1,1-Dichloroethane | 10.2 | 1.0 | µg/L | 10.0 | ND | 102 | | 70-130 | | | R-06 | |
| 1,2-Dichloroethane | 10.2 | 1.0 | µg/L | 10.0 | ND | 102 | | 70-130 | | | | |
| 1,1-Dichloroethylene | 10.7 | 1.0 | µg/L | 10.0 | ND | 107 | | 70-130 | | | | |
| cis-1,2-Dichloroethylene | 10.2 | 1.0 | µg/L | 10.0 | ND | 102 | | 70-130 | | | | |
| **trans-1,2-Dichloroethylene** | 14.3 | 1.0 | µg/L | 10.0 | 0.300 | **140** | * | 70-130 | | | L-02, MS-15, V-20 | |
| 1,2-Dichloropropane | 9.91 | 1.0 | µg/L | 10.0 | ND | 99.1 | | 70-130 | | | | |
| cis-1,3-Dichloropropene | 8.33 | 0.50 | µg/L | 10.0 | ND | 83.3 | | 70-130 | | | | |
| trans-1,3-Dichloropropene | 8.19 | 0.50 | µg/L | 10.0 | ND | 81.9 | | 70-130 | | | | |
| 1,4-Dioxane | 89.6 | 50 | µg/L | 100 | ND | 89.6 | | 70-130 | | | | |
| Ethylbenzene | 9.95 | 1.0 | µg/L | 10.0 | ND | 99.5 | | 70-130 | | | | |

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**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | | %REC Limits | RPD | | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B322285 - SW-846 5030B** | | | | | | | | | | | | |
| **Matrix Spike (B322285-MS1)** | **Source: 22K0850-01** | | | Prepared: 11/07/22 Analyzed: 11/08/22 | | | | | | | | |
| 2-Hexanone (MBK) | 107 | 10 | µg/L | 100 | ND | 107 | | 70-130 | | | | |
| Isopropylbenzene (Cumene) | 10.1 | 1.0 | µg/L | 10.0 | ND | 101 | | 70-130 | | | | |
| **Methyl Acetate** | 13.6 | 1.0 | µg/L | 10.0 | ND | **136** | * | 70-130 | | | | L-02, MS-22, V-20 |
| Methyl tert-Butyl Ether (MTBE) | 13.9 | 1.0 | µg/L | 10.0 | 1.12 | 128 | | 70-130 | | | | |
| Methyl Cyclohexane | 10.0 | 1.0 | µg/L | 10.0 | ND | 100 | | 70-130 | | | | |
| Methylene Chloride | 11.5 | 5.0 | µg/L | 10.0 | ND | 115 | | 70-130 | | | | |
| 4-Methyl-2-pentanone (MIBK) | 106 | 10 | µg/L | 100 | ND | 106 | | 70-130 | | | | |
| Styrene | 9.93 | 1.0 | µg/L | 10.0 | ND | 99.3 | | 70-130 | | | | |
| 1,1,2,2-Tetrachloroethane | 10.3 | 0.50 | µg/L | 10.0 | ND | 103 | | 70-130 | | | | |
| Tetrachloroethylene | 9.97 | 1.0 | µg/L | 10.0 | ND | 99.7 | | 70-130 | | | | |
| Toluene | 10.0 | 1.0 | µg/L | 10.0 | ND | 100 | | 70-130 | | | | |
| 1,2,3-Trichlorobenzene | 8.23 | 5.0 | µg/L | 10.0 | ND | 82.3 | | 70-130 | | | | |
| 1,2,4-Trichlorobenzene | 7.61 | 1.0 | µg/L | 10.0 | ND | 76.1 | | 70-130 | | | | |
| 1,1,1-Trichloroethane | 11.0 | 1.0 | µg/L | 10.0 | ND | 110 | | 70-130 | | | | |
| 1,1,2-Trichloroethane | 10.8 | 1.0 | µg/L | 10.0 | ND | 108 | | 70-130 | | | | |
| Trichloroethylene | 10.8 | 1.0 | µg/L | 10.0 | ND | 108 | | 70-130 | | | | |
| Trichlorofluoromethane (Freon 11) | 11.7 | 2.0 | µg/L | 10.0 | ND | 117 | | 70-130 | | | | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 12.8 | 1.0 | µg/L | 10.0 | ND | 128 | | 70-130 | | | | L-02, V-20 |
| **Vinyl Chloride** | 24.0 | 2.0 | µg/L | 10.0 | ND | **240** | * | 70-130 | | | | L-02, MS-15, V-20 |
| m+p Xylene | 20.1 | 2.0 | µg/L | 20.0 | ND | 100 | | 70-130 | | | | |
| o-Xylene | 10.2 | 1.0 | µg/L | 10.0 | ND | 102 | | 70-130 | | | | |
| Xylenes (total) | 30.3 | 1.0 | µg/L | 30.0 | ND | 101 | | 0-200 | | | | |
| Surrogate: 1,2-Dichloroethane-d4 | *25.7* | | µg/L | 25.0 | | 103 | | 70-130 | | | | |
| Surrogate: Toluene-d8 | *25.0* | | µg/L | 25.0 | | 100 | | 70-130 | | | | |
| Surrogate: 4-Bromofluorobenzene | *26.3* | | µg/L | 25.0 | | 105 | | 70-130 | | | | |
| **Matrix Spike Dup (B322285-MSD1)** | **Source: 22K0850-01** | | | Prepared: 11/07/22 Analyzed: 11/08/22 | | | | | | | | |
| Acetone | 102 | 50 | µg/L | 100 | ND | 102 | | 70-130 | 9.89 | | 30 | |
| Benzene | 9.73 | 1.0 | µg/L | 10.0 | ND | 97.3 | | 70-130 | 0.921 | | 30 | |
| Bromochloromethane | 10.6 | 1.0 | µg/L | 10.0 | ND | 106 | | 70-130 | 1.31 | | 30 | |
| Bromodichloromethane | 10.0 | 0.50 | µg/L | 10.0 | ND | 100 | | 70-130 | 4.21 | | 30 | |
| Bromoform | 8.45 | 1.0 | µg/L | 10.0 | ND | 84.5 | | 70-130 | 0.590 | | 30 | |
| **Bromomethane** | 15.4 | 2.0 | µg/L | 10.0 | ND | **154** | * | 70-130 | 5.56 | | 30 | MS-15, V-20 |
| 2-Butanone (MEK) | 101 | 20 | µg/L | 100 | ND | 101 | | 70-130 | 4.51 | | 30 | |
| **Carbon Disulfide** | 142 | 5.0 | µg/L | 100 | ND | **142** | * | 70-130 | 6.19 | | 30 | L-02, MS-15, V-20 |
| Carbon Tetrachloride | 10.9 | 5.0 | µg/L | 10.0 | ND | 109 | | 70-130 | 0.366 | | 30 | |
| Chlorobenzene | 9.76 | 1.0 | µg/L | 10.0 | ND | 97.6 | | 70-130 | 3.32 | | 30 | |
| Chlorodibromomethane | 9.91 | 0.50 | µg/L | 10.0 | ND | 99.1 | | 70-130 | 1.60 | | 30 | |
| Chloroethane | 11.8 | 2.0 | µg/L | 10.0 | ND | 118 | | 70-130 | 2.09 | | 30 | |
| Chloroform | 10.7 | 2.0 | µg/L | 10.0 | ND | 107 | | 70-130 | 1.41 | | 30 | |
| Chloromethane | 12.8 | 2.0 | µg/L | 10.0 | ND | 128 | | 70-130 | 5.44 | | 30 | |
| Cyclohexane | 11.5 | 5.0 | µg/L | 10.0 | ND | 115 | | 70-130 | 1.22 | | 30 | |
| 1,2-Dibromo-3-chloropropane (DBCP) | 7.62 | 5.0 | µg/L | 10.0 | ND | 76.2 | | 70-130 | 11.4 | | 30 | V-05 |
| 1,2-Dibromoethane (EDB) | 9.77 | 0.50 | µg/L | 10.0 | ND | 97.7 | | 70-130 | 5.86 | | 30 | |
| 1,2-Dichlorobenzene | 9.11 | 1.0 | µg/L | 10.0 | ND | 91.1 | | 70-130 | 3.56 | | 30 | |
| 1,3-Dichlorobenzene | 8.93 | 1.0 | µg/L | 10.0 | ND | 89.3 | | 70-130 | 2.76 | | 30 | |
| 1,4-Dichlorobenzene | 8.83 | 1.0 | µg/L | 10.0 | ND | 88.3 | | 70-130 | 4.10 | | 30 | |
| Dichlorodifluoromethane (Freon 12) | 8.97 | 2.0 | µg/L | 10.0 | ND | 89.7 | | 70-130 | 3.29 | | 30 | |
| **1,1-Dichloroethane** | 14.0 | 1.0 | µg/L | 10.0 | ND | **140** | * | 70-130 | **31.1** | * | 30 | MS-23, R-06 |
| 1,2-Dichloroethane | 9.83 | 1.0 | µg/L | 10.0 | ND | 98.3 | | 70-130 | 3.20 | | 30 | |

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**QUALITY CONTROL**

**Volatile Organic Compounds by GC/MS - Quality Control**

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | | %REC Limits | RPD | RPD Limit | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Batch B322285 - SW-846 5030B** | | | | | | | | | | | |
| **Matrix Spike Dup (B322285-MSD1)** | **Source: 22K0850-01** | | | Prepared: 11/07/22 Analyzed: 11/08/22 | | | | | | | |
| 1,1-Dichloroethylene | 9.95 | 1.0 | µg/L | 10.0 | ND | 99.5 | | 70-130 | 7.17 | 30 | |
| cis-1,2-Dichloroethylene | 10.2 | 1.0 | µg/L | 10.0 | ND | 102 | | 70-130 | 0.0985 | 30 | |
| **trans-1,2-Dichloroethylene** | 13.5 | 1.0 | µg/L | 10.0 | 0.300 | **132** | * | 70-130 | 5.96 | 30 | L-02, MS-15, V-20 |
| 1,2-Dichloropropane | 9.50 | 1.0 | µg/L | 10.0 | ND | 95.0 | | 70-130 | 4.22 | 30 | |
| cis-1,3-Dichloropropene | 8.00 | 0.50 | µg/L | 10.0 | ND | 80.0 | | 70-130 | 4.04 | 30 | |
| trans-1,3-Dichloropropene | 7.79 | 0.50 | µg/L | 10.0 | ND | 77.9 | | 70-130 | 5.01 | 30 | |
| 1,4-Dioxane | 93.7 | 50 | µg/L | 100 | ND | 93.7 | | 70-130 | 4.50 | 30 | |
| Ethylbenzene | 9.71 | 1.0 | µg/L | 10.0 | ND | 97.1 | | 70-130 | 2.44 | 30 | |
| 2-Hexanone (MBK) | 102 | 10 | µg/L | 100 | ND | 102 | | 70-130 | 4.94 | 30 | |
| Isopropylbenzene (Cumene) | 9.69 | 1.0 | µg/L | 10.0 | ND | 96.9 | | 70-130 | 4.24 | 30 | |
| Methyl Acetate | 11.8 | 1.0 | µg/L | 10.0 | ND | 118 | | 70-130 | 13.5 | 30 | L-02, V-20 |
| **Methyl tert-Butyl Ether (MTBE)** | 15.9 | 1.0 | µg/L | 10.0 | 1.12 | **148** | * | 70-130 | 13.4 | 30 | MS-24 |
| Methyl Cyclohexane | 10.2 | 1.0 | µg/L | 10.0 | ND | 102 | | 70-130 | 2.07 | 30 | |
| Methylene Chloride | 10.0 | 5.0 | µg/L | 10.0 | ND | 100 | | 70-130 | 14.1 | 30 | |
| 4-Methyl-2-pentanone (MIBK) | 99.6 | 10 | µg/L | 100 | ND | 99.6 | | 70-130 | 5.99 | 30 | |
| Styrene | 9.28 | 1.0 | µg/L | 10.0 | ND | 92.8 | | 70-130 | 6.77 | 30 | |
| 1,1,2,2-Tetrachloroethane | 9.88 | 0.50 | µg/L | 10.0 | ND | 98.8 | | 70-130 | 3.87 | 30 | |
| Tetrachloroethylene | 9.68 | 1.0 | µg/L | 10.0 | ND | 96.8 | | 70-130 | 2.95 | 30 | |
| Toluene | 9.61 | 1.0 | µg/L | 10.0 | ND | 96.1 | | 70-130 | 4.18 | 30 | |
| 1,2,3-Trichlorobenzene | 8.06 | 5.0 | µg/L | 10.0 | ND | 80.6 | | 70-130 | 2.09 | 30 | |
| 1,2,4-Trichlorobenzene | 7.85 | 1.0 | µg/L | 10.0 | ND | 78.5 | | 70-130 | 3.10 | 30 | |
| 1,1,1-Trichloroethane | 10.7 | 1.0 | µg/L | 10.0 | ND | 107 | | 70-130 | 3.13 | 30 | |
| 1,1,2-Trichloroethane | 10.5 | 1.0 | µg/L | 10.0 | ND | 105 | | 70-130 | 2.25 | 30 | |
| Trichloroethylene | 9.92 | 1.0 | µg/L | 10.0 | ND | 99.2 | | 70-130 | 8.96 | 30 | |
| Trichlorofluoromethane (Freon 11) | 11.3 | 2.0 | µg/L | 10.0 | ND | 113 | | 70-130 | 3.31 | 30 | |
| **1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)** | 13.1 | 1.0 | µg/L | 10.0 | ND | **131** | * | 70-130 | 2.47 | 30 | L-02, MS-22, V-20 |
| **Vinyl Chloride** | 23.8 | 2.0 | µg/L | 10.0 | ND | **238** | * | 70-130 | 0.921 | 30 | L-02, MS-15, V-20 |
| m+p Xylene | 19.2 | 2.0 | µg/L | 20.0 | ND | 95.8 | | 70-130 | 4.74 | 20 | |
| o-Xylene | 9.81 | 1.0 | µg/L | 10.0 | ND | 98.1 | | 70-130 | 4.09 | 30 | |
| Xylenes (total) | 29.0 | 1.0 | µg/L | 30.0 | ND | 96.6 | | 0-200 | 4.52 | | |
| Surrogate: 1,2-Dichloroethane-d4 | *26.4* | | µg/L | 25.0 | | 106 | | 70-130 | | | |
| Surrogate: Toluene-d8 | *24.9* | | µg/L | 25.0 | | 99.6 | | 70-130 | | | |
| Surrogate: 4-Bromofluorobenzene | *26.4* | | µg/L | 25.0 | | 106 | | 70-130 | | | |

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**FLAG/QUALIFIER SUMMARY**

| | |
|---|---|
| * | QC result is outside of established limits. |
| † | Wide recovery limits established for difficult compound. |
| ‡ | Wide RPD limits established for difficult compound. |
| # | Data exceeded client recommended or regulatory level |
| ND | Not Detected |
| RL | Reporting Limit is at the level of quantitation (LOQ) |
| DL | Detection Limit is the lower limit of detection determined by the MDL study |
| MCL | Maximum Contaminant Level |
| | Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded. |
| | No results have been blank subtracted unless specified in the case narrative section. |
| J | Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag). |
| L-02 | Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side. |
| L-07 | Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria. |
| MS-15 | Matrix spike and matrix spike duplicate recoveries are outside of control limits. Data validation is not affected since results for this compound in this sample are "not detected", and recovery bias is on the high side. |
| MS-22 | Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is within method specified criteria. |
| MS-23 | Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound. |
| MS-24 | Either matrix spike or matrix spike duplicate is outside of control limits, but the other is within limits. Analysis is in control based on laboratory fortified blank recovery. |
| R-06 | Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample. |
| V-05 | Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound. |
| V-20 | Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound. |

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**CERTIFICATIONS**

**Certified Analyses included in this Report**

| Analyte | Certifications |
|---|---|
| ***SW-846 8260D in Water*** | |
| Acetone | CT,ME,NH,VA,NY |
| Benzene | CT,ME,NH,VA,NY |
| Bromochloromethane | ME,NH,VA,NY |
| Bromodichloromethane | CT,ME,NH,VA,NY |
| Bromoform | CT,ME,NH,VA,NY |
| Bromomethane | CT,ME,NH,VA,NY |
| 2-Butanone (MEK) | CT,ME,NH,VA,NY |
| Carbon Disulfide | CT,ME,NH,VA,NY |
| Carbon Tetrachloride | CT,ME,NH,VA,NY |
| Chlorobenzene | CT,ME,NH,VA,NY |
| Chlorodibromomethane | CT,ME,NH,VA,NY |
| Chloroethane | CT,ME,NH,VA,NY |
| Chloroform | CT,ME,NH,VA,NY |
| Chloromethane | CT,ME,NH,VA,NY |
| Cyclohexane | ME,NY |
| 1,2-Dibromo-3-chloropropane (DBCP) | ME,NY |
| 1,2-Dibromoethane (EDB) | ME,NY |
| 1,2-Dichlorobenzene | CT,ME,NH,VA,NY |
| 1,3-Dichlorobenzene | CT,ME,NH,VA,NY |
| 1,4-Dichlorobenzene | CT,ME,NH,VA,NY |
| Dichlorodifluoromethane (Freon 12) | ME,NH,VA,NY |
| 1,1-Dichloroethane | CT,ME,NH,VA,NY |
| 1,2-Dichloroethane | CT,ME,NH,VA,NY |
| 1,1-Dichloroethylene | CT,ME,NH,VA,NY |
| cis-1,2-Dichloroethylene | ME,NY |
| trans-1,2-Dichloroethylene | CT,ME,NH,VA,NY |
| 1,2-Dichloropropane | CT,ME,NH,VA,NY |
| cis-1,3-Dichloropropene | CT,ME,NH,VA,NY |
| trans-1,3-Dichloropropene | CT,ME,NH,VA,NY |
| 1,4-Dioxane | ME,NY |
| Ethylbenzene | CT,ME,NH,VA,NY |
| 2-Hexanone (MBK) | CT,ME,NH,VA,NY |
| Isopropylbenzene (Cumene) | ME,VA,NY |
| Methyl Acetate | ME,NY |
| Methyl tert-Butyl Ether (MTBE) | CT,ME,NH,VA,NY |
| Methyl Cyclohexane | NY |
| Methylene Chloride | CT,ME,NH,VA,NY |
| 4-Methyl-2-pentanone (MIBK) | CT,ME,NH,VA,NY |
| Styrene | CT,ME,NH,VA,NY |
| 1,1,2,2-Tetrachloroethane | CT,ME,NH,VA,NY |
| Tetrachloroethylene | CT,ME,NH,VA,NY |
| Toluene | CT,ME,NH,VA,NY |
| 1,2,3-Trichlorobenzene | ME,NH,VA,NY |
| 1,2,4-Trichlorobenzene | CT,ME,NH,VA,NY |
| 1,1,1-Trichloroethane | CT,ME,NH,VA,NY |
| 1,1,2-Trichloroethane | CT,ME,NH,VA,NY |
| Trichloroethylene | CT,ME,NH,VA,NY |

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**CERTIFICATIONS**

**Certified Analyses included in this Report**

| Analyte | Certifications |
|---|---|
| ***SW-846 8260D in Water*** | |
| Trichlorofluoromethane (Freon 11) | CT,ME,NH,VA,NY |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | VA,NY |
| Vinyl Chloride | CT,ME,NH,VA,NY |
| Xylenes (total) | ME,NY |

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

| Code | Description | Number | Expires |
|---|---|---|---|
| CT | Connecticut Department of Public Health | PH-0165 | 12/31/2022 |
| NY | New York State Department of Health | 10899 NELAP | 04/1/2023 |
| NH | New Hampshire Environmental Lab | 2516 NELAP | 02/5/2023 |
| ME | State of Maine | MA00100 | 06/9/2023 |
| VA | Commonwealth of Virginia | 460217 | 12/14/2023 |

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CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 2

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

| | |
|---|---|
| Company Name: | TRC Engineers, Inc. |
| Address: | 1430 Broadway, 10th Floor, New York |
| Phone: | (212) 221-7822 |
| Project Name: | Mahopac Business District (with |
| Project Location: | South Lake Boulevard, Mahopac, NY |
| Project Number: | 386554.0000.0000 Phase 1 |
| Project Manager: | Jenner Roup |
| Pace Analytical Quote Name/Number | Order No. 2209448 |
| Invoice Recipient: | |
| Sampled By: | R.D |

**Requested Turnaround Time**
7-Day ☐ 10-Day ☒
Due Date: Standard

**Rush-Approval Required**
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

**Data Delivery**
Format: PDF ☒ EXCEL ☒ Equis
Other: ASP-B, NYSDEC
CLP Like Data Pkg Required: ☐
Email To: JRaupe@trccompanies.com
Fax To #:

| Pace Analytical Work Order# | Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite | Grab | [1]Matrix Code | Conc Code | TCL VOCs 8260 | PFAS 1633 (Comp) | # of Containers | [2] Preservation Code | [3] Container Code |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MBDW-MW-2I | 11/1/22 11:35 | 11/1/22 11:40 | | X | GW | | X | X | 2 | A | V |
| 2 | MBAW-MW-2S | 11/1/22 12:40 | 11/1/22 12:45 | | X | GW | | X | X | 2 | A | V |
| 3 | MBAW-MW-3I | 11/1/22 6:05 | 11/1/22 6:10 | | X | GW | | X | X | 2 | A | V |
| 4 | MBDW-MW-21 MS | 11/1/22 11:40 | 11/1/22 11:45 | | X | GW | | X | X | 2 | A | V |
| | MBDW-MW-21 MSD | 11/1/22 11:45 | 11/1/22 11:50 | | X | GW | | X | X | 2 | A | V |
| 4 | DUP-01 | 11/1/22 12:00 | 11/1/22 12:00 | | X | GW | | X | X | 2 | A | V |
| 5 | MBDW-MW-6S | 11/2/22 10:25 | 11/2/22 10:30 | | X | GW | | X | X | 2 | A | V |
| 6 | MBAW-MW-6I | 11/2/22 1:40 | 11/2/22 1:45 | | X | GW | | X | X | 2 | A | V |
| 7 | MBAW-MW-2D | 11/2/22 14:00 | 11/3/22 14:05 | | X | GW | | X | X | 2 | A | V |
| 8 | EB-01 | 11/3/22 12:10 | 11/3/22 12:00 | | X | GW | | X | X | 2 | A | V |

ANALYSIS REQUESTED

**Dissolved Metals Samples**
☐ Field Filtered
☐ Lab to Filter

**Orthophosphate Samples**
☐ Field Filtered
☐ Lab to Filter

**[1] Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

**[2] Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define) HDPE

**[3] Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:
ASP-B Deliverable, email to JRaupe@trccompanies.com
NYSDEC Work Assignment No. D009812-24
PFAS 15 40 Compounds (1633) Task 1

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

| | Date/Time: |
|---|---|
| Relinquished by: (signature) | 11/3/22 14:15 |
| Received by: (signature) | 11/3/22 1415 |
| Relinquished by: (signature) | 11/3/22 1800 |
| Received by: (signature) 3.6/3.2 | 11/4 4pm |
| Relinquished by: (signature) | |
| Received by: (signature) | |

**Program & Regulatory Information**
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

**Deliverables**
☒ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:
NELAC and AIHA-LAP, LLC Accredited

**Project Entity**
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

**Other**
☐ Chromatogram
☐ AIHA-LAP,LLC

**PCB ONLY**
☐ Soxhlet
☐ Non Soxhlet



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Pace Analytical®

Phone: 612-607-6400
Fax: 612-607-6344

https://www.pacelabs.com/

Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Page 2 of 2

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: TRC Engineers, Inc.
Address: 436 Broadway, 10th Floor, New York, NY
Phone: (212) 221-7822
Project Name: Mahopac Business District Wells
Project Location: South Lake Boulevard, Mahopac NY
Project Number: 386554.0000.0000 Phase 1
Project Manager: Jenna Raup
Pace Analytical Quote Name/Number: Order No. 2209448
Invoice Recipient:
Sampled By: R.D

**Requested Turnaround Time**
7-Day ☐ 10-Day ☒
Due Date: Standard

**Rush Approval Required**
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

**Data Delivery**
Format: PDF ☒ EXCEL ☒
Other: ASP-B, NYSDEC EQuIS
CLP Like Data Pkg Required: ☐
Email To: JRaup@trccompanies.com
Fax To #: CM

ANALYSIS REQUESTED

TCL VOCs 8260

| Pace Analytical Work Order# | Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite | Grab | [1]Matrix Code | Conc Code | # of Containers | [2] Preservation Code | [3] Container Code |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | FB-01 | 11/2/22 12:00 | 11/2/22 12:00 | | X | GW | U | X | | |

**Dissolved Metals Samples**
☐ Field Filtered
☐ Lab to Filter

**Orthophosphate Samples**
☐ Field Filtered
☐ Lab to Filter

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

| | Date/Time: |
|---|---|
| Relinquished by: (signature) | 11/3/22 14:15 |
| Received by: (signature) | 11/3/22 1415 |
| Relinquished by: (signature) | 11/3/22 1800 |
| Received by: (signature) | 11/4 0819 |
| Relinquished by: (signature) | |
| Received by: (signature) | |

**Program & Regulatory Information**
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

**Deliverables**
☐ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited

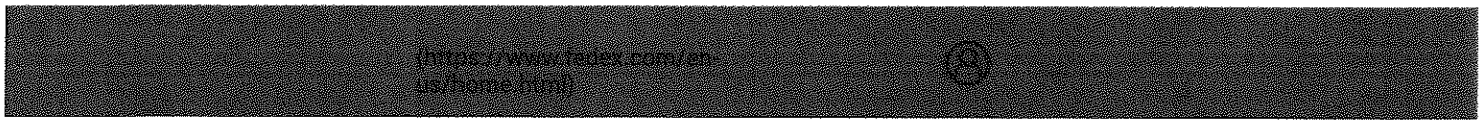
**Project Entity**
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

**Other**
☐ Chromatogram
☐ *AIHA-LAP,LLC*

**PCB ONLY**
☐ Soxhlet
☐ Non Soxhlet



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FedEx® Tracking

**DELIVERED**

# Friday

11/4/2022 at 9:39 am

Signed for by: R.PETRAITIS

Obtain Proof of delivery

How was your delivery?

**DELIVERY STATUS**

Delivered

Shipment is 1 of 2 pieces

Get Status Updates

**TRACKING ID**

613661360340

**FROM**
MELVILLE, NY US

*Label Created*
11/3/2022 5:21 PM

**PACKAGE RECEIVED BY FEDEX**
MELVILLE, NY
11/3/2022 5:41 PM

**IN TRANSIT**
WINDSOR LOCKS, CT
11/4/2022 7:20 AM

**OUT FOR DELIVERY**
WINDSOR LOCKS, CT
11/4/2022 7:29 AM

**DELIVERED**
EAST LONGMEADOW, MA US

*DELIVERED*
11/4/2022 at 9:39 AM

View travel history

Manage Delivery

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.pacelabs.com

Pace PEOPLE ADVANCING SCIENCE

Doc# 277 Rev 6 July 2022

**Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False**

**Client** TRC Companies

**Received By** LD Date 11/14/22 Time 934

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct From Sample F Ambient _____ Melted Ice _____

Were samples within Tempurature? Within 2-6°C T By Gun # 5 Actual Temp 3.6/2.2
By Blank # _____ Actual Temp -

Was Custody Seal In tact? N/A Were Samples Tampered with? F

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client? T Analysis? T Sampler Name? T
Project? T ID's? T Collection Dates/Times? T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Samples are received within holding time? T Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? T

Proper Media/Containers Used? T splitting samples require F

Were trip blanks receive T On COC? F

Do All Samples Have the proper pH? N/A Acid _____ Base _____

| Vials | # | Containers: | # | | # | | # |
|---|---|---|---|---|---|---|---|
| Unp- | | 1 Liter Amb. | | 1 Liter Plastic | | 16 oz Amb. | |
| HCL- | 24 | 500 mL Amb. | | 500 mL Plastic | | 8oz Amb/Clear | |
| Meoh- | | 250 mL Amb. | | 250 mL Plastic | 22 | 4oz Amb/Clear | |
| Bisulfate- | | Col./Bacteria | | Flashpoint | | 2oz Amb/Clear | |
| DI- | | Other Plastic | | Other Glass | | Encore | |
| Thiosulfate- | | SOC Kit | | Plastic Bag | | Frozen: | |
| Sulfuric- | | Perchlorate | | Ziplock | | | |

**Unused Media**

| Vials | # | Containers: | # | | # | | # |
|---|---|---|---|---|---|---|---|
| Unp- | | 1 Liter Amb. | | 1 Liter Plastic | | 16 oz Amb. | |
| HCL- | | 500 mL Amb. | | 500 mL Plastic | | 8oz Amb/Clear | |
| Meoh- | | 250 mL Amb. | | 250 mL Plastic | | 4oz Amb/Clear | |
| Bisulfate- | | Col./Bacteria | | Flashpoint | | 2oz Amb/Clear | |
| DI- | | Other Plastic | | Other Glass | | Encore | |
| Thiosulfate- | | SOC Kit | | Plastic Bag | | Frozen: | |
| Sulfuric- | | Perchlorate | | Ziplock | | | |

**Comments:**

1 Trip blank Received and no field blank Received.

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
**T :** +1 360 577 7222
**F :** +1 360 636 1068
**www.alsglobal.com**

January 18, 2023

**Analytical Report for Service Request No:** K2213469
**Revised Service Request No:** K2213469.01

Abigail Douglass
Pace Analytical Services
39 Spruce Street
East Longmeadow, MA 01028

**RE: 22K0850**

Dear Abigail,

Enclosed is the revised results of the sample(s) submitted to our laboratory November 09, 2022 For your reference, these analyses have been assigned our service request number **K2213469.**

Revised report to the MDL.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3377. You may also contact me via email at Sydney.Wolf@alsglobal.com.

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Sydney A. Wolf
Project Manager



REVISED
5:12 pm, Jan 18, 2023

ALS Environmental
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    General Chemistry
    Per and Polyfluoroalkyl Substances(PFAS) by LC/MS/MS

## Acronyms

| | |
|---|---|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

## Inorganic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated value. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |
| H | The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory. |

## Metals Data Qualifiers

| | |
|---|---|
| # | The control limit criteria is not applicable. |
| J | The result is an estimated value. |
| E | The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample. |
| M | The duplicate injection precision was not met. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a matrix interference. |
| X | See case narrative. |
| + | The correlation coefficient for the MSA is less than 0.995. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Organic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| A | A tentatively identified compound, a suspected aldol-condensation product. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards. |
| C | The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data. |
| D | The reported result is from a dilution. |
| E | The result is an estimated value. |
| J | The result is an estimated value. |
| N | The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed. |
| P | The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results. |
| U | The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution. |
| i | The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference. |
| X | See case narrative. |
| Q | See case narrative. One or more quality control criteria was outside the limits. |

## Additional Petroleum Hydrocarbon Specific Qualifiers

| | |
|---|---|
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |
| Y | The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard. |
| Z | The chromatographic fingerprint does not resemble a petroleum product. |

## ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
## State Certifications, Accreditations, and Licenses

| Agency | Web Site | Number |
|---|---|---|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjlabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdw/labservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

ALS Environmental

# Case Narrative

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

ALS Environmental

**Client:** Pace Analytical Services
**Project:** 22K0850
**Sample Matrix:** Water

**Service Request:** K2213469
**Date Received:** 11/09/2022

## CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

**Sample Receipt:**

Eight water samples were received for analysis at ALS Environmental on 11/09/2022. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

**General Chemistry:**

No significant anomalies were noted with this analysis.

**Organic LC:**

The control criteria were exceeded for D9-EtFOSE in 1633 ICV associated with calibration KC2200730; the associated native is reported from this ICV. The isotope in question was in control in 1633 Abs ICV analyzed with this calibration. The associated matrix spike recovery of the native compound was in control in 1633 ICV, indicating the analysis was in control. The surrogate outlier was flagged accordingly. No further corrective action was appropriate.

The following analytes were flagged as outside the control criterion for Instrument Sensitivity Check (ISC) KQ2222406-02: N-Methylperfluorooctane sulfonamido acetic acid (MeFOSAA). In accordance with the 2nd draft of EPA Method 1633, up to 10% of the analytes in the ISC can vary 50-150% of the true value. The remaining analytes are required to fall within 70-130% of the true value. The ISC met these criteria. No further corrective action was required.

The lower control criterion was exceeded for D3-MeFOSA in Continuing Calibration Verifications (CCVs) KQ2222406-02/-03/-05. The recovery of the associated native analyte was outside the upper control criterion, which indicated a potential high bias for the native analyte in this batch. The field sample analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was appropriate.

The control criteria were exceeded for D9-EtFOSE in Continuing Calibration Verification (CCV) KQ2222406-05. The recovery of the associated native analyte was within control criteria, which indicated the analysis was in control. No further corrective action was appropriate.

The control criteria were exceeded for 13C2-4:2 FTS in Continuing Calibration Verifications (CCVs) KQ2300281-02/-06. The recovery of the associated native analyte was within control criteria, which indicated the analysis was in control. No further corrective action was appropriate.

Method 1633, 01/05/2023: The upper control criterion was exceeded for Perfluoropentane sulfonic acid (PFPeS), Perfluorohexane sulfonic acid (PFHxS), and 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) in Continuing Calibration Verification (CCV) KQ2300281-08. The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

The upper control criterion was exceeded for 13C2-4:2 FTS in sample 22K0850-03. The associated native analyte was not detected above the Method Reporting Limit (MRL) in the sample. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

Method 1633, 01/05/2023: The results reported for Perfluorooctane sulfonamide in Laboratory Control Sample (LCS) KQ2220707-04 may contain a bias. The ion ratio criteria were not met. The failing ratio may indicate a bias to the results in the affected LCS.

Approved by Sydney A Wall Date 01/18/2023

1317 South 13th Ave, Kelso, WA 98626 | 1-360-577-7222 | www.alsglobal.com

ALS Environmental

The results were flagged with "I" to indicate the issue.

Approved by _____ Date 01/18/2023

ALS Environmental

# Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

K2213469

# SUBCONTRACT CHAIN OF CUSTODY

**Pace New England**

**22K0850**

**SENDING LABORATORY:**

Pace New England
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Raymond J. McCarthy

**RECEIVING LABORATORY:**

ALS Labs- Kelso, WA
1317 S. 13th Avenue
Kelso, WA 98626-2845
Phone :(360) 577-7222
Fax: (360) 425-9096

| Analysis | Due | Expires | Comments |
|---|---|---|---|
| **Sample ID: 22K0850-01** | **Water** | **Sampled: 11/01/22 11:40** | **MS/MSD CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/15/22 11:40 | |
| MS/MSD PFAS | 12/06/22 15:30 | 10/27/23 11:40 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv 250 mL plastic Unpreserv 250 mL plastic Unpreserv 250 mL plastic Unpreserv 250 mL plastic Unpreserv 250 mL plastic Unpreserv | | | |
| **Sample ID: 22K0850-02** | **Water** | **Sampled: 11/01/22 12:45** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/15/22 12:45 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv 250 mL plastic Unpreserv | | | |
| **Sample ID: 22K0850-03** | **Water** | **Sampled: 11/01/22 14:10** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/15/22 14:10 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv 250 mL plastic Unpreserv | | | |
| **Sample ID: 22K0850-04** | **Water** | **Sampled: 11/01/22 12:00** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/15/22 12:00 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv 250 mL plastic Unpreserv | | | |
| **Sample ID: 22K0850-05** | **Water** | **Sampled: 11/02/22 10:30** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/16/22 10:30 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv 250 mL plastic Unpreserv | | | |

| Released By | Date | Received By | Date |
|---|---|---|---|
| | | | 11/9/22 1020 |
| Released By | Date | Received By | Date |

L2213469

## SUBCONTRACT CHAIN OF CUSTODY

**Pace New England**

**22K0850**

| Analysis | Due | Expires | Comments |
|---|---|---|---|
| **Sample ID: 22K0850-06** | **Water** **Sampled:** | **11/02/22 11:45** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/16/22 11:45 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv( 250 mL plastic Unpreserv( | | | |
| **Sample ID: 22K0850-07** | **Water** **Sampled:** | **11/03/22 14:05** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/17/22 14:05 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv( 250 mL plastic Unpreserv( | | | |
| **Sample ID: 22K0850-08** | **Water** **Sampled:** | **11/03/22 12:00** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/17/22 12:00 | |
| *Containers Supplied:* | | | |
| 250 mL plastic Unpreserv( 250 mL plastic Unpreserv( | | | |
| **Sample ID: 22K0850-09** | **Water** **Sampled:** | **11/02/22 12:00** | **CAT B** |
| S-PFAS | 12/06/22 15:30 | 11/16/22 12:00 | |
| *Containers Supplied:* | | | |

| Released By | Date | Received By | Date |
|---|---|---|---|
| | | | 11/9/22 1020 |
| Released By | Date | Received By | Date |

Shipped by -

PM_____

## Cooler Receipt and Preservation Form

Client Con-Test Analytical laboratory Service Request K22 13469

Received: 11/9/22 Opened: 11/9/22 By: K Unloaded: 11/9/22 By: K

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

| Temp Blank | Sample Temp | IR Gun | Cooler #/COC ID / NA | Out of temp indicate with "X" | PM Notified if out of temp | Tracking Number NA | Filed |
|---|---|---|---|---|---|---|---|
| | 2.0 | T107 | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column above:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA Y N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* Large Baggies
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
14. Was Cl2/Res negative? NA Y N
15. Were 100ml sterile microbiology bottles filled exactly to the 100ml mark? NA Y N Under filled Overfilled

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---|---|---|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count Bottle Type | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

Notes, Discrepancies, Resolutions: Samples have Pace Analytical labels. Did not rec'v a COC. Rec'd 20 PFAS bottles did not receive - OM

ALS Environmental

# General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 - 11/03/22 |
| **Sample Matrix:** | Water | **Date Received:** | 11/9/22 |
| **Analysis Method:** | SM 2540 D Modified | **Units:** | mg/L |
| **Prep Method:** | None | **Basis:** | NA |

**Solids, Total Suspended (TSS)**

| Sample Name | Lab Code | Result | MRL | MDL | Dil. | Date Analyzed | Q |
|---|---|---|---|---|---|---|---|
| 22K0850-01 | K2213469-001 | ND U | 100 | - | 1 | 11/16/22 17:29 | |
| 22K0850-02 | K2213469-002 | ND U | 100 | - | 1 | 11/16/22 17:29 | |
| 22K0850-03 | K2213469-003 | ND U | 100 | - | 1 | 11/16/22 17:29 | |
| 22K0850-04 | K2213469-004 | ND U | 100 | - | 1 | 11/16/22 17:29 | |
| 22K0850-07 | K2213469-007 | ND U | 100 | - | 1 | 11/16/22 17:29 | |
| Method Blank | K2213469-MB | ND U | 100 | - | 1 | 11/16/22 17:29 | |

ALS Environmental

# Per and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

**ALS Environmental—Kelso Laboratory**
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 11:40 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-01 | **Units:** | ng/L |
| **Lab Code:** | K2213469-001 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **7.5** | 4.5 | 0.41 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | **0.89 J** | 4.5 | 0.89 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | **4.0 J** | 4.5 | 0.82 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **25** | 4.5 | 0.83 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **42** | 4.5 | 0.86 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **200** | 4.5 | 0.64 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **120** | 4.5 | 0.63 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **69** | 4.5 | 0.71 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **99** | 4.5 | 0.87 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **8.4** | 4.5 | 0.75 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **9.4** | 4.5 | 0.60 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | **1.5 J** | 4.5 | 0.82 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **0.76 J** | 4.5 | 0.61 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 12/09/22 15:51 | 11/22/22 | * |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 12/09/22 15:51 | 11/22/22 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 11:40 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-01 | **Units:** | ng/L |
| **Lab Code:** | K2213469-001 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.5 | 1.3 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 12/09/22 15:51 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 11:40 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-01 | **Units:** | ng/L |
| **Lab Code:** | K2213469-001 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 86 | 20 - 150 | 12/09/22 15:51 | |
| 13C3-PFHxS | 79 | 20 - 150 | 12/09/22 15:51 | |
| 13C8-PFOS | 70 | 20 - 150 | 12/09/22 15:51 | |
| 13C4-PFBA | 77 | 20 - 150 | 12/09/22 15:51 | |
| 13C5-PFPeA | 79 | 20 - 150 | 12/09/22 15:51 | |
| 13C5-PFHxA | 83 | 20 - 150 | 12/09/22 15:51 | |
| 13C4-PFHpA | 80 | 20 - 150 | 12/09/22 15:51 | |
| 13C8-PFOA | 76 | 20 - 150 | 12/09/22 15:51 | |
| 13C9-PFNA | 83 | 20 - 150 | 12/09/22 15:51 | |
| 13C6-PFDA | 80 | 20 - 150 | 12/09/22 15:51 | |
| 13C7-PFUnDA | 75 | 20 - 150 | 12/09/22 15:51 | |
| 13C2-PFDoDA | 63 | 20 - 150 | 12/09/22 15:51 | |
| 13C2-PFTeDA | 63 | 20 - 150 | 12/09/22 15:51 | |
| 13C8-FOSA | 61 | 20 - 150 | 12/09/22 15:51 | |
| D3-MeFOSA | 35 | 20 - 150 | 12/09/22 15:51 | |
| D5-EtFOSA | 56 | 20 - 150 | 12/09/22 15:51 | |
| D7-MeFOSE | 49 | 20 - 150 | 12/09/22 15:51 | |
| D9-EtFOSE | 41 | 20 - 150 | 12/09/22 15:51 | |
| D3-MeFOSAA | 56 | 20 - 150 | 12/09/22 15:51 | |
| D5-EtFOSAA | 60 | 20 - 150 | 12/09/22 15:51 | |
| 13C2-4:2 FTS | 65 | 20 - 150 | 12/09/22 15:51 | |
| 13C2-6:2 FTS | 66 | 20 - 150 | 12/09/22 15:51 | |
| 13C2-8:2 FTS | 59 | 20 - 150 | 12/09/22 15:51 | |
| 13C3-HFPO-DA | 90 | 20 - 150 | 12/09/22 15:51 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-02 | **Units:** | ng/L |
| **Lab Code:** | K2213469-002 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **8.8** | 4.5 | 0.41 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 4.5 | 0.89 | 1 | 01/04/23 22:01 | 11/22/22 | * |
| Perfluorohexane sulfonic acid (PFHxS) | **2.3 J** | 4.5 | 0.82 | 1 | 01/04/23 22:01 | 11/22/22 | * |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **33** | 4.5 | 0.83 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **11** | 4.5 | 0.86 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **6.2** | 4.5 | 0.64 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **5.6** | 4.5 | 0.63 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **3.8 J** | 4.5 | 0.71 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **22** | 4.5 | 0.87 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **7.7** | 4.5 | 0.75 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **2.6 J** | 4.5 | 0.60 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **0.87 J** | 4.5 | 0.61 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 22:01 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-02 | **Units:** | ng/L |
| **Lab Code:** | K2213469-002 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:01 | 11/22/22 | * |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 22:01 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-02 | **Units:** | ng/L |
| **Lab Code:** | K2213469-002 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 79 | 20 - 150 | 01/04/23 22:01 | |
| 13C3-PFHxS | 79 | 20 - 150 | 01/04/23 22:01 | |
| 13C8-PFOS | 59 | 20 - 150 | 01/04/23 22:01 | |
| 13C4-PFBA | 78 | 20 - 150 | 01/04/23 22:01 | |
| 13C5-PFPeA | 75 | 20 - 150 | 01/04/23 22:01 | |
| 13C5-PFHxA | 81 | 20 - 150 | 01/04/23 22:01 | |
| 13C4-PFHpA | 82 | 20 - 150 | 01/04/23 22:01 | |
| 13C8-PFOA | 83 | 20 - 150 | 01/04/23 22:01 | |
| 13C9-PFNA | 75 | 20 - 150 | 01/04/23 22:01 | |
| 13C6-PFDA | 74 | 20 - 150 | 01/04/23 22:01 | |
| 13C7-PFUnDA | 77 | 20 - 150 | 01/04/23 22:01 | |
| 13C2-PFDoDA | 71 | 20 - 150 | 01/04/23 22:01 | |
| 13C2-PFTeDA | 63 | 20 - 150 | 01/04/23 22:01 | |
| 13C8-FOSA | 53 | 20 - 150 | 01/04/23 22:01 | |
| D3-MeFOSA | 44 | 20 - 150 | 01/04/23 22:01 | |
| D5-EtFOSA | 42 | 20 - 150 | 01/04/23 22:01 | |
| D7-MeFOSE | 46 | 20 - 150 | 01/04/23 22:01 | |
| D9-EtFOSE | 44 | 20 - 150 | 01/04/23 22:01 | |
| D3-MeFOSAA | 51 | 20 - 150 | 01/04/23 22:01 | |
| D5-EtFOSAA | 55 | 20 - 150 | 01/04/23 22:01 | |
| 13C2-4:2 FTS | 90 | 20 - 150 | 01/04/23 22:01 | |
| 13C2-6:2 FTS | 78 | 20 - 150 | 01/04/23 22:01 | |
| 13C2-8:2 FTS | 79 | 20 - 150 | 01/04/23 22:01 | |
| 13C3-HFPO-DA | 86 | 20 - 150 | 01/04/23 22:01 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 14:10 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-03 | **Units:** | ng/L |
| **Lab Code:** | K2213469-003 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **3.5 J** | 4.5 | 0.41 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 4.5 | 0.89 | 1 | 01/04/23 22:24 | 11/22/22 | * |
| Perfluorohexane sulfonic acid (PFHxS) | **0.91 J** | 4.5 | 0.82 | 1 | 01/04/23 22:24 | 11/22/22 | * |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **5.5** | 4.5 | 0.83 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **4.5** | 4.5 | 0.86 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **4.0 J** | 4.5 | 0.64 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **4.2 J** | 4.5 | 0.63 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **7.6** | 4.5 | 0.71 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **37** | 4.5 | 0.87 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **10** | 4.5 | 0.75 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **22** | 4.5 | 0.60 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | **3.0 J** | 4.5 | 0.82 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **1.3 J** | 4.5 | 0.61 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | **0.65 J** | 4.5 | 0.46 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 22:24 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 14:10 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-03 | **Units:** | ng/L |
| **Lab Code:** | K2213469-003 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:24 | 11/22/22 | * |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 22:24 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 14:10 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-03 | **Units:** | ng/L |
| **Lab Code:** | K2213469-003 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 80 | 20 - 150 | 01/04/23 22:24 | |
| 13C3-PFHxS | 83 | 20 - 150 | 01/04/23 22:24 | |
| 13C8-PFOS | 70 | 20 - 150 | 01/04/23 22:24 | |
| 13C4-PFBA | 71 | 20 - 150 | 01/04/23 22:24 | |
| 13C5-PFPeA | 80 | 20 - 150 | 01/04/23 22:24 | |
| 13C5-PFHxA | 85 | 20 - 150 | 01/04/23 22:24 | |
| 13C4-PFHpA | 95 | 20 - 150 | 01/04/23 22:24 | |
| 13C8-PFOA | 77 | 20 - 150 | 01/04/23 22:24 | |
| 13C9-PFNA | 77 | 20 - 150 | 01/04/23 22:24 | |
| 13C6-PFDA | 67 | 20 - 150 | 01/04/23 22:24 | |
| 13C7-PFUnDA | 72 | 20 - 150 | 01/04/23 22:24 | |
| 13C2-PFDoDA | 67 | 20 - 150 | 01/04/23 22:24 | |
| 13C2-PFTeDA | 62 | 20 - 150 | 01/04/23 22:24 | |
| 13C8-FOSA | 58 | 20 - 150 | 01/04/23 22:24 | |
| D3-MeFOSA | 49 | 20 - 150 | 01/04/23 22:24 | |
| D5-EtFOSA | 47 | 20 - 150 | 01/04/23 22:24 | |
| D7-MeFOSE | 50 | 20 - 150 | 01/04/23 22:24 | |
| D9-EtFOSE | 46 | 20 - 150 | 01/04/23 22:24 | |
| D3-MeFOSAA | 62 | 20 - 150 | 01/04/23 22:24 | |
| D5-EtFOSAA | 59 | 20 - 150 | 01/04/23 22:24 | |
| 13C2-4:2 FTS | 169 | 20 - 150 | 01/04/23 22:24 | * |
| 13C2-6:2 FTS | 123 | 20 - 150 | 01/04/23 22:24 | |
| 13C2-8:2 FTS | 98 | 20 - 150 | 01/04/23 22:24 | |
| 13C3-HFPO-DA | 98 | 20 - 150 | 01/04/23 22:24 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-04 | **Units:** | ng/L |
| **Lab Code:** | K2213469-004 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **8.9** | 4.5 | 0.41 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 4.5 | 0.89 | 1 | 01/04/23 22:47 | 11/22/22 | * |
| Perfluorohexane sulfonic acid (PFHxS) | **4.3 J** | 4.5 | 0.82 | 1 | 01/04/23 22:47 | 11/22/22 | * |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **25** | 4.5 | 0.83 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **62** | 4.5 | 0.86 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **260** | 4.5 | 0.64 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **140** | 4.5 | 0.63 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **93** | 4.5 | 0.71 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **170** | 4.5 | 0.87 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **14** | 4.5 | 0.75 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **15** | 4.5 | 0.60 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | **2.7 J** | 4.5 | 0.82 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **1.8 J** | 4.5 | 0.61 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | **0.90 J** | 4.5 | 0.46 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 22:47 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-04 | **Units:** | ng/L |
| **Lab Code:** | K2213469-004 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:47 | 11/22/22 | * |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 22:47 | 11/22/22 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-04 | **Units:** | ng/L |
| **Lab Code:** | K2213469-004 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 65 | 20 - 150 | 01/04/23 22:47 | |
| 13C3-PFHxS | 78 | 20 - 150 | 01/04/23 22:47 | |
| 13C8-PFOS | 77 | 20 - 150 | 01/04/23 22:47 | |
| 13C4-PFBA | 81 | 20 - 150 | 01/04/23 22:47 | |
| 13C5-PFPeA | 84 | 20 - 150 | 01/04/23 22:47 | |
| 13C5-PFHxA | 88 | 20 - 150 | 01/04/23 22:47 | |
| 13C4-PFHpA | 96 | 20 - 150 | 01/04/23 22:47 | |
| 13C8-PFOA | 75 | 20 - 150 | 01/04/23 22:47 | |
| 13C9-PFNA | 75 | 20 - 150 | 01/04/23 22:47 | |
| 13C6-PFDA | 67 | 20 - 150 | 01/04/23 22:47 | |
| 13C7-PFUnDA | 64 | 20 - 150 | 01/04/23 22:47 | |
| 13C2-PFDoDA | 57 | 20 - 150 | 01/04/23 22:47 | |
| 13C2-PFTeDA | 59 | 20 - 150 | 01/04/23 22:47 | |
| 13C8-FOSA | 67 | 20 - 150 | 01/04/23 22:47 | |
| D3-MeFOSA | 55 | 20 - 150 | 01/04/23 22:47 | |
| D5-EtFOSA | 54 | 20 - 150 | 01/04/23 22:47 | |
| D7-MeFOSE | 57 | 20 - 150 | 01/04/23 22:47 | |
| D9-EtFOSE | 52 | 20 - 150 | 01/04/23 22:47 | |
| D3-MeFOSAA | 64 | 20 - 150 | 01/04/23 22:47 | |
| D5-EtFOSAA | 60 | 20 - 150 | 01/04/23 22:47 | |
| 13C2-4:2 FTS | 71 | 20 - 150 | 01/04/23 22:47 | |
| 13C2-6:2 FTS | 56 | 20 - 150 | 01/04/23 22:47 | |
| 13C2-8:2 FTS | 59 | 20 - 150 | 01/04/23 22:47 | |
| 13C3-HFPO-DA | 108 | 20 - 150 | 01/04/23 22:47 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 10:30 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-05 | **Units:** | ng/L |
| **Lab Code:** | K2213469-005 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **9.8** | 4.5 | 0.41 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 4.5 | 0.89 | 1 | 01/04/23 23:11 | 11/22/22 | * |
| Perfluorohexane sulfonic acid (PFHxS) | **2.6 J** | 4.5 | 0.82 | 1 | 01/04/23 23:11 | 11/22/22 | * |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **52** | 4.5 | 0.83 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **7.9** | 4.5 | 0.86 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **7.7** | 4.5 | 0.64 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **7.1** | 4.5 | 0.63 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **5.1** | 4.5 | 0.71 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **19** | 4.5 | 0.87 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **2.4 J** | 4.5 | 0.75 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **1.8 J** | 4.5 | 0.60 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | ND U | 4.5 | 0.61 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 23:11 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 10:30 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-05 | **Units:** | ng/L |
| **Lab Code:** | K2213469-005 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.5 | 1.3 | 1 | 01/04/23 23:11 | 11/22/22 | * |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 23:11 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 10:30 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-05 | **Units:** | ng/L |
| **Lab Code:** | K2213469-005 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 73 | 20 - 150 | 01/04/23 23:11 | |
| 13C3-PFHxS | 77 | 20 - 150 | 01/04/23 23:11 | |
| 13C8-PFOS | 68 | 20 - 150 | 01/04/23 23:11 | |
| 13C4-PFBA | 86 | 20 - 150 | 01/04/23 23:11 | |
| 13C5-PFPeA | 93 | 20 - 150 | 01/04/23 23:11 | |
| 13C5-PFHxA | 79 | 20 - 150 | 01/04/23 23:11 | |
| 13C4-PFHpA | 93 | 20 - 150 | 01/04/23 23:11 | |
| 13C8-PFOA | 71 | 20 - 150 | 01/04/23 23:11 | |
| 13C9-PFNA | 76 | 20 - 150 | 01/04/23 23:11 | |
| 13C6-PFDA | 70 | 20 - 150 | 01/04/23 23:11 | |
| 13C7-PFUnDA | 66 | 20 - 150 | 01/04/23 23:11 | |
| 13C2-PFDoDA | 59 | 20 - 150 | 01/04/23 23:11 | |
| 13C2-PFTeDA | 58 | 20 - 150 | 01/04/23 23:11 | |
| 13C8-FOSA | 70 | 20 - 150 | 01/04/23 23:11 | |
| D3-MeFOSA | 60 | 20 - 150 | 01/04/23 23:11 | |
| D5-EtFOSA | 58 | 20 - 150 | 01/04/23 23:11 | |
| D7-MeFOSE | 63 | 20 - 150 | 01/04/23 23:11 | |
| D9-EtFOSE | 58 | 20 - 150 | 01/04/23 23:11 | |
| D3-MeFOSAA | 70 | 20 - 150 | 01/04/23 23:11 | |
| D5-EtFOSAA | 65 | 20 - 150 | 01/04/23 23:11 | |
| 13C2-4:2 FTS | 74 | 20 - 150 | 01/04/23 23:11 | |
| 13C2-6:2 FTS | 61 | 20 - 150 | 01/04/23 23:11 | |
| 13C2-8:2 FTS | 63 | 20 - 150 | 01/04/23 23:11 | |
| 13C3-HFPO-DA | 103 | 20 - 150 | 01/04/23 23:11 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 11:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-06 | **Units:** | ng/L |
| **Lab Code:** | K2213469-006 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **8.4** | 4.5 | 0.41 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 4.5 | 0.89 | 1 | 01/04/23 23:34 | 11/22/22 | * |
| Perfluorohexane sulfonic acid (PFHxS) | **3.9 J** | 4.5 | 0.82 | 1 | 01/04/23 23:34 | 11/22/22 | * |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **35** | 4.5 | 0.83 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **18** | 4.5 | 0.86 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **51** | 4.5 | 0.64 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **45** | 4.5 | 0.63 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **16** | 4.5 | 0.71 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **41** | 4.5 | 0.87 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **3.9 J** | 4.5 | 0.75 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **1.1 J** | 4.5 | 0.60 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **0.97 J** | 4.5 | 0.61 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 23:34 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 11:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-06 | **Units:** | ng/L |
| **Lab Code:** | K2213469-006 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.5 | 1.3 | 1 | 01/04/23 23:34 | 11/22/22 | * |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 23:34 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 11:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-06 | **Units:** | ng/L |
| **Lab Code:** | K2213469-006 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 81 | 20 - 150 | 01/04/23 23:34 | |
| 13C3-PFHxS | 78 | 20 - 150 | 01/04/23 23:34 | |
| 13C8-PFOS | 68 | 20 - 150 | 01/04/23 23:34 | |
| 13C4-PFBA | 86 | 20 - 150 | 01/04/23 23:34 | |
| 13C5-PFPeA | 87 | 20 - 150 | 01/04/23 23:34 | |
| 13C5-PFHxA | 75 | 20 - 150 | 01/04/23 23:34 | |
| 13C4-PFHpA | 87 | 20 - 150 | 01/04/23 23:34 | |
| 13C8-PFOA | 83 | 20 - 150 | 01/04/23 23:34 | |
| 13C9-PFNA | 74 | 20 - 150 | 01/04/23 23:34 | |
| 13C6-PFDA | 84 | 20 - 150 | 01/04/23 23:34 | |
| 13C7-PFUnDA | 74 | 20 - 150 | 01/04/23 23:34 | |
| 13C2-PFDoDA | 63 | 20 - 150 | 01/04/23 23:34 | |
| 13C2-PFTeDA | 55 | 20 - 150 | 01/04/23 23:34 | |
| 13C8-FOSA | 65 | 20 - 150 | 01/04/23 23:34 | |
| D3-MeFOSA | 58 | 20 - 150 | 01/04/23 23:34 | |
| D5-EtFOSA | 54 | 20 - 150 | 01/04/23 23:34 | |
| D7-MeFOSE | 63 | 20 - 150 | 01/04/23 23:34 | |
| D9-EtFOSE | 59 | 20 - 150 | 01/04/23 23:34 | |
| D3-MeFOSAA | 71 | 20 - 150 | 01/04/23 23:34 | |
| D5-EtFOSAA | 65 | 20 - 150 | 01/04/23 23:34 | |
| 13C2-4:2 FTS | 82 | 20 - 150 | 01/04/23 23:34 | |
| 13C2-6:2 FTS | 72 | 20 - 150 | 01/04/23 23:34 | |
| 13C2-8:2 FTS | 72 | 20 - 150 | 01/04/23 23:34 | |
| 13C3-HFPO-DA | 98 | 20 - 150 | 01/04/23 23:34 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 14:05 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-07 | **Units:** | ng/L |
| **Lab Code:** | K2213469-007 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **5.3** | 4.5 | 0.41 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 4.5 | 0.89 | 1 | 01/04/23 23:57 | 11/22/22 | * |
| Perfluorohexane sulfonic acid (PFHxS) | **2.0 J** | 4.5 | 0.82 | 1 | 01/04/23 23:57 | 11/22/22 | * |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **18** | 4.5 | 0.83 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **30** | 4.5 | 0.86 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **41** | 4.5 | 0.64 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **49** | 4.5 | 0.63 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **49** | 4.5 | 0.71 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **42** | 4.5 | 0.87 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **17** | 4.5 | 0.75 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **13** | 4.5 | 0.60 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | **14** | 4.5 | 0.82 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **12** | 4.5 | 0.61 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | **6.2** | 4.5 | 0.46 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | **2.7 J** | 4.5 | 1.3 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 23:57 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 14:05 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-07 | **Units:** | ng/L |
| **Lab Code:** | K2213469-007 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | **1.7 J** | 4.5 | 1.3 | 1 | 01/04/23 23:57 | 11/22/22 | * |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 23:57 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 14:05 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-07 | **Units:** | ng/L |
| **Lab Code:** | K2213469-007 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 72 | 20 - 150 | 01/04/23 23:57 | |
| 13C3-PFHxS | 78 | 20 - 150 | 01/04/23 23:57 | |
| 13C8-PFOS | 78 | 20 - 150 | 01/04/23 23:57 | |
| 13C4-PFBA | 81 | 20 - 150 | 01/04/23 23:57 | |
| 13C5-PFPeA | 91 | 20 - 150 | 01/04/23 23:57 | |
| 13C5-PFHxA | 80 | 20 - 150 | 01/04/23 23:57 | |
| 13C4-PFHpA | 96 | 20 - 150 | 01/04/23 23:57 | |
| 13C8-PFOA | 76 | 20 - 150 | 01/04/23 23:57 | |
| 13C9-PFNA | 71 | 20 - 150 | 01/04/23 23:57 | |
| 13C6-PFDA | 72 | 20 - 150 | 01/04/23 23:57 | |
| 13C7-PFUnDA | 62 | 20 - 150 | 01/04/23 23:57 | |
| 13C2-PFDoDA | 54 | 20 - 150 | 01/04/23 23:57 | |
| 13C2-PFTeDA | 51 | 20 - 150 | 01/04/23 23:57 | |
| 13C8-FOSA | 61 | 20 - 150 | 01/04/23 23:57 | |
| D3-MeFOSA | 51 | 20 - 150 | 01/04/23 23:57 | |
| D5-EtFOSA | 49 | 20 - 150 | 01/04/23 23:57 | |
| D7-MeFOSE | 54 | 20 - 150 | 01/04/23 23:57 | |
| D9-EtFOSE | 51 | 20 - 150 | 01/04/23 23:57 | |
| D3-MeFOSAA | 65 | 20 - 150 | 01/04/23 23:57 | |
| D5-EtFOSAA | 61 | 20 - 150 | 01/04/23 23:57 | |
| 13C2-4:2 FTS | 63 | 20 - 150 | 01/04/23 23:57 | |
| 13C2-6:2 FTS | 65 | 20 - 150 | 01/04/23 23:57 | |
| 13C2-8:2 FTS | 66 | 20 - 150 | 01/04/23 23:57 | |
| 13C3-HFPO-DA | 103 | 20 - 150 | 01/04/23 23:57 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-08 | **Units:** | ng/L |
| **Lab Code:** | K2213469-008 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | ND U | 4.6 | 0.41 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 4.6 | 0.89 | 1 | 01/05/23 00:20 | 11/22/22 | * |
| Perfluorohexane sulfonic acid (PFHxS) | ND U | 4.6 | 0.82 | 1 | 01/05/23 00:20 | 11/22/22 | * |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.6 | 0.69 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | ND U | 4.6 | 0.83 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.6 | 0.33 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.6 | 0.67 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.6 | 0.56 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | ND U | 4.6 | 0.86 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | ND U | 4.6 | 0.64 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | ND U | 4.6 | 0.63 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | ND U | 4.6 | 0.71 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | ND U | 4.6 | 0.87 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | ND U | 4.6 | 0.75 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | ND U | 4.6 | 0.60 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.6 | 0.82 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | ND U | 4.6 | 0.61 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.6 | 0.46 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.6 | 1.3 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.6 | 0.72 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.6 | 1.2 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.6 | 0.85 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.6 | 0.82 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.6 | 0.92 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.6 | 0.91 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.6 | 0.95 | 1 | 01/05/23 00:20 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-08 | **Units:** | ng/L |
| **Lab Code:** | K2213469-008 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.6 | 0.42 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.6 | 1.3 | 1 | 01/05/23 00:20 | 11/22/22 | * |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.6 | 0.86 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.6 | 0.43 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.6 | 0.45 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.6 | 0.39 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.6 | 0.41 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.6 | 0.54 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.6 | 0.41 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.6 | 0.58 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.6 | 0.36 | 1 | 01/05/23 00:20 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-08 | **Units:** | ng/L |
| **Lab Code:** | K2213469-008 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 80 | 20 - 150 | 01/05/23 00:20 | |
| 13C3-PFHxS | 82 | 20 - 150 | 01/05/23 00:20 | |
| 13C8-PFOS | 66 | 20 - 150 | 01/05/23 00:20 | |
| 13C4-PFBA | 85 | 20 - 150 | 01/05/23 00:20 | |
| 13C5-PFPeA | 82 | 20 - 150 | 01/05/23 00:20 | |
| 13C5-PFHxA | 85 | 20 - 150 | 01/05/23 00:20 | |
| 13C4-PFHpA | 88 | 20 - 150 | 01/05/23 00:20 | |
| 13C8-PFOA | 76 | 20 - 150 | 01/05/23 00:20 | |
| 13C9-PFNA | 75 | 20 - 150 | 01/05/23 00:20 | |
| 13C6-PFDA | 79 | 20 - 150 | 01/05/23 00:20 | |
| 13C7-PFUnDA | 78 | 20 - 150 | 01/05/23 00:20 | |
| 13C2-PFDoDA | 67 | 20 - 150 | 01/05/23 00:20 | |
| 13C2-PFTeDA | 61 | 20 - 150 | 01/05/23 00:20 | |
| 13C8-FOSA | 58 | 20 - 150 | 01/05/23 00:20 | |
| D3-MeFOSA | 52 | 20 - 150 | 01/05/23 00:20 | |
| D5-EtFOSA | 49 | 20 - 150 | 01/05/23 00:20 | |
| D7-MeFOSE | 54 | 20 - 150 | 01/05/23 00:20 | |
| D9-EtFOSE | 53 | 20 - 150 | 01/05/23 00:20 | |
| D3-MeFOSAA | 61 | 20 - 150 | 01/05/23 00:20 | |
| D5-EtFOSAA | 58 | 20 - 150 | 01/05/23 00:20 | |
| 13C2-4:2 FTS | 76 | 20 - 150 | 01/05/23 00:20 | |
| 13C2-6:2 FTS | 78 | 20 - 150 | 01/05/23 00:20 | |
| 13C2-8:2 FTS | 70 | 20 - 150 | 01/05/23 00:20 | |
| 13C3-HFPO-DA | 92 | 20 - 150 | 01/05/23 00:20 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ng/L |
| **Lab Code:** | KQ2220707-05 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | ND U | 5.0 | 0.41 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U | 5.0 | 0.89 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | ND U | 5.0 | 0.82 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 5.0 | 0.69 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | ND U | 5.0 | 0.83 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 5.0 | 0.33 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 5.0 | 0.67 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 5.0 | 0.56 | 1 | 12/09/22 14:45 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | ND U | 5.0 | 0.86 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | ND U | 5.0 | 0.64 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | ND U | 5.0 | 0.63 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | ND U | 5.0 | 0.71 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | ND U | 5.0 | 0.87 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | ND U | 5.0 | 0.75 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | ND U | 5.0 | 0.60 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 5.0 | 0.82 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | ND U | 5.0 | 0.61 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 5.0 | 0.46 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 5.0 | 1.3 | 1 | 12/09/22 14:45 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 5.0 | 0.72 | 1 | 12/09/22 14:45 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 5.0 | 1.2 | 1 | 12/09/22 14:45 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 5.0 | 0.85 | 1 | 12/09/22 14:45 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 5.0 | 0.82 | 1 | 12/09/22 14:45 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 5.0 | 0.92 | 1 | 12/09/22 14:45 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 5.0 | 0.91 | 1 | 12/09/22 14:45 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 5.0 | 0.95 | 1 | 12/09/22 14:45 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ng/L |
| **Lab Code:** | KQ2220707-05 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 5.0 | 0.42 | 1 | 12/09/22 14:45 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 5.0 | 1.3 | 1 | 12/09/22 14:45 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 5.0 | 0.86 | 1 | 12/09/22 14:45 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 200 | 6.8 | 1 | 12/09/22 14:45 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 200 | 4.2 | 1 | 12/09/22 14:45 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 200 | 6.0 | 1 | 12/09/22 14:45 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 5.0 | 0.43 | 1 | 12/09/22 14:45 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 5.0 | 0.45 | 1 | 12/09/22 14:45 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 5.0 | 0.39 | 1 | 12/09/22 14:45 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 5.0 | 0.41 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 5.0 | 0.54 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 5.0 | 0.41 | 1 | 12/09/22 14:45 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 5.0 | 0.58 | 1 | 12/09/22 14:45 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 5.0 | 0.36 | 1 | 12/09/22 14:45 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | NA |
| **Sample Matrix:** | Water | **Date Received:** | NA |
| **Sample Name:** | Method Blank | **Units:** | ng/L |
| **Lab Code:** | KQ2220707-05 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Surrogate Name | % Rec | Control Limits | Date Analyzed | Q |
|---|---|---|---|---|
| 13C3-PFBS | 88 | 20 - 150 | 12/09/22 14:45 | |
| 13C3-PFHxS | 84 | 20 - 150 | 12/09/22 14:45 | |
| 13C8-PFOS | 80 | 20 - 150 | 12/09/22 14:45 | |
| 13C4-PFBA | 86 | 20 - 150 | 12/09/22 14:45 | |
| 13C5-PFPeA | 82 | 20 - 150 | 12/09/22 14:45 | |
| 13C5-PFHxA | 87 | 20 - 150 | 12/09/22 14:45 | |
| 13C4-PFHpA | 86 | 20 - 150 | 12/09/22 14:45 | |
| 13C8-PFOA | 76 | 20 - 150 | 12/09/22 14:45 | |
| 13C9-PFNA | 90 | 20 - 150 | 12/09/22 14:45 | |
| 13C6-PFDA | 94 | 20 - 150 | 12/09/22 14:45 | |
| 13C7-PFUnDA | 83 | 20 - 150 | 12/09/22 14:45 | |
| 13C2-PFDoDA | 73 | 20 - 150 | 12/09/22 14:45 | |
| 13C2-PFTeDA | 76 | 20 - 150 | 12/09/22 14:45 | |
| 13C8-FOSA | 65 | 20 - 150 | 12/09/22 14:45 | |
| D3-MeFOSA | 35 | 20 - 150 | 12/09/22 14:45 | |
| D5-EtFOSA | 59 | 20 - 150 | 12/09/22 14:45 | |
| D7-MeFOSE | 55 | 20 - 150 | 12/09/22 14:45 | |
| D9-EtFOSE | 48 | 20 - 150 | 12/09/22 14:45 | |
| D3-MeFOSAA | 70 | 20 - 150 | 12/09/22 14:45 | |
| D5-EtFOSAA | 73 | 20 - 150 | 12/09/22 14:45 | |
| 13C2-4:2 FTS | 68 | 20 - 150 | 12/09/22 14:45 | |
| 13C2-6:2 FTS | 67 | 20 - 150 | 12/09/22 14:45 | |
| 13C2-8:2 FTS | 65 | 20 - 150 | 12/09/22 14:45 | |
| 13C3-HFPO-DA | 94 | 20 - 150 | 12/09/22 14:45 | |

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QA/QC Report

**Client:** Pace Analytical Services **Service Request:** K2213469
**Project:** 22K0850/
**Sample Matrix:** Water

## SURROGATE RECOVERY SUMMARY

### Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**Extraction Method:** Method

| Surrogate | Control Limits | 22K0850-01 K2213469-001 | 22K0850-02 K2213469-002 | 22K0850-03 K2213469-003 |
|---|---|---|---|---|
| 13C3-PFBS | 20-150 | 86 | 79 | 80 |
| 13C3-PFHxS | 20-150 | 79 | 79 | 83 |
| 13C8-PFOS | 20-150 | 70 | 59 | 70 |
| 13C4-PFBA | 20-150 | 77 | 78 | 71 |
| 13C5-PFPeA | 20-150 | 79 | 75 | 80 |
| 13C5-PFHxA | 20-150 | 83 | 81 | 85 |
| 13C4-PFHpA | 20-150 | 80 | 82 | 95 |
| 13C8-PFOA | 20-150 | 76 | 83 | 77 |
| 13C9-PFNA | 20-150 | 83 | 75 | 77 |
| 13C6-PFDA | 20-150 | 80 | 74 | 67 |
| 13C7-PFUnDA | 20-150 | 75 | 77 | 72 |
| 13C2-PFDoDA | 20-150 | 63 | 71 | 67 |
| 13C2-PFTeDA | 20-150 | 63 | 63 | 62 |
| 13C8-FOSA | 20-150 | 61 | 53 | 58 |
| D3-MeFOSA | 20-150 | 35 | 44 | 49 |
| D5-EtFOSA | 20-150 | 56 | 42 | 47 |
| D7-MeFOSE | 20-150 | 49 | 46 | 50 |
| D9-EtFOSE | 20-150 | 41 | 44 | 46 |
| D3-MeFOSAA | 20-150 | 56 | 51 | 62 |
| D5-EtFOSAA | 20-150 | 60 | 55 | 59 |
| 13C2-4:2 FTS | 20-150 | 65 | 90 | 169* |
| 13C2-6:2 FTS | 20-150 | 66 | 78 | 123 |
| 13C2-8:2 FTS | 20-150 | 59 | 79 | 98 |
| 13C3-HFPO-DA | 20-150 | 90 | 86 | 98 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with an pound (#) indicate the control criteria is not acceptable.**

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services **Service Request:** K2213469
**Project:** 22K0850/
**Sample Matrix:** Water

## SURROGATE RECOVERY SUMMARY

### Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**Extraction Method:** Method

| Surrogate | Control Limits | 22K0850-04 K2213469-004 | 22K0850-05 K2213469-005 | 22K0850-06 K2213469-006 |
|---|---|---|---|---|
| 13C3-PFBS | 20-150 | 65 | 73 | 81 |
| 13C3-PFHxS | 20-150 | 78 | 77 | 78 |
| 13C8-PFOS | 20-150 | 77 | 68 | 68 |
| 13C4-PFBA | 20-150 | 81 | 86 | 86 |
| 13C5-PFPeA | 20-150 | 84 | 93 | 87 |
| 13C5-PFHxA | 20-150 | 88 | 79 | 75 |
| 13C4-PFHpA | 20-150 | 96 | 93 | 87 |
| 13C8-PFOA | 20-150 | 75 | 71 | 83 |
| 13C9-PFNA | 20-150 | 75 | 76 | 74 |
| 13C6-PFDA | 20-150 | 67 | 70 | 84 |
| 13C7-PFUnDA | 20-150 | 64 | 66 | 74 |
| 13C2-PFDoDA | 20-150 | 57 | 59 | 63 |
| 13C2-PFTeDA | 20-150 | 59 | 58 | 55 |
| 13C8-FOSA | 20-150 | 67 | 70 | 65 |
| D3-MeFOSA | 20-150 | 55 | 60 | 58 |
| D5-EtFOSA | 20-150 | 54 | 58 | 54 |
| D7-MeFOSE | 20-150 | 57 | 63 | 63 |
| D9-EtFOSE | 20-150 | 52 | 58 | 59 |
| D3-MeFOSAA | 20-150 | 64 | 70 | 71 |
| D5-EtFOSAA | 20-150 | 60 | 65 | 65 |
| 13C2-4:2 FTS | 20-150 | 71 | 74 | 82 |
| 13C2-6:2 FTS | 20-150 | 56 | 61 | 72 |
| 13C2-8:2 FTS | 20-150 | 59 | 63 | 72 |
| 13C3-HFPO-DA | 20-150 | 108 | 103 | 98 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with an pound (#) indicate the control criteria is not acceptable.**

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services **Service Request:** K2213469
**Project:** 22K0850/
**Sample Matrix:** Water

## SURROGATE RECOVERY SUMMARY

### Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**Extraction Method:** Method

| Surrogate | Control Limits | 22K0850-07 K2213469-007 | 22K0850-08 K2213469-008 | Method Blank KQ2220707-05 |
|---|---|---|---|---|
| 13C3-PFBS | 20-150 | 72 | 80 | 88 |
| 13C3-PFHxS | 20-150 | 78 | 82 | 84 |
| 13C8-PFOS | 20-150 | 78 | 66 | 80 |
| 13C4-PFBA | 20-150 | 81 | 85 | 86 |
| 13C5-PFPeA | 20-150 | 91 | 82 | 82 |
| 13C5-PFHxA | 20-150 | 80 | 85 | 87 |
| 13C4-PFHpA | 20-150 | 96 | 88 | 86 |
| 13C8-PFOA | 20-150 | 76 | 76 | 76 |
| 13C9-PFNA | 20-150 | 71 | 75 | 90 |
| 13C6-PFDA | 20-150 | 72 | 79 | 94 |
| 13C7-PFUnDA | 20-150 | 62 | 78 | 83 |
| 13C2-PFDoDA | 20-150 | 54 | 67 | 73 |
| 13C2-PFTeDA | 20-150 | 51 | 61 | 76 |
| 13C8-FOSA | 20-150 | 61 | 58 | 65 |
| D3-MeFOSA | 20-150 | 51 | 52 | 35 |
| D5-EtFOSA | 20-150 | 49 | 49 | 59 |
| D7-MeFOSE | 20-150 | 54 | 54 | 55 |
| D9-EtFOSE | 20-150 | 51 | 53 | 48 |
| D3-MeFOSAA | 20-150 | 65 | 61 | 70 |
| D5-EtFOSAA | 20-150 | 61 | 58 | 73 |
| 13C2-4:2 FTS | 20-150 | 63 | 76 | 68 |
| 13C2-6:2 FTS | 20-150 | 65 | 78 | 67 |
| 13C2-8:2 FTS | 20-150 | 66 | 70 | 65 |
| 13C3-HFPO-DA | 20-150 | 103 | 92 | 94 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with an pound (#) indicate the control criteria is not acceptable.**

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services **Service Request:** K2213469
**Project:** 22K0850/
**Sample Matrix:** Water

## SURROGATE RECOVERY SUMMARY

### Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**Extraction Method:** Method

| Surrogate | Control Limits | Lab Control Sample KQ2220707-04 | 22K0850-01 KQ2220707-01 | 22K0850-01 KQ2220707-02 |
|---|---|---|---|---|
| 13C3-PFBS | 20-150 | 79 | 86 | 87 |
| 13C3-PFHxS | 20-150 | 71 | 76 | 83 |
| 13C8-PFOS | 20-150 | 83 | 74 | 75 |
| 13C4-PFBA | 20-150 | 80 | 79 | 78 |
| 13C5-PFPeA | 20-150 | 74 | 78 | 78 |
| 13C5-PFHxA | 20-150 | 80 | 83 | 85 |
| 13C4-PFHpA | 20-150 | 79 | 84 | 82 |
| 13C8-PFOA | 20-150 | 81 | 90 | 82 |
| 13C9-PFNA | 20-150 | 85 | 79 | 82 |
| 13C6-PFDA | 20-150 | 82 | 71 | 80 |
| 13C7-PFUnDA | 20-150 | 78 | 70 | 71 |
| 13C2-PFDoDA | 20-150 | 63 | 63 | 66 |
| 13C2-PFTeDA | 20-150 | 66 | 58 | 63 |
| 13C8-FOSA | 20-150 | 60 | 69 | 63 |
| D3-MeFOSA | 20-150 | 35 | 40 | 35 |
| D5-EtFOSA | 20-150 | 54 | 57 | 54 |
| D7-MeFOSE | 20-150 | 49 | 51 | 48 |
| D9-EtFOSE | 20-150 | 41 | 43 | 41 |
| D3-MeFOSAA | 20-150 | 68 | 63 | 61 |
| D5-EtFOSAA | 20-150 | 63 | 65 | 60 |
| 13C2-4:2 FTS | 20-150 | 65 | 68 | 67 |
| 13C2-6:2 FTS | 20-150 | 67 | 66 | 66 |
| 13C2-8:2 FTS | 20-150 | 58 | 57 | 59 |
| 13C3-HFPO-DA | 20-150 | 87 | 92 | 90 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with an pound (#) indicate the control criteria is not acceptable.**

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services **Service Request:** K2213469
**Project:** 22K0850/
**Sample Matrix:** Water

## SURROGATE RECOVERY SUMMARY

### Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**Extraction Method:** Method

| Surrogate | Control Limits | Low Level Lab Control Sample KQ2220707-03 |
|---|---|---|
| 13C3-PFBS | 20-150 | 81 |
| 13C3-PFHxS | 20-150 | 79 |
| 13C8-PFOS | 20-150 | 77 |
| 13C4-PFBA | 20-150 | 82 |
| 13C5-PFPeA | 20-150 | 77 |
| 13C5-PFHxA | 20-150 | 83 |
| 13C4-PFHpA | 20-150 | 82 |
| 13C8-PFOA | 20-150 | 85 |
| 13C9-PFNA | 20-150 | 82 |
| 13C6-PFDA | 20-150 | 82 |
| 13C7-PFUnDA | 20-150 | 75 |
| 13C2-PFDoDA | 20-150 | 66 |
| 13C2-PFTeDA | 20-150 | 59 |
| 13C8-FOSA | 20-150 | 61 |
| D3-MeFOSA | 20-150 | 36 |
| D5-EtFOSA | 20-150 | 56 |
| D7-MeFOSE | 20-150 | 49 |
| D9-EtFOSE | 20-150 | 42 |
| D3-MeFOSAA | 20-150 | 66 |
| D5-EtFOSAA | 20-150 | 63 |
| 13C2-4:2 FTS | 20-150 | 65 |
| 13C2-6:2 FTS | 20-150 | 66 |
| 13C2-8:2 FTS | 20-150 | 58 |
| 13C3-HFPO-DA | 20-150 | 90 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with an pound (#) indicate the control criteria is not acceptable.**

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/04/23 15:13

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F014
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-02
**Analysis Lot:**790610
**Signal ID:**1

| | | 18O2-PFHxS | | 13C4-PFOS | | 13C3-PFBA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| **Result ==>** | | 175,349 | 6.89 | 134,227 | 8.64 | 558,544 | 1.34 |
| **Upper Limit ==>** | | 350,698 | 7.29 | 268,454 | 9.04 | 1,117,088 | 1.74 |
| **Lower Limit ==>** | | 52,605 | 6.49 | 40,268 | 8.24 | 167,563 | 0.94 |
| ***Associated Analyses*** | | | | | | | |
| Low Level Continuing Calibration Verification | KQ2300281-02 | 197073 | 6.857 | 118875 | 8.607 | 520153 | 1.310 |
| Continuing Calibration Blank | KQ2300281-04 | 213318 | 6.857 | 134067 | 8.607 | 572298 | 1.315 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/04/23 15:13

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F014
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-02
**Analysis Lot:**790610
**Signal ID:**1

| | | 13C2-PFHxA | | 13C4-PFOA | | 13C5-PFNA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 406,407 | 4.77 | 31,752 | 6.92 | 293,471 | 7.78 |
| | **Upper Limit ==>** | 812,814 | 5.17 | 63,504 | 7.32 | 586,942 | 8.18 |
| | **Lower Limit ==>** | 121,922 | 4.37 | 9,526 | 6.52 | 88,041 | 7.38 |
| ***Associated Analyses*** | | | | | | | |
| Low Level Continuing Calibration Verification | KQ2300281-02 | 468882 | 4.731 | 26722 | 6.889 | 277748 | 7.744 |
| Continuing Calibration Blank | KQ2300281-04 | 506629 | 4.731 | 30854 | 6.888 | 300667 | 7.744 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/04/23 15:13

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F014
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-02
**Analysis Lot:**790610
**Signal ID:**1

| | 13C2-PFDA | |
|---|---|---|
| | **Area** | **RT** |
| **Result ==>** | 130,786 | 8.55 |
| **Upper Limit ==>** | 261,572 | 8.95 |
| **Lower Limit ==>** | 39,236 | 8.15 |

***Associated Analyses***

| | | | |
|---|---|---|---|
| Low Level Continuing Calibration Verification | KQ2300281-02 | 122099 | 8.513 |
| Continuing Calibration Blank | KQ2300281-04 | 130442 | 8.514 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/04/23 21:14

**Internal Standard Area and RT SUMMARY**
**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F029
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-06
**Analysis Lot:**790610
**Signal ID:**1

| | | 18O2-PFHxS | | 13C4-PFOS | | 13C3-PFBA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 175,349 | 6.89 | 134,227 | 8.64 | 558,544 | 1.34 |
| | **Upper Limit ==>** | 350,698 | 7.29 | 268,454 | 9.04 | 1,117,088 | 1.74 |
| | **Lower Limit ==>** | 52,605 | 6.49 | 40,268 | 8.24 | 167,563 | 0.94 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2300281-06 | 197634 | 6.857 | 147675 | 8.610 | 545154 | 1.310 |
| Continuing Calibration Blank | KQ2300281-05 | 212312 | 6.846 | 160913 | 8.597 | 594898 | 1.314 |
| 22K0850-02 | K2213469-002 | 207945 | 6.865 | 206306 | 8.611 | 670552 | 1.360 |
| 22K0850-03 | K2213469-003 | 198111 | 6.865 | 192844 | 8.614 | 648542 | 1.355 |
| 22K0850-04 | K2213469-004 | 241071 | 6.869 | 165454 | 8.615 | 676294 | 1.367 |
| 22K0850-05 | K2213469-005 | 234577 | 6.870 | 168552 | 8.619 | 721904 | 1.370 |
| 22K0850-06 | K2213469-006 | 220252 | 6.872 | 172046 | 8.621 | 699879 | 1.368 |
| 22K0850-07 | K2213469-007 | 232671 | 6.870 | 168689 | 8.618 | 669781 | 1.364 |
| 22K0850-08 | K2213469-008 | 207499 | 6.878 | 179483 | 8.624 | 681755 | 1.368 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/04/23 21:14

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F029
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-06
**Analysis Lot:**790610
**Signal ID:**1

| | | 13C2-PFHxA | | 13C4-PFOA | | 13C5-PFNA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| **Result ==>** | | 406,407 | 4.77 | 31,752 | 6.92 | 293,471 | 7.78 |
| **Upper Limit ==>** | | 812,814 | 5.17 | 63,504 | 7.32 | 586,942 | 8.18 |
| **Lower Limit ==>** | | 121,922 | 4.37 | 9,526 | 6.52 | 88,041 | 7.38 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2300281-06 | 458039 | 4.731 | 27264 | 6.888 | 288875 | 7.746 |
| Continuing Calibration Blank | KQ2300281-05 | 526002 | 4.724 | 29723 | 6.879 | 316179 | 7.734 |
| 22K0850-02 | K2213469-002 | 518695 | 4.743 | 37273 | 6.894 | 347472 | 7.748 |
| 22K0850-03 | K2213469-003 | 468734 | 4.739 | 41660 | 6.895 | 340512 | 7.750 |
| 22K0850-04 | K2213469-004 | 428401 | 4.747 | 35545 | 6.897 | 345502 | 7.752 |
| 22K0850-05 | K2213469-005 | 488100 | 4.750 | 38439 | 6.899 | 365589 | 7.754 |
| 22K0850-06 | K2213469-006 | 491551 | 4.753 | 34216 | 6.902 | 358722 | 7.755 |
| 22K0850-07 | K2213469-007 | 428208 | 4.752 | 33204 | 6.899 | 348333 | 7.753 |
| 22K0850-08 | K2213469-008 | 478886 | 4.756 | 40289 | 6.907 | 341256 | 7.760 |

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**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/04/23 21:14

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F029
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-06
**Analysis Lot:**790610
**Signal ID:**1

| | | 13C2-PFDA | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **Result ==>** | 130,786 | 8.55 |
| | **Upper Limit ==>** | 261,572 | 8.95 |
| | **Lower Limit ==>** | 39,236 | 8.15 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | KQ2300281-06 | 119736 | 8.518 |
| Continuing Calibration Blank | KQ2300281-05 | 128751 | 8.504 |
| 22K0850-02 | K2213469-002 | 144808 | 8.517 |
| 22K0850-03 | K2213469-003 | 160772 | 8.520 |
| 22K0850-04 | K2213469-004 | 168725 | 8.521 |
| 22K0850-05 | K2213469-005 | 186935 | 8.523 |
| 22K0850-06 | K2213469-006 | 165387 | 8.525 |
| 22K0850-07 | K2213469-007 | 175531 | 8.523 |
| 22K0850-08 | K2213469-008 | 144146 | 8.526 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/05/23 01:30

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F040
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-08
**Analysis Lot:**790610
**Signal ID:**1

| | | 18O2-PFHxS | | 13C4-PFOS | | 13C3-PFBA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| **Result ==>** | | 175,349 | 6.89 | 134,227 | 8.64 | 558,544 | 1.34 |
| **Upper Limit ==>** | | 350,698 | 7.29 | 268,454 | 9.04 | 1,117,088 | 1.74 |
| **Lower Limit ==>** | | 52,605 | 6.49 | 40,268 | 8.24 | 167,563 | 0.94 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2300281-08 | 155957 | 6.853 | 118856 | 8.604 | 562130 | 1.303 |
| Continuing Calibration Blank | KQ2300281-07 | 196107 | 6.847 | 160481 | 8.598 | 603332 | 1.310 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/05/23 01:30

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F040
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-08
**Analysis Lot:**790610
**Signal ID:**1

| | | 13C2-PFHxA | | 13C4-PFOA | | 13C5-PFNA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 406,407 | 4.77 | 31,752 | 6.92 | 293,471 | 7.78 |
| | **Upper Limit ==>** | 812,814 | 5.17 | 63,504 | 7.32 | 586,942 | 8.18 |
| | **Lower Limit ==>** | 121,922 | 4.37 | 9,526 | 6.52 | 88,041 | 7.38 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2300281-08 | 416330 | 4.728 | 29352 | 6.885 | 273035 | 7.742 |
| Continuing Calibration Blank | KQ2300281-07 | 476463 | 4.722 | 32237 | 6.881 | 301257 | 7.736 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**01/05/23 01:30

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F040
**Instrument ID:** K-LCMS-08
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2300281-08
**Analysis Lot:**790610
**Signal ID:**1

| | 13C2-PFDA | |
|---|---|---|
| | **Area** | **RT** |
| **Result ==>** | 130,786 | 8.55 |
| **Upper Limit ==>** | 261,572 | 8.95 |
| **Lower Limit ==>** | 39,236 | 8.15 |

***Associated Analyses***

| | | | |
|---|---|---|---|
| Continuing Calibration Verification | KQ2300281-08 | 125044 | 8.512 |
| Continuing Calibration Blank | KQ2300281-07 | 127446 | 8.508 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 12:55

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F008
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-02
**Analysis Lot:**788052
**Signal ID:**1

| | | 18O2-PFHxS | | 13C4-PFOS | | 13C3-PFBA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 55,054 | 6.96 | 38,439 | 8.72 | 162,146 | 1.48 |
| | **Upper Limit ==>** | 110,108 | 7.36 | 76,878 | 9.12 | 324,292 | 1.88 |
| | **Lower Limit ==>** | 16,516 | 6.56 | 11,532 | 8.32 | 48,644 | 1.08 |
| ***Associated Analyses*** | | | | | | | |
| Low Level Continuing Calibration Verification | KQ2222406-02 | 51367 | 6.962 | 33403 | 8.723 | 145038 | 1.468 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 12:55

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F008
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-02
**Analysis Lot:**788052
**Signal ID:**1

| | | 13C2-PFHxA | | 13C4-PFOA | | 13C5-PFNA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| **Result ==>** | | 193,048 | 4.85 | 9,378 | 6.97 | 98,428 | 7.82 |
| **Upper Limit ==>** | | 386,096 | 5.25 | 18,756 | 7.37 | 196,856 | 8.22 |
| **Lower Limit ==>** | | 57,914 | 4.45 | 2,813 | 6.57 | 29,528 | 7.42 |
| ***Associated Analyses*** | | | | | | | |
| Low Level Continuing Calibration Verification | KQ2222406-02 | 177448 | 4.848 | 7933 | 6.968 | 82583 | 7.827 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 12:55

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F008
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-02
**Analysis Lot:**788052
**Signal ID:**1

| | 13C2-PFDA | |
|---|---|---|
| | **Area** | **RT** |
| **Result ==>** | 67,743 | 8.6 |
| **Upper Limit ==>** | 135,486 | 9.00 |
| **Lower Limit ==>** | 20,323 | 8.20 |

***Associated Analyses***

| | | | |
|---|---|---|---|
| Low Level Continuing Calibration Verification | KQ2222406-02 | 56181 | 8.608 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 13:17

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F009
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-03
**Analysis Lot:**788052
**Signal ID:**1

| | | 18O2-PFHxS | | 13C4-PFOS | | 13C3-PFBA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 55,054 | 6.96 | 38,439 | 8.72 | 162,146 | 1.48 |
| | **Upper Limit ==>** | 110,108 | 7.36 | 76,878 | 9.12 | 324,292 | 1.88 |
| | **Lower Limit ==>** | 16,516 | 6.56 | 11,532 | 8.32 | 48,644 | 1.08 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2222406-03 | 49869 | 6.957 | 30727 | 8.717 | 137737 | 1.464 |
| Continuing Calibration Blank | KQ2222406-04 | 55610 | 6.951 | 38790 | 8.711 | 164769 | 1.467 |
| Method Blank | KQ2220707-05 | 76229 | 6.941 | 49680 | 8.700 | 221967 | 1.455 |
| Low Level Lab Control Sample | KQ2220707-03 | 81325 | 6.938 | 55440 | 8.701 | 235039 | 1.447 |
| Lab Control Sample | KQ2220707-04 | 81461 | 6.941 | 51452 | 8.701 | 234948 | 1.441 |
| 22K0850-01 | K2213469-001 | 79508 | 6.938 | 53820 | 8.696 | 234502 | 1.450 |
| 22K0850-01MS | KQ2220707-01 | 79236 | 6.933 | 50509 | 8.693 | 236589 | 1.442 |
| 22K0850-01DMS | KQ2220707-02 | 79533 | 6.938 | 53145 | 8.699 | 240274 | 1.441 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 13:17

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F009
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-03
**Analysis Lot:**788052
**Signal ID:**1

| | | 13C2-PFHxA | | 13C4-PFOA | | 13C5-PFNA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 193,048 | 4.85 | 9,378 | 6.97 | 98,428 | 7.82 |
| | **Upper Limit ==>** | 386,096 | 5.25 | 18,756 | 7.37 | 196,856 | 8.22 |
| | **Lower Limit ==>** | 57,914 | 4.45 | 2,813 | 6.57 | 29,528 | 7.42 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2222406-03 | 165574 | 4.843 | 7851 | 6.964 | 80642 | 7.821 |
| Continuing Calibration Blank | KQ2222406-04 | 193112 | 4.835 | 9798 | 6.959 | 95576 | 7.814 |
| Method Blank | KQ2220707-05 | 267691 | 4.827 | 14191 | 6.951 | 128711 | 7.807 |
| Low Level Lab Control Sample | KQ2220707-03 | 280168 | 4.825 | 12560 | 6.949 | 138175 | 7.806 |
| Lab Control Sample | KQ2220707-04 | 284170 | 4.828 | 12834 | 6.952 | 128899 | 7.808 |
| 22K0850-01 | K2213469-001 | 270642 | 4.828 | 13299 | 6.946 | 130549 | 7.804 |
| 22K0850-01MS | KQ2220707-01 | 274341 | 4.816 | 11910 | 6.942 | 135861 | 7.799 |
| 22K0850-01DMS | KQ2220707-02 | 278314 | 4.820 | 13091 | 6.947 | 131967 | 7.804 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 13:17

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F009
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-03
**Analysis Lot:**788052
**Signal ID:**1

| | | 13C2-PFDA | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **Result ==>** | 67,743 | 8.6 |
| | **Upper Limit ==>** | 135,486 | 9.00 |
| | **Lower Limit ==>** | 20,323 | 8.20 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | KQ2222406-03 | 53818 | 8.602 |
| Continuing Calibration Blank | KQ2222406-04 | 63679 | 8.595 |
| Method Blank | KQ2220707-05 | 82703 | 8.587 |
| Low Level Lab Control Sample | KQ2220707-03 | 89269 | 8.588 |
| Lab Control Sample | KQ2220707-04 | 84546 | 8.589 |
| 22K0850-01 | K2213469-001 | 84922 | 8.583 |
| 22K0850-01MS | KQ2220707-01 | 91462 | 8.581 |
| 22K0850-01DMS | KQ2220707-02 | 84646 | 8.585 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 16:57

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F019
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-05
**Analysis Lot:**788052
**Signal ID:**1

| | | 18O2-PFHxS | | 13C4-PFOS | | 13C3-PFBA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 55,054 | 6.96 | 38,439 | 8.72 | 162,146 | 1.48 |
| | **Upper Limit ==>** | 110,108 | 7.36 | 76,878 | 9.12 | 324,292 | 1.88 |
| | **Lower Limit ==>** | 16,516 | 6.56 | 11,532 | 8.32 | 48,644 | 1.08 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2222406-05 | 49687 | 6.941 | 31795 | 8.700 | 139749 | 1.454 |
| Continuing Calibration Blank | KQ2222406-06 | 52349 | 6.946 | 33999 | 8.707 | 158249 | 1.457 |
| Continuing Calibration Blank | KQ2222406-09 | 50338 | 6.938 | 34902 | 8.694 | 151501 | 1.453 |
| Continuing Calibration Blank | KQ2222406-07 | 55440 | 6.945 | 36682 | 8.706 | 155658 | 1.450 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 16:57

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F019
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-05
**Analysis Lot:**788052
**Signal ID:**1

| | | 13C2-PFHxA | | 13C4-PFOA | | 13C5-PFNA | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| | **Result ==>** | 193,048 | 4.85 | 9,378 | 6.97 | 98,428 | 7.82 |
| | **Upper Limit ==>** | 386,096 | 5.25 | 18,756 | 7.37 | 196,856 | 8.22 |
| | **Lower Limit ==>** | 57,914 | 4.45 | 2,813 | 6.57 | 29,528 | 7.42 |
| ***Associated Analyses*** | | | | | | | |
| Continuing Calibration Verification | KQ2222406-05 | 163735 | 4.828 | 8672 | 6.953 | 79469 | 7.806 |
| Continuing Calibration Blank | KQ2222406-06 | 188655 | 4.833 | 8862 | 6.956 | 85161 | 7.811 |
| Continuing Calibration Blank | KQ2222406-09 | 175487 | 4.826 | 8583 | 6.949 | 87496 | 7.803 |
| Continuing Calibration Blank | KQ2222406-07 | 190968 | 4.832 | 9496 | 6.956 | 87458 | 7.812 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:**K2213469
**Date Analyzed:**12/09/22 16:57

**Internal Standard Area and RT SUMMARY**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F019
**Instrument ID:** K-LCMS-05
**Analysis Method:** Draft EPA Method 1633

**Lab Code:**KQ2222406-05
**Analysis Lot:**788052
**Signal ID:**1

| | | 13C2-PFDA | |
|---|---|---|---|
| | | **Area** | **RT** |
| | **Result ==>** | 67,743 | 8.6 |
| | **Upper Limit ==>** | 135,486 | 9.00 |
| | **Lower Limit ==>** | 20,323 | 8.20 |
| ***Associated Analyses*** | | | |
| Continuing Calibration Verification | KQ2222406-05 | 51357 | 8.588 |
| Continuing Calibration Blank | KQ2222406-06 | 54978 | 8.593 |
| Continuing Calibration Blank | KQ2222406-09 | 50920 | 8.583 |
| Continuing Calibration Blank | KQ2222406-07 | 57574 | 8.593 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850
**Sample Matrix:** Water

**Service Request:** K2213469
**Date Collected:** 11/01/22
**Date Received:** 11/09/22
**Date Analyzed:** 12/9/22
**Date Extracted:** 11/22/22

## Duplicate Matrix Spike Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Sample Name:** 22K0850-01
**Lab Code:** K2213469-001
**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

**Units:** ng/L
**Basis:** NA

| | | Matrix Spike KQ2220707-01 | | | Duplicate Matrix Spike KQ2220707-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| Perfluorobutane sulfonic acid (PFBS) | 7.5 | 20.1 | 16.0 | 78 | 20.6 | 15.8 | 83 | 40-150 | 3 | 30 |
| Perfluoropentane sulfonic acid (PFPeS) | 0.89 J | 19.2 | 17.0 | 108 | 15.2 | 16.8 | 85 | 40-150 | 23 | 30 |
| Perfluorohexane sulfonic acid (PFHxS) | 4.0 J | 20.5 | 16.5 | 100 | 16.9 | 16.3 | 79 | 40-150 | 19 | 30 |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 18.2 | 17.2 | 106 | 15.0 | 17.0 | 88 | 40-150 | 19 | 30 |
| Perfluorooctane sulfonic acid (PFOS) | 25 | 40.1 | 16.8 | 92 | 37.5 | 16.6 | 77 | 40-150 | 7 | 30 |
| Perfluorononane sulfonic acid (PFNS) | ND U | 17.7 | 17.4 | 102 | 15.1 | 17.2 | 88 | 40-150 | 16 | 30 |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 14.5 | 17.4 | 83 | 13.1 | 17.2 | 76 | 40-150 | 10 | 30 |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 13.8 | 17.5 | 79 | 12.8 | 17.3 | 74 | 40-150 | 7 | 30 |
| Perfluorobutanoic acid (PFBA) | 42 | 64.6 | 18.1 | 127 | 55.2 | 17.8 | 76 | 40-150 | 16 | 30 |
| Perfluoropentanoic acid (PFPeA) | 200 | 249 | 18.1 | 256 # | 197 | 17.8 | -33 # | 40-150 | 23 | 30 |
| Perfluorohexanoic acid (PFHxA) | 120 | 146 | 18.1 | 162 # | 114 | 17.8 | -15 # | 40-150 | 25 | 30 |
| Perfluoroheptanoic acid (PFHpA) | 69 | 91.7 | 18.1 | 127 | 72.7 | 17.8 | 22 * | 40-150 | 23 | 30 |
| Perfluorooctanoic acid (PFOA) | 99 | 120 | 18.1 | 119 # | 96.3 | 17.8 | -14 # | 40-150 | 22 | 30 |
| Perfluorononanoic acid (PFNA) | 8.4 | 24.2 | 18.1 | 87 | 21.2 | 17.8 | 72 | 40-150 | 13 | 30 |
| Perfluorodecanoic acid (PFDA) | 9.4 | 25.3 | 18.1 | 88 | 22.1 | 17.8 | 71 | 40-150 | 14 | 30 |
| Perfluoroundecanoic acid (PFUnDA) | 1.5 J | 16.5 | 18.1 | 83 | 15.0 | 17.8 | 76 | 40-150 | 10 | 30 |
| Perfluorododecanoic acid (PFDOA) | 0.76 J | 15.6 | 18.1 | 82 | 13.8 | 17.8 | 73 | 40-150 | 12 | 30 |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 17.7 | 18.1 | 98 | 14.7 | 17.8 | 82 | 40-150 | 18 | 30 |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 16.4 | 18.1 | 91 | 15.1 | 17.8 | 85 | 40-150 | 8 | 30 |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 16.2 | 18.1 | 89 | 15.2 | 17.8 | 85 | 40-150 | 6 | 30 |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 19.4 | 18.1 | 107 | 18.9 | 17.8 | 106 | 40-150 | 2 | 30 |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 14.5 | 18.1 | 80 | 13.7 | 17.8 | 77 | 40-150 | 6 | 30 |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 18.1 | 18.1 | 100 | 17.1 | 17.8 | 96 | 40-150 | 6 | 30 |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 16.5 | 18.1 | 91 | 15.7 | 17.8 | 88 | 40-150 | 5 | 30 |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 16.6 | 18.1 | 92 | 13.4 | 17.8 | 75 | 40-150 | 21 | 30 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.**

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 |
| | | **Date Analyzed:** | 12/9/22 |
| | | **Date Extracted:** | 11/22/22 |

**Duplicate Matrix Spike Summary**
**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

| | | | |
|---|---|---|---|
| **Sample Name:** | 22K0850-01 | **Units:** | ng/L |
| **Lab Code:** | K2213469-001 | **Basis:** | NA |
| **Analysis Method:** | Draft EPA Method 1633 | | |
| **Prep Method:** | Method | | |

| | | Matrix Spike KQ2220707-01 | | | Duplicate Matrix Spike KQ2220707-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Spike Amount** | **% Rec** | **Result** | **Spike Amount** | **% Rec** | **% Rec Limits** | **RPD** | **RPD Limit** |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 15.3 | 18.1 | 85 | 12.3 | 17.8 | 69 | 40-150 | 22 | 30 |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 15.0 | 16.9 | 89 | 13.8 | 16.7 | 83 | 40-150 | 8 | 30 |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 15.7 | 17.2 | 91 | 13.5 | 17.0 | 79 | 40-150 | 15 | 30 |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 14.6 | 17.4 | 84 | 12.0 | 17.1 | 70 | 40-150 | 20 | 30 |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 338 | 361 | 93 | 342 | 357 | 96 | 40-150 | 1 | 30 |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 324 | 361 | 90 | 312 | 357 | 87 | 40-150 | 4 | 30 |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 286 | 361 | 79 | 278 | 357 | 78 | 40-150 | 3 | 30 |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 12.9 | 16.1 | 80 | 12.4 | 15.9 | 78 | 40-150 | 4 | 30 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 12.1 | 16.9 | 71 | 11.0 | 16.6 | 66 | 40-150 | 9 | 30 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 10.2 | 17.0 | 60 | 9.00 | 16.8 | 53 | 40-150 | 12 | 30 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 17.3 | 18.1 | 96 | 16.0 | 17.8 | 89 | 40-150 | 8 | 30 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 17.0 | 18.1 | 94 | 15.7 | 17.8 | 88 | 40-150 | 8 | 30 |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 16.1 | 18.1 | 89 | 15.5 | 17.8 | 87 | 40-150 | 3 | 30 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 20.8 | 18.1 | 115 | 18.6 | 17.8 | 104 | 40-150 | 11 | 30 |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 13.2 | 17.1 | 77 | 12.7 | 16.9 | 75 | 40-150 | 4 | 30 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.**

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Analyzed:** | 12/09/22 |
| **Sample Matrix:** | Water | **Date Extracted:** | 11/22/22 |

**Lab Control Sample Summary**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

| | | | |
|---|---|---|---|
| **Analysis Method:** | Draft EPA Method 1633 | **Units:** | ng/L |
| **Prep Method:** | Method | **Basis:** | NA |
| | | **Analysis Lot:** | 788052 |

**Low Level Lab Control Sample**
**KQ2220707-03**

| Analyte Name | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | 6.13 | 9.43 | 65 | 40-150 |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | 8.07 | 9.60 | 84 | 40-150 |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 8.99 | 9.37 | 96 | 40-150 |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 9.44 | 9.51 | 99 | 40-150 |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 228 | 300 | 76 | 40-150 |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 270 | 300 | 90 | 40-150 |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | 302 | 300 | 101 | 40-150 |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | 7.52 | 9.45 | 80 | 40-150 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | 7.45 | 9.33 | 80 | 40-150 |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | 8.48 | 10.0 | 85 | 40-150 |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 9.14 | 10.0 | 91 | 40-150 |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 8.58 | 10.0 | 86 | 40-150 |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 9.90 | 10.0 | 99 | 40-150 |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 8.87 | 10.0 | 89 | 40-150 |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 8.95 | 10.0 | 90 | 40-150 |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 9.34 | 10.0 | 93 | 40-150 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | 11.0 | 10.0 | 110 | 40-150 |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | 7.85 | 8.90 | 88 | 40-150 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | 9.84 | 10.0 | 98 | 40-150 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | 9.66 | 10.0 | 97 | 40-150 |
| Perfluorobutane sulfonic acid (PFBS) | 7.58 | 8.87 | 85 | 40-150 |
| Perfluorobutanoic acid (PFBA) | 8.90 | 10.0 | 89 | 40-150 |
| Perfluorodecane sulfonic acid (PFDS) | 7.64 | 9.65 | 79 | 40-150 |
| Perfluorodecanoic acid (PFDA) | 9.17 | 10.0 | 92 | 40-150 |
| Perfluorododecane sulfonic acid (PFDoS) | 6.82 | 9.70 | 70 | 40-150 |
| Perfluorododecanoic acid (PFDOA) | 7.56 | 10.0 | 76 | 40-150 |
| Perfluoroheptane sulfonic acid (PFHpS) | 8.74 | 9.53 | 92 | 40-150 |
| Perfluoroheptanoic acid (PFHpA) | 8.74 | 10.0 | 87 | 40-150 |
| Perfluorohexane sulfonic acid (PFHxS) | 8.43 | 9.14 | 92 | 40-150 |
| Perfluorohexanoic acid (PFHxA) | 8.94 | 10.0 | 89 | 40-150 |
| Perfluorononane sulfonic acid (PFNS) | 7.97 | 9.62 | 83 | 40-150 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Analyzed:** | 12/09/22 |
| **Sample Matrix:** | Water | **Date Extracted:** | 11/22/22 |

**Lab Control Sample Summary**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

| | | | |
|---|---|---|---|
| **Analysis Method:** | Draft EPA Method 1633 | **Units:** | ng/L |
| **Prep Method:** | Method | **Basis:** | NA |
| | | **Analysis Lot:** | 788052 |

**Low Level Lab Control Sample**
**KQ2220707-03**

| Analyte Name | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|
| Perfluorononanoic acid (PFNA) | 7.55 | 10.0 | 75 | 40-150 |
| Perfluorooctane sulfonamide (PFOSAm) | 9.36 | 10.0 | 94 | 40-150 |
| Perfluorooctane sulfonic acid (PFOS) | 7.91 I | 9.28 | 85 | 40-150 |
| Perfluorooctanoic acid (PFOA) | 6.97 | 10.0 | 70 | 40-150 |
| Perfluoropentane sulfonic acid (PFPeS) | 8.92 | 9.41 | 95 | 40-150 |
| Perfluoropentanoic acid (PFPeA) | 9.72 | 10.0 | 97 | 40-150 |
| Perfluorotetradecanoic acid (PFTDA) | 9.65 | 10.0 | 97 | 40-150 |
| Perfluorotridecanoic acid (PFTrDA) | 9.19 | 10.0 | 92 | 40-150 |
| Perfluoroundecanoic acid (PFUnDA) | 7.55 | 10.0 | 76 | 40-150 |

**ALS Group USA, Corp.**
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QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Analyzed:** | 12/09/22 |
| **Sample Matrix:** | Water | **Date Extracted:** | 11/22/22 |

**Lab Control Sample Summary**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

| | | | |
|---|---|---|---|
| **Analysis Method:** | Draft EPA Method 1633 | **Units:** | ng/L |
| **Prep Method:** | Method | **Basis:** | NA |
| | | **Analysis Lot:** | 788052 |

**Lab Control Sample**
**KQ2220707-04**

| Analyte Name | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | 11.9 | 18.9 | 63 | 40-150 |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | 15.4 | 19.2 | 80 | 40-150 |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 16.7 | 18.7 | 89 | 40-150 |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 16.4 | 19.0 | 86 | 40-150 |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 310 | 400 | 77 | 40-150 |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 354 | 400 | 88 | 40-150 |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | 388 | 400 | 97 | 40-150 |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | 15.2 | 18.9 | 80 | 40-150 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | 14.2 | 18.7 | 76 | 40-150 |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | 19.8 | 20.0 | 99 | 40-150 |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 17.2 | 20.0 | 86 | 40-150 |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 16.5 | 20.0 | 83 | 40-150 |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 19.9 | 20.0 | 99 | 40-150 |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 24.7 | 20.0 | 123 | 40-150 |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 16.0 | 20.0 | 80 | 40-150 |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 19.5 | 20.0 | 98 | 40-150 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | 23.0 | 20.0 | 115 | 40-150 |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | 14.5 | 17.8 | 81 | 40-150 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | 19.9 | 20.0 | 99 | 40-150 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | 19.8 | 20.0 | 99 | 40-150 |
| Perfluorobutane sulfonic acid (PFBS) | 17.2 | 17.7 | 97 | 40-150 |
| Perfluorobutanoic acid (PFBA) | 17.2 | 20.0 | 86 | 40-150 |
| Perfluorodecane sulfonic acid (PFDS) | 16.1 | 19.3 | 83 | 40-150 |
| Perfluorodecanoic acid (PFDA) | 19.3 | 20.0 | 97 | 40-150 |
| Perfluorododecane sulfonic acid (PFDoS) | 15.5 | 19.4 | 80 | 40-150 |
| Perfluorododecanoic acid (PFDOA) | 17.6 | 20.0 | 88 | 40-150 |
| Perfluoroheptane sulfonic acid (PFHpS) | 15.9 | 19.1 | 84 | 40-150 |
| Perfluoroheptanoic acid (PFHpA) | 17.2 | 20.0 | 86 | 40-150 |
| Perfluorohexane sulfonic acid (PFHxS) | 17.5 | 18.3 | 96 | 40-150 |
| Perfluorohexanoic acid (PFHxA) | 17.1 | 20.0 | 85 | 40-150 |
| Perfluorononane sulfonic acid (PFNS) | 16.3 | 19.2 | 85 | 40-150 |

**ALS Group USA, Corp.**
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QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Analyzed:** | 12/09/22 |
| **Sample Matrix:** | Water | **Date Extracted:** | 11/22/22 |

**Lab Control Sample Summary**
**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

| | | | |
|---|---|---|---|
| **Analysis Method:** | Draft EPA Method 1633 | **Units:** | ng/L |
| **Prep Method:** | Method | **Basis:** | NA |
| | | **Analysis Lot:** | 788052 |

**Lab Control Sample**
**KQ2220707-04**

| Analyte Name | Result | Spike Amount | % Rec | % Rec Limits |
|---|---|---|---|---|
| Perfluorononanoic acid (PFNA) | 15.9 | 20.0 | 80 | 40-150 |
| Perfluorooctane sulfonamide (PFOSAm) | 18.6 I | 20.0 | 93 | 40-150 |
| Perfluorooctane sulfonic acid (PFOS) | 17.4 | 18.6 | 94 | 40-150 |
| Perfluorooctanoic acid (PFOA) | 16.5 | 20.0 | 82 | 40-150 |
| Perfluoropentane sulfonic acid (PFPeS) | 19.0 | 18.8 | 101 | 40-150 |
| Perfluoropentanoic acid (PFPeA) | 18.8 | 20.0 | 94 | 40-150 |
| Perfluorotetradecanoic acid (PFTDA) | 15.4 | 20.0 | 77 | 40-150 |
| Perfluorotridecanoic acid (PFTrDA) | 17.7 | 20.0 | 88 | 40-150 |
| Perfluoroundecanoic acid (PFUnDA) | 17.2 | 20.0 | 86 | 40-150 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850
**Sample Matrix:** Water

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 14:45
**Date Extracted:** 11/22/22

## Method Blank Summary

## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Sample Name:** Method Blank
**Lab Code:** KQ2220707-05

**Instrument ID:**K-LCMS-05
**File ID:**J:\LCMS05\Data\221209_1633_B1\221209F013

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

**Analysis Lot:**788052,790610
**Extraction Lot:**410440

This Method Blank applies to the following analyses.

| Sample Name | Lab Code | File ID | Date Analyzed |
|---|---|---|---|
| Low Level Lab Control Sample | KQ2220707-03 | J:\LCMS05\Data\221209_1633_B1\221209F014 | 12/09/22 15:07 |
| Lab Control Sample | KQ2220707-04 | J:\LCMS05\Data\221209_1633_B1\221209F015 | 12/09/22 15:29 |
| 22K0850-01 | K2213469-001 | J:\LCMS05\Data\221209_1633_B1\221209F016 | 12/09/22 15:51 |
| 22K0850-01MS | KQ2220707-01 | J:\LCMS05\Data\221209_1633_B1\221209F017 | 12/09/22 16:13 |
| 22K0850-01DMS | KQ2220707-02 | J:\LCMS05\Data\221209_1633_B1\221209F018 | 12/09/22 16:35 |
| 22K0850-02 | K2213469-002 | J:\LCMS08\Data\230104_1633_B1\230104_F031 | 01/04/23 22:01 |
| 22K0850-03 | K2213469-003 | J:\LCMS08\Data\230104_1633_B1\230104_F032 | 01/04/23 22:24 |
| 22K0850-04 | K2213469-004 | J:\LCMS08\Data\230104_1633_B1\230104_F033 | 01/04/23 22:47 |
| 22K0850-05 | K2213469-005 | J:\LCMS08\Data\230104_1633_B1\230104_F034 | 01/04/23 23:11 |
| 22K0850-06 | K2213469-006 | J:\LCMS08\Data\230104_1633_B1\230104_F035 | 01/04/23 23:34 |
| 22K0850-07 | K2213469-007 | J:\LCMS08\Data\230104_1633_B1\230104_F036 | 01/04/23 23:57 |
| 22K0850-08 | K2213469-008 | J:\LCMS08\Data\230104_1633_B1\230104_F037 | 01/05/23 00:20 |

**ALS Group USA, Corp.**
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QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Analyzed:** | 12/09/22 15:29 |
| **Sample Matrix:** | Water | **Date Extracted:** | 11/22/22 |

**Lab Control Sample Summary**
**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **Instrument ID:** | K-LCMS-05 |
| **Lab Code:** | KQ2220707-04 | **File ID:** | J:\LCMS05\Data\221209_1633_B1\221209F015 |
| **Analysis Method:** | Draft EPA Method 1633 | **Analysis Lot:** | 788052,790610 |
| **Prep Method:** | Method | **Extraction Lot:** | 410440 |

This Lab Control Sample applies to the following analyses.

| Sample Name | Lab Code | File ID | Date Analyzed |
|---|---|---|---|
| Method Blank | KQ2220707-05 | J:\LCMS05\Data\221209_1633_B1\221209F013 | 12/09/22 14:45 |
| Low Level Lab Control Sample | KQ2220707-03 | J:\LCMS05\Data\221209_1633_B1\221209F014 | 12/09/22 15:07 |
| 22K0850-01 | K2213469-001 | J:\LCMS05\Data\221209_1633_B1\221209F016 | 12/09/22 15:51 |
| 22K0850-01MS | KQ2220707-01 | J:\LCMS05\Data\221209_1633_B1\221209F017 | 12/09/22 16:13 |
| 22K0850-01DMS | KQ2220707-02 | J:\LCMS05\Data\221209_1633_B1\221209F018 | 12/09/22 16:35 |
| 22K0850-02 | K2213469-002 | J:\LCMS08\Data\230104_1633_B1\230104_F031 | 01/04/23 22:01 |
| 22K0850-03 | K2213469-003 | J:\LCMS08\Data\230104_1633_B1\230104_F032 | 01/04/23 22:24 |
| 22K0850-04 | K2213469-004 | J:\LCMS08\Data\230104_1633_B1\230104_F033 | 01/04/23 22:47 |
| 22K0850-05 | K2213469-005 | J:\LCMS08\Data\230104_1633_B1\230104_F034 | 01/04/23 23:11 |
| 22K0850-06 | K2213469-006 | J:\LCMS08\Data\230104_1633_B1\230104_F035 | 01/04/23 23:34 |
| 22K0850-07 | K2213469-007 | J:\LCMS08\Data\230104_1633_B1\230104_F036 | 01/04/23 23:57 |
| 22K0850-08 | K2213469-008 | J:\LCMS08\Data\230104_1633_B1\230104_F037 | 01/05/23 00:20 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| # | Lab Code | Sample Name | File Location | Acquisition Date |
|---|---|---|---|---|
| 01 | KC2200730-01 | 1633 ICAL @ 0.050ppb | 221208F008 | 12/08/2022 19:01 |
| 02 | KC2200730-02 | 1633 ICAL @ 0.10ppb | 221208F009 | 12/08/2022 19:23 |
| 03 | KC2200730-03 | 1633 ICAL @ 0.250ppb | 221208F010 | 12/08/2022 19:45 |
| 04 | KC2200730-04 | 1633 ICAL @ 0.50ppb | 221208F011 | 12/08/2022 20:07 |
| 05 | KC2200730-05 | 1633 ICAL @ 1.0ppb | 221208F012 | 12/08/2022 20:29 |
| 06 | KC2200730-06 | 1633 ICAL @ 5.0ppb | 221208F013 | 12/08/2022 20:51 |
| 07 | KC2200730-07 | 1633 ICAL @ 10ppb | 221208F014 | 12/08/2022 21:13 |
| 08 | KC2200730-08 | 1633 ICAL @ 15ppb | 221208F015 | 12/08/2022 21:35 |
| 09 | KC2200730-09 | 1633 ICAL @ 20ppb | 221208F016 | 12/08/2022 21:57 |

**Analyte**

**11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2360 | 4.785 | 04 | 0.4720 | 5.091 | 05 | 0.9400 | 5.372 | 06 | 4.7200 | 4.99 |
| 07 | 9.4000 | 5.224 | 08 | 14.1000 | 5.154 | 09 | 18.9000 | 5.04 | | | |

**13C2-4:2 FTS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.541 | 02 | 5.0000 | 0.5702 | 03 | 5.0000 | 0.5675 | 04 | 5.0000 | 0.565 |
| 05 | 5.0000 | 0.5883 | 06 | 5.0000 | 0.5583 | 07 | 5.0000 | 0.5601 | 08 | 5.0000 | 0.5802 |
| 09 | 5.0000 | 0.5343 | | | | | | | | | |

**13C2-6:2 FTS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.5537 | 02 | 5.0000 | 0.5769 | 03 | 5.0000 | 0.5812 | 04 | 5.0000 | 0.588 |
| 05 | 5.0000 | 0.5929 | 06 | 5.0000 | 0.5703 | 07 | 5.0000 | 0.5966 | 08 | 5.0000 | 0.5775 |
| 09 | 5.0000 | 0.5155 | | | | | | | | | |

**13C2-8:2 FTS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.5912 | 02 | 5.0000 | 0.5894 | 03 | 5.0000 | 0.5727 | 04 | 5.0000 | 0.5884 |
| 05 | 5.0000 | 0.5988 | 06 | 5.0000 | 0.5949 | 07 | 5.0000 | 0.6001 | 08 | 5.0000 | 0.5899 |
| 09 | 5.0000 | 0.5108 | | | | | | | | | |

**13C2-PFDoDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 1.192 | 02 | 1.2500 | 1.177 | 03 | 1.2500 | 1.262 | 04 | 1.2500 | 1.257 |
| 05 | 1.2500 | 1.257 | 06 | 1.2500 | 1.099 | 07 | 1.2500 | 1.19 | 08 | 1.2500 | 1.287 |
| 09 | 1.2500 | 1.068 | | | | | | | | | |

**13C2-PFTeDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 0.2831 | 02 | 1.2500 | 0.3028 | 03 | 1.2500 | 0.3131 | 04 | 1.2500 | 0.3131 |
| 05 | 1.2500 | 0.3014 | 06 | 1.2500 | 0.2778 | 07 | 1.2500 | 0.3019 | 08 | 1.2500 | 0.3138 |
| 09 | 1.2500 | 0.2585 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

**Analyte**

**13C3-HFPO-DA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 10.0000 | 0.1722 | 02 | 10.0000 | 0.1828 | 03 | 10.0000 | 0.1896 | 04 | 10.0000 | 0.1999 |
| 05 | 10.0000 | 0.1911 | 06 | 10.0000 | 0.1865 | 07 | 10.0000 | 0.1938 | 08 | 10.0000 | 0.1912 |
| 09 | 10.0000 | 0.1844 | | | | | | | | | |

**13C3-PFBS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 1.035 | 02 | 2.5000 | 1.052 | 03 | 2.5000 | 1.087 | 04 | 2.5000 | 1.11 |
| 05 | 2.5000 | 1.113 | 06 | 2.5000 | 1.088 | 07 | 2.5000 | 1.132 | 08 | 2.5000 | 1.142 |
| 09 | 2.5000 | 1.039 | | | | | | | | | |

**13C3-PFHxS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 1.029 | 02 | 2.5000 | 1.114 | 03 | 2.5000 | 1.069 | 04 | 2.5000 | 1.066 |
| 05 | 2.5000 | 1.147 | 06 | 2.5000 | 1.083 | 07 | 2.5000 | 1.131 | 08 | 2.5000 | 1.118 |
| 09 | 2.5000 | 1.041 | | | | | | | | | |

**13C4-PFBA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 10.0000 | 0.5576 | 02 | 10.0000 | 0.5723 | 03 | 10.0000 | 0.5806 | 04 | 10.0000 | 0.6084 |
| 05 | 10.0000 | 0.6012 | 06 | 10.0000 | 0.5623 | 07 | 10.0000 | 0.5875 | 08 | 10.0000 | 0.5812 |
| 09 | 10.0000 | 0.5724 | | | | | | | | | |

**13C4-PFHpA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.7835 | 02 | 2.5000 | 0.8354 | 03 | 2.5000 | 0.8541 | 04 | 2.5000 | 0.8822 |
| 05 | 2.5000 | 0.8372 | 06 | 2.5000 | 0.8365 | 07 | 2.5000 | 0.8593 | 08 | 2.5000 | 0.8342 |
| 09 | 2.5000 | 0.8247 | | | | | | | | | |

**13C5-PFHxA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.9826 | 02 | 2.5000 | 1.033 | 03 | 2.5000 | 1.034 | 04 | 2.5000 | 1.107 |
| 05 | 2.5000 | 1.03 | 06 | 2.5000 | 1.014 | 07 | 2.5000 | 1.055 | 08 | 2.5000 | 1.043 |
| 09 | 2.5000 | 1.058 | | | | | | | | | |

**13C5-PFPeA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.2519 | 02 | 5.0000 | 0.263 | 03 | 5.0000 | 0.2711 | 04 | 5.0000 | 0.2882 |
| 05 | 5.0000 | 0.261 | 06 | 5.0000 | 0.2673 | 07 | 5.0000 | 0.2711 | 08 | 5.0000 | 0.2664 |
| 09 | 5.0000 | 0.2746 | | | | | | | | | |

**13C6-PFDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 1.03 | 02 | 1.2500 | 1.078 | 03 | 1.2500 | 1.095 | 04 | 1.2500 | 1.131 |
| 05 | 1.2500 | 1.11 | 06 | 1.2500 | 0.9686 | 07 | 1.2500 | 1.071 | 08 | 1.2500 | 1.154 |
| 09 | 1.2500 | 0.9726 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

# Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

**Analyte**

**13C7-PFUnDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 1.203 | 02 | 1.2500 | 1.305 | 03 | 1.2500 | 1.377 | 04 | 1.2500 | 1.365 |
| 05 | 1.2500 | 1.314 | 06 | 1.2500 | 1.167 | 07 | 1.2500 | 1.256 | 08 | 1.2500 | 1.358 |
| 09 | 1.2500 | 1.139 | | | | | | | | | |

**13C8-FOSA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 1.368 | 02 | 2.5000 | 1.253 | 03 | 2.5000 | 1.38 | 04 | 2.5000 | 1.45 |
| 05 | 2.5000 | 1.399 | 06 | 2.5000 | 1.444 | 07 | 2.5000 | 1.303 | 08 | 2.5000 | 1.377 |
| 09 | 2.5000 | 1.225 | | | | | | | | | |

**13C8-PFOA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 16.98 | 02 | 2.5000 | 18.05 | 03 | 2.5000 | 16.81 | 04 | 2.5000 | 18.77 |
| 05 | 2.5000 | 15.75 | 06 | 2.5000 | 18.45 | 07 | 2.5000 | 17.52 | 08 | 2.5000 | 18.9 |
| 09 | 2.5000 | 19.48 | | | | | | | | | |

**13C8-PFOS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.4216 | 02 | 2.5000 | 0.4666 | 03 | 2.5000 | 0.4374 | 04 | 2.5000 | 0.4412 |
| 05 | 2.5000 | 0.4509 | 06 | 2.5000 | 0.4994 | 07 | 2.5000 | 0.3902 | 08 | 2.5000 | 0.4053 |
| 09 | 2.5000 | 0.4237 | | | | | | | | | |

**13C9-PFNA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 0.8595 | 02 | 1.2500 | 0.9914 | 03 | 1.2500 | 0.8858 | 04 | 1.2500 | 0.9384 |
| 05 | 1.2500 | 0.9361 | 06 | 1.2500 | 0.8992 | 07 | 1.2500 | 0.9639 | 08 | 1.2500 | 0.9343 |
| 09 | 1.2500 | 0.9349 | | | | | | | | | |

**1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2400 | 2.877 | 04 | 0.4800 | 2.791 | 05 | 0.9600 | 2.675 | 06 | 4.8000 | 2.371 |
| 07 | 9.6000 | 2.621 | 08 | 14.4000 | 2.603 | 09 | 19.2000 | 2.7 | | | |

**1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0469 | 2.594 | 02 | 0.0940 | 3.567 | 03 | 0.2340 | 2.854 | 04 | 0.4690 | 3.618 |
| 05 | 0.9400 | 3.724 | 06 | 4.6900 | 3.311 | 07 | 9.4000 | 3.798 | 08 | 14.1000 | 3.39 |
| 09 | 18.7000 | 3.45 | | | | | | | | | |

**1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0476 | 3.004 | 02 | 0.0950 | 2.532 | 03 | 0.2380 | 2.748 | 04 | 0.4760 | 2.969 |
| 05 | 0.9500 | 2.974 | 06 | 4.7600 | 2.799 | 07 | 9.5000 | 2.92 | 08 | 14.3000 | 2.99 |
| 09 | 19.0000 | 2.922 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

### Analyte

**2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 10.0000 | 0.1233 | 04 | 15.0000 | 0.1156 | 05 | 20.0000 | 0.1304 | 06 | 50.0000 | 0.1482 |
| 07 | 80.0000 | 0.1366 | 08 | 100.0000 | 0.1338 | 09 | 150.0000 | 0.1347 | | | |

**2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 10.0000 | 0.0946 | 04 | 15.0000 | 0.09481 | 05 | 20.0000 | 0.1093 | 06 | 50.0000 | 0.1253 |
| 07 | 80.0000 | 0.1157 | 08 | 100.0000 | 0.112 | 09 | 150.0000 | 0.1125 | | | |

**4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 10.0000 | 0.06289 | 04 | 15.0000 | 0.06491 | 05 | 20.0000 | 0.07562 | 06 | 50.0000 | 0.08553 |
| 07 | 80.0000 | 0.08267 | 08 | 100.0000 | 0.07996 | 09 | 150.0000 | 0.07755 | | | |

**4,8-Dioxa-3H-perfluorononanoic acid (DONA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0473 | 10.35 | 02 | 0.0950 | 10.07 | 03 | 0.2360 | 9.882 | 04 | 0.4730 | 10.66 |
| 05 | 0.9500 | 10.61 | 06 | 4.7300 | 9.75 | 07 | 9.5000 | 10.3 | 08 | 14.2000 | 10.49 |
| 09 | 18.9000 | 11.02 | | | | | | | | | |

**9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2340 | 5.968 | 04 | 0.4670 | 6.926 | 05 | 0.9300 | 7.04 | 06 | 4.6700 | 6.66 |
| 07 | 9.3000 | 6.992 | 08 | 14.0000 | 6.981 | 09 | 18.7000 | 6.931 | | | |

**D3-MeFOSA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.3887 | 02 | 2.5000 | 0.412 | 03 | 2.5000 | 0.3842 | 04 | 2.5000 | 0.4053 |
| 05 | 2.5000 | 0.387 | 06 | 2.5000 | 0.4387 | 07 | 2.5000 | 0.3838 | 08 | 2.5000 | 0.3264 |
| 09 | 2.5000 | 0.2757 | | | | | | | | | |

**D3-MeFOSAA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 1.546 | 02 | 5.0000 | 1.59 | 03 | 5.0000 | 1.653 | 04 | 5.0000 | 1.692 |
| 05 | 5.0000 | 1.651 | 06 | 5.0000 | 1.709 | 07 | 5.0000 | 1.498 | 08 | 5.0000 | 1.591 |
| 09 | 5.0000 | 1.544 | | | | | | | | | |

**D5-EtFOSA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.5943 | 02 | 2.5000 | 0.6278 | 03 | 2.5000 | 0.6633 | 04 | 2.5000 | 0.6919 |
| 05 | 2.5000 | 0.6487 | 06 | 2.5000 | 0.7177 | 07 | 2.5000 | 0.652 | 08 | 2.5000 | 0.6098 |
| 09 | 2.5000 | 0.5658 | | | | | | | | | |

**D5-EtFOSAA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 1.321 | 02 | 5.0000 | 1.381 | 03 | 5.0000 | 1.396 | 04 | 5.0000 | 1.443 |
| 05 | 5.0000 | 1.388 | 06 | 5.0000 | 1.54 | 07 | 5.0000 | 1.346 | 08 | 5.0000 | 1.414 |
| 09 | 5.0000 | 1.27 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

# Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

**Analyte**

**D7-MeFOSE**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 25.0000 | 0.7525 | 02 | 25.0000 | 0.6586 | 03 | 25.0000 | 0.6904 | 04 | 25.0000 | 0.7945 |
| 05 | 25.0000 | 0.7983 | 06 | 25.0000 | 0.7878 | 07 | 25.0000 | 0.6047 | 08 | 25.0000 | 0.5726 |
| 09 | 25.0000 | 0.5264 | | | | | | | | | |

**D9-EtFOSE**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 25.0000 | 0.8757 | 03 | 25.0000 | 0.9209 | 04 | 25.0000 | 1.058 | 05 | 25.0000 | 1.078 |
| 06 | 25.0000 | 1.056 | 07 | 25.0000 | 0.7619 | 08 | 25.0000 | 0.7112 | 09 | 25.0000 | 0.621 |

**Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.16 | 02 | 0.1000 | 1.07 | 03 | 0.2500 | 1.064 | 04 | 0.5000 | 1.191 |
| 05 | 1.0000 | 1.168 | 06 | 5.0000 | 1.157 | 07 | 10.0000 | 1.198 | 08 | 15.0000 | 1.21 |
| 09 | 20.0000 | 1.272 | | | | | | | | | |

**N-Ethylperfluorooctane sulfonamide (EtFOSAm)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.222 | 02 | 0.1000 | 1.373 | 03 | 0.2500 | 1.495 | 04 | 0.5000 | 1.543 |
| 05 | 1.0000 | 1.72 | 06 | 5.0000 | 1.609 | 07 | 10.0000 | 1.733 | 08 | 15.0000 | 1.693 |
| 09 | 20.0000 | 1.775 | | | | | | | | | |

**N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 0.8627 | 03 | 0.2500 | 0.9486 | 04 | 0.5000 | 0.9047 | 05 | 1.0000 | 0.9725 |
| 06 | 5.0000 | 0.9021 | 07 | 10.0000 | 1.044 | 08 | 15.0000 | 1.006 | 09 | 20.0000 | 1.035 |

**N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.619 | 02 | 0.1000 | 1.365 | 03 | 0.2500 | 1.354 | 04 | 0.5000 | 1.49 |
| 05 | 1.0000 | 1.59 | 06 | 5.0000 | 1.388 | 07 | 10.0000 | 1.492 | 08 | 15.0000 | 1.453 |
| 09 | 20.0000 | 1.406 | | | | | | | | | |

**N-Methylperfluorooctane sulfonamide (MeFOSA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.861 | 02 | 0.1000 | 2.007 | 03 | 0.2500 | 2.578 | 04 | 0.5000 | 2.708 |
| 05 | 1.0000 | 2.903 | 06 | 5.0000 | 2.5 | 07 | 10.0000 | 2.656 | 08 | 15.0000 | 2.751 |
| 09 | 20.0000 | 3.031 | | | | | | | | | |

**N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 1.06 | 03 | 0.2500 | 1.143 | 04 | 0.5000 | 1.11 | 05 | 1.0000 | 1.356 |
| 06 | 5.0000 | 1.215 | 07 | 10.0000 | 1.367 | 08 | 15.0000 | 1.304 | 09 | 20.0000 | 1.28 |

**N-Methylperfluorooctane sulfonamido ethanol (MeFOSE)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.287 | 02 | 0.1000 | 1.394 | 03 | 0.2500 | 1.123 | 04 | 0.5000 | 1.157 |
| 05 | 1.0000 | 1.3 | 06 | 5.0000 | 1.143 | 07 | 10.0000 | 1.183 | 08 | 15.0000 | 1.167 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

### Analyte

**N-Methylperfluorooctane sulfonamido ethanol (MeFOSE)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 09 | 20.0000 | 1.183 | | | | | | | | | |

**Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 0.922 | 02 | 0.1000 | 0.8244 | 03 | 0.2500 | 0.976 | 04 | 0.5000 | 0.9652 |
| 05 | 1.0000 | 1.051 | 06 | 5.0000 | 0.9697 | 07 | 10.0000 | 1.013 | 08 | 15.0000 | 1.005 |
| 09 | 20.0000 | 0.9949 | | | | | | | | | |

**Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0445 | 1.456 | 02 | 0.0890 | 1.584 | 03 | 0.2230 | 1.37 | 04 | 0.4450 | 1.385 |
| 05 | 0.8900 | 1.552 | 06 | 4.4500 | 1.395 | 07 | 8.9000 | 1.48 | 08 | 13.4000 | 1.447 |
| 09 | 17.8000 | 1.471 | | | | | | | | | |

**Perfluoro-3-methoxypropanoic acid (PFMPA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 2.055 | 02 | 0.1000 | 1.814 | 03 | 0.2500 | 1.836 | 04 | 0.5000 | 1.897 |
| 05 | 1.0000 | 2.125 | 06 | 5.0000 | 1.858 | 07 | 10.0000 | 1.984 | 08 | 15.0000 | 2.004 |
| 09 | 20.0000 | 1.976 | | | | | | | | | |

**Perfluoro-4-methoxybutanoic acid (PFMBA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 2.312 | 02 | 0.1000 | 1.941 | 03 | 0.2500 | 2.128 | 04 | 0.5000 | 2.105 |
| 05 | 1.0000 | 2.39 | 06 | 5.0000 | 2.097 | 07 | 10.0000 | 2.251 | 08 | 15.0000 | 2.231 |
| 09 | 20.0000 | 2.193 | | | | | | | | | |

**Perfluorobutane sulfonic acid (PFBS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0444 | 0.8979 | 02 | 0.0890 | 1.165 | 03 | 0.2210 | 1.024 | 04 | 0.4440 | 0.9945 |
| 05 | 0.8900 | 1.19 | 06 | 4.4400 | 1.1 | 07 | 8.9000 | 1.2 | 08 | 13.3000 | 1.159 |
| 09 | 17.7000 | 1.186 | | | | | | | | | |

**Perfluorobutanoic acid (PFBA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2500 | 1.355 | 04 | 0.5000 | 1.25 | 05 | 1.0000 | 1.357 | 06 | 5.0000 | 1.222 |
| 07 | 10.0000 | 1.264 | 08 | 15.0000 | 1.262 | 09 | 20.0000 | 1.252 | | | |

**Perfluorodecane sulfonic acid (PFDS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0483 | 2.606 | 02 | 0.0970 | 2.396 | 03 | 0.2410 | 3.105 | 04 | 0.4830 | 3.067 |
| 05 | 0.9700 | 3.095 | 06 | 4.8300 | 2.665 | 07 | 9.7000 | 3.275 | 08 | 14.5000 | 3.337 |
| 09 | 19.3000 | 3.091 | | | | | | | | | |

**Perfluorodecanoic acid (PFDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 3.466 | 02 | 0.1000 | 2.348 | 03 | 0.2500 | 1.749 | 04 | 0.5000 | 1.444 |
| 05 | 1.0000 | 1.357 | 06 | 5.0000 | 1.218 | 07 | 10.0000 | 1.268 | 08 | 15.0000 | 1.258 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

# Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

**Analyte**

**Perfluorodecanoic acid (PFDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 09 | 20.0000 | 1.222 | | | | | | | | | |

**Perfluorododecane sulfonic acid (PFDoS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2430 | 1.473 | 04 | 0.4850 | 1.515 | 05 | 0.9700 | 1.397 | 06 | 4.8500 | 1.371 |
| 07 | 9.7000 | 1.665 | 08 | 14.6000 | 1.622 | 09 | 19.4000 | 1.475 | | | |

**Perfluorododecanoic acid (PFDOA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 2.084 | 02 | 0.1000 | 1.326 | 03 | 0.2500 | 0.9646 | 04 | 0.5000 | 0.9656 |
| 05 | 1.0000 | 0.8035 | 06 | 5.0000 | 0.7154 | 07 | 10.0000 | 0.7651 | 08 | 15.0000 | 0.7362 |
| 09 | 20.0000 | 0.7739 | | | | | | | | | |

**Perfluoroheptane sulfonic acid (PFHpS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0477 | 3.836 | 02 | 0.0950 | 3.099 | 03 | 0.2390 | 3.624 | 04 | 0.4770 | 3.97 |
| 05 | 0.9500 | 3.991 | 06 | 4.7700 | 3.152 | 07 | 9.5000 | 4.045 | 08 | 14.3000 | 4.004 |
| 09 | 19.1000 | 3.793 | | | | | | | | | |

**Perfluoroheptanoic acid (PFHpA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2500 | 1.707 | 04 | 0.5000 | 1.511 | 05 | 1.0000 | 1.415 | 06 | 5.0000 | 1.248 |
| 07 | 10.0000 | 1.26 | 08 | 15.0000 | 1.294 | 09 | 20.0000 | 1.305 | | | |

**Perfluorohexane sulfonic acid (PFHxS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.0910 | 0.7915 | 03 | 0.2290 | 1.009 | 04 | 0.4570 | 1.158 | 05 | 0.9100 | 1.136 |
| 06 | 4.5700 | 1.004 | 07 | 9.1000 | 1.115 | 08 | 13.7000 | 1.079 | 09 | 18.3000 | 1.103 |

**Perfluorohexanoic acid (PFHxA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.334 | 02 | 0.1000 | 1.013 | 03 | 0.2500 | 0.9065 | 04 | 0.5000 | 1.051 |
| 05 | 1.0000 | 1.238 | 06 | 5.0000 | 1.02 | 07 | 10.0000 | 1.078 | 08 | 15.0000 | 1.075 |
| 09 | 20.0000 | 1.052 | | | | | | | | | |

**Perfluorononane sulfonic acid (PFNS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0481 | 2.278 | 02 | 0.0960 | 2.577 | 03 | 0.2400 | 2.557 | 04 | 0.4810 | 2.365 |
| 05 | 0.9600 | 2.721 | 06 | 4.8100 | 2.311 | 07 | 9.6000 | 2.942 | 08 | 14.4000 | 2.988 |
| 09 | 19.2000 | 2.672 | | | | | | | | | |

**Perfluorononanoic acid (PFNA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 3.096 | 02 | 0.1000 | 1.84 | 03 | 0.2500 | 1.526 | 04 | 0.5000 | 1.289 |
| 05 | 1.0000 | 1.163 | 06 | 5.0000 | 1.009 | 07 | 10.0000 | 1.03 | 08 | 15.0000 | 1.075 |
| 09 | 20.0000 | 1.039 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

### Analyte

**Perfluorooctane sulfonamide (PFOSAm)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2500 | 1.28 | 04 | 0.5000 | 1.42 | 05 | 1.0000 | 1.525 | 06 | 5.0000 | 1.362 |
| 07 | 10.0000 | 1.438 | 08 | 15.0000 | 1.405 | 09 | 20.0000 | 1.455 | | | |

**Perfluorooctane sulfonic acid (PFOS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2330 | 3.431 | 04 | 0.4640 | 4.771 | 05 | 0.9300 | 4.717 | 06 | 4.6400 | 3.877 |
| 07 | 9.3000 | 4.884 | 08 | 13.9000 | 4.847 | 09 | 18.6000 | 4.644 | | | |

**Perfluorooctanoic acid (PFOA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 2.433 | 02 | 0.1000 | 1.691 | 03 | 0.2500 | 1.218 | 04 | 0.5000 | 0.9999 |
| 05 | 1.0000 | 0.9967 | 06 | 5.0000 | 0.8219 | 07 | 10.0000 | 0.8783 | 08 | 15.0000 | 0.8517 |
| 09 | 20.0000 | 0.8693 | | | | | | | | | |

**Perfluoropentane sulfonic acid (PFPeS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0471 | 1.195 | 02 | 0.0940 | 1.08 | 03 | 0.2350 | 1.256 | 04 | 0.4710 | 1.301 |
| 05 | 0.9400 | 1.3 | 06 | 4.7100 | 1.259 | 07 | 9.4000 | 1.344 | 08 | 14.1000 | 1.354 |
| 09 | 18.8000 | 1.36 | | | | | | | | | |

**Perfluoropentanoic acid (PFPeA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 2.98 | 03 | 0.2500 | 2.574 | 04 | 0.5000 | 2.88 | 05 | 1.0000 | 2.968 |
| 06 | 5.0000 | 2.649 | 07 | 10.0000 | 2.832 | 08 | 15.0000 | 2.831 | 09 | 20.0000 | 2.783 |

**Perfluorotetradecanoic acid (PFTDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | 0.2500 | 3.177 | 04 | 0.5000 | 3.076 | 05 | 1.0000 | 2.869 | 06 | 5.0000 | 2.387 |
| 07 | 10.0000 | 2.403 | 08 | 15.0000 | 2.442 | 09 | 20.0000 | 2.434 | | | |

**Perfluorotridecanoic acid (PFTrDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 10.36 | 02 | 0.1000 | 7.621 | 03 | 0.2500 | 5.649 | 04 | 0.5000 | 5.136 |
| 05 | 1.0000 | 4.642 | 06 | 5.0000 | 3.921 | 07 | 10.0000 | 4.018 | 08 | 15.0000 | 4.082 |
| 09 | 20.0000 | 4.152 | | | | | | | | | |

**Perfluoroundecanoic acid (PFUnDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 2.255 | 02 | 0.1000 | 1.5 | 03 | 0.2500 | 1.174 | 04 | 0.5000 | 1.001 |
| 05 | 1.0000 | 0.9561 | 06 | 5.0000 | 0.8289 | 07 | 10.0000 | 0.8833 | 08 | 15.0000 | 0.8344 |
| 09 | 20.0000 | 0.8669 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| Analyte Name | Compound Type | Calibration Evaluation | | | | Calibration Evaluation | |
|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval | Eval Result | Control Criteria | Average RRF | Minimum RRF |
| 11-Chloroeicosafluoro-3-oxaundecane -1-sulfonic acid (11-Cl-PF3OUdS) | TRG | Average RF | % RSD | 3.6 | ≤20 | 5.094 | |
| 13C2-4:2 FTS | SURR | Average RF | % RSD | 3.0 | ≤20 | 0.5628 | |
| 13C2-6:2 FTS | SURR | Average RF | % RSD | 4.4 | ≤20 | 0.5725 | |
| 13C2-8:2 FTS | SURR | Average RF | % RSD | 4.8 | ≤20 | 0.5818 | |
| 13C2-PFDoDA | SURR | Average RF | % RSD | 6.3 | ≤20 | 1.199 | |
| 13C2-PFTeDA | SURR | Average RF | % RSD | 6.5 | ≤20 | 0.2962 | |
| 13C3-HFPO-DA | SURR | Average RF | % RSD | 4.2 | ≤20 | 0.188 | |
| 13C3-PFBS | SURR | Average RF | % RSD | 3.6 | ≤20 | 1.089 | |
| 13C3-PFHxS | SURR | Average RF | % RSD | 3.8 | ≤20 | 1.089 | |
| 13C4-PFBA | SURR | Average RF | % RSD | 2.9 | ≤20 | 0.5804 | |
| 13C4-PFHpA | SURR | Average RF | % RSD | 3.2 | ≤20 | 0.8386 | |
| 13C5-PFHxA | SURR | Average RF | % RSD | 3.3 | ≤20 | 1.04 | |
| 13C5-PFPeA | SURR | Average RF | % RSD | 3.7 | ≤20 | 0.2683 | |
| 13C6-PFDA | SURR | Average RF | % RSD | 6.1 | ≤20 | 1.068 | |
| 13C7-PFUnDA | SURR | Average RF | % RSD | 7.0 | ≤20 | 1.276 | |
| 13C8-FOSA | SURR | Average RF | % RSD | 5.8 | ≤20 | 1.355 | |
| 13C8-PFOA | SURR | Average RF | % RSD | 6.7 | ≤20 | 17.86 | |
| 13C8-PFOS | SURR | Average RF | % RSD | 7.5 | ≤20 | 0.4374 | |
| 13C9-PFNA | SURR | Average RF | % RSD | 4.3 | ≤20 | 0.9271 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | TRG | Linear | R2 | 0.9985 | ≥ | 2.663 | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | TRG | Linear | R2 | 0.9976 | ≥ | 3.367 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | TRG | Average RF | % RSD | 5.4 | ≤20 | 2.873 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | TRG | Linear | R2 | 0.9973 | ≥ | 0.1318 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | TRG | Linear | R2 | 0.9965 | ≥ | 0.1092 | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | TRG | Linear | R2 | 0.9967 | ≥ | 0.07559 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | TRG | Average RF | % RSD | 3.9 | ≤20 | 10.35 | |
| 9-Chlorohexadecafluoro-3-oxanonane -1-sulfonic acid (9-Cl-PF3ONS) | TRG | Linear | R2 | 0.9998 | ≥ | 6.786 | |
| D3-MeFOSA | SURR | Average RF | % RSD | 12.9 | ≤20 | 0.378 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| Analyte Name | Compound Type | Calibration Evaluation | | | | Calibration Evaluation | |
|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval | Eval Result | Control Criteria | Average RRF | Minimum RRF |
| D3-MeFOSAA | SURR | Average RF | % RSD | 4.5 | ≤20 | 1.608 | |
| D5-EtFOSA | SURR | Average RF | % RSD | 7.4 | ≤20 | 0.6412 | |
| D5-EtFOSAA | SURR | Average RF | % RSD | 5.5 | ≤20 | 1.389 | |
| D7-MeFOSE | SURR | Average RF | % RSD | 15.0 | ≤20 | 0.6873 | |
| D9-EtFOSE | SURR | Average RF | % RSD | 19.7 | ≤20 | 0.8853 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | TRG | Average RF | % RSD | 5.6 | ≤20 | 1.166 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | TRG | Linear | R2 | 0.9991 | ≥ | 1.574 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | TRG | Average RF | % RSD | 6.9 | ≤20 | 0.9594 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | TRG | Average RF | % RSD | 6.5 | ≤20 | 1.462 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | TRG | Linear | R2 | 0.9957 | ≥ | 2.555 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | TRG | Average RF | % RSD | 9.4 | ≤20 | 1.229 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | TRG | Average RF | % RSD | 7.5 | ≤20 | 1.215 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | TRG | Average RF | % RSD | 6.7 | ≤20 | 0.969 | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | TRG | Average RF | % RSD | 5.0 | ≤20 | 1.46 | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | TRG | Average RF | % RSD | 5.4 | ≤20 | 1.95 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | TRG | Average RF | % RSD | 6.1 | ≤20 | 2.183 | |
| Perfluorobutane sulfonic acid (PFBS) | TRG | Average RF | % RSD | 9.7 | ≤20 | 1.102 | |
| Perfluorobutanoic acid (PFBA) | TRG | Average RF | % RSD | 4.2 | ≤20 | 1.28 | |
| Perfluorodecane sulfonic acid (PFDS) | TRG | Average RF | % RSD | 10.9 | ≤20 | 2.96 | |
| Perfluorodecanoic acid (PFDA) | TRG | Linear | R2 | 0.9997 | ≥ | 1.703 | |
| Perfluorododecane sulfonic acid (PFDoS) | TRG | Average RF | % RSD | 7.2 | ≤20 | 1.503 | |
| Perfluorododecanoic acid (PFDOA) | TRG | Linear | R2 | 0.9989 | ≥ | 1.015 | |
| Perfluoroheptane sulfonic acid (PFHpS) | TRG | Average RF | % RSD | 9.8 | ≤20 | 3.724 | |
| Perfluoroheptanoic acid (PFHpA) | TRG | Linear | R2 | 0.9995 | ≥ | 1.391 | |
| Perfluorohexane sulfonic acid (PFHxS) | TRG | Linear | R2 | 0.9990 | ≥ | 1.05 | |
| Perfluorohexanoic acid (PFHxA) | TRG | Average RF | % RSD | 11.7 | ≤20 | 1.085 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| Analyte Name | Compound Type | Calibration Evaluation | | | | Calibration Evaluation | |
|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval | Eval Result | Control Criteria | Average RRF | Minimum RRF |
| Perfluorononane sulfonic acid (PFNS) | TRG | Average RF | % RSD | 9.9 | ≤20 | 2.601 | |
| Perfluorononanoic acid (PFNA) | TRG | Linear | R2 | 0.9993 | ≥ | 1.452 | |
| Perfluorooctane sulfonamide (PFOSAm) | TRG | Linear | R2 | 0.9994 | ≥ | 1.412 | |
| Perfluorooctane sulfonic acid (PFOS) | TRG | Linear | R2 | 0.9959 | ≥ | 4.453 | |
| Perfluorooctanoic acid (PFOA) | TRG | Linear | R2 | 0.9994 | ≥ | 1.196 | |
| Perfluoropentane sulfonic acid (PFPeS) | TRG | Average RF | % RSD | 7.1 | ≤20 | 1.272 | |
| Perfluoropentanoic acid (PFPeA) | TRG | Average RF | % RSD | 5.1 | ≤20 | 2.812 | |
| Perfluorotetradecanoic acid (PFTDA) | TRG | Linear | R2 | 0.9996 | ≥ | 2.684 | |
| Perfluorotridecanoic acid (PFTrDA) | TRG | Linear | R2 | 0.9993 | ≥ | 5.509 | |
| Perfluoroundecanoic acid (PFUnDA) | TRG | Linear | R2 | 0.9993 | ≥ | 1.144 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| # | Lab Code | Sample Name | File Location | Acquisition Date |
|---|---|---|---|---|
| 01 | KC2200776-01 | 22-OLC-03-16A | 221229_F006 | 12/29/2022 15:21 |
| 02 | KC2200776-02 | 22-OLC-03-16B | 221229_F007 | 12/29/2022 15:44 |
| 03 | KC2200776-03 | 22-OLC-03-16C | 221229_F008 | 12/29/2022 16:07 |
| 04 | KC2200776-04 | 22-OLC-03-16D | 221229_F009 | 12/29/2022 16:31 |
| 05 | KC2200776-05 | 22-OLC-03-16E | 221229_F010 | 12/29/2022 16:54 |
| 06 | KC2200776-06 | 22-OLC-03-16F | 221229_F011 | 12/29/2022 17:17 |
| 07 | KC2200776-07 | 22-OLC-03-16G | 221229_F012 | 12/29/2022 17:40 |
| 08 | KC2200776-08 | 22-OLC-03-16H | 221229_F013 | 12/29/2022 18:04 |
| 09 | KC2200776-09 | 22-OLC-03-16I | 221229_F014 | 12/29/2022 18:27 |

### Analyte

**11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0472 | 8.819 | 02 | 0.0940 | 8.581 | 03 | 0.2360 | 8.593 | 04 | 0.4720 | 8.711 |
| 05 | 0.9400 | 8.18 | 06 | 4.7200 | 7.459 | 07 | 9.4000 | 7.119 | 08 | 14.1000 | 7.362 |
| 09 | 18.9000 | 7.183 | | | | | | | | | |

**13C2-4:2 FTS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.1614 | 02 | 5.0000 | 0.142 | 03 | 5.0000 | 0.1336 | 04 | 5.0000 | 0.1438 |
| 05 | 5.0000 | 0.1516 | 06 | 5.0000 | 0.1361 | 07 | 5.0000 | 0.1545 | 08 | 5.0000 | 0.13 |
| 09 | 5.0000 | 0.1359 | | | | | | | | | |

**13C2-6:2 FTS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.09722 | 02 | 5.0000 | 0.08835 | 03 | 5.0000 | 0.09675 | 04 | 5.0000 | 0.1103 |
| 05 | 5.0000 | 0.09328 | 06 | 5.0000 | 0.1189 | 07 | 5.0000 | 0.1116 | 08 | 5.0000 | 0.08108 |
| 09 | 5.0000 | 0.11 | | | | | | | | | |

**13C2-8:2 FTS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.1064 | 02 | 5.0000 | 0.1021 | 03 | 5.0000 | 0.09964 | 04 | 5.0000 | 0.1012 |
| 05 | 5.0000 | 0.09693 | 06 | 5.0000 | 0.1062 | 07 | 5.0000 | 0.09647 | 08 | 5.0000 | 0.08121 |
| 09 | 5.0000 | 0.1125 | | | | | | | | | |

**13C2-PFDoDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 1.949 | 02 | 1.2500 | 1.9 | 03 | 1.2500 | 1.81 | 04 | 1.2500 | 1.749 |
| 05 | 1.2500 | 2.014 | 06 | 1.2500 | 1.746 | 07 | 1.2500 | 1.537 | 08 | 1.2500 | 1.768 |
| 09 | 1.2500 | 1.481 | | | | | | | | | |

**13C2-PFTeDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 1.098 | 02 | 1.2500 | 1.089 | 03 | 1.2500 | 1.054 | 04 | 1.2500 | 0.9438 |
| 05 | 1.2500 | 1.177 | 06 | 1.2500 | 0.9765 | 07 | 1.2500 | 0.9483 | 08 | 1.2500 | 1.068 |
| 09 | 1.2500 | 0.8061 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

**Analyte**

**13C3-HFPO-DA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 10.0000 | 0.2738 | 02 | 10.0000 | 0.2855 | 03 | 10.0000 | 0.289 | 04 | 10.0000 | 0.2738 |
| 05 | 10.0000 | 0.2836 | 06 | 10.0000 | 0.296 | 07 | 10.0000 | 0.2768 | 08 | 10.0000 | 0.2806 |
| 09 | 10.0000 | 0.2861 | | | | | | | | | |

**13C3-PFBS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 1.067 | 02 | 2.5000 | 1.007 | 03 | 2.5000 | 0.9014 | 04 | 2.5000 | 0.9322 |
| 05 | 2.5000 | 1.032 | 06 | 2.5000 | 0.9238 | 07 | 2.5000 | 0.8795 | 08 | 2.5000 | 0.8398 |
| 09 | 2.5000 | 0.9417 | | | | | | | | | |

**13C3-PFHxS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.7427 | 02 | 2.5000 | 0.8418 | 03 | 2.5000 | 0.7934 | 04 | 2.5000 | 0.7726 |
| 05 | 2.5000 | 0.7936 | 06 | 2.5000 | 0.8381 | 07 | 2.5000 | 0.7567 | 08 | 2.5000 | 0.759 |
| 09 | 2.5000 | 0.8167 | | | | | | | | | |

**13C4-PFBA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 10.0000 | 0.4871 | 02 | 10.0000 | 0.4832 | 03 | 10.0000 | 0.483 | 04 | 10.0000 | 0.4551 |
| 05 | 10.0000 | 0.4967 | 06 | 10.0000 | 0.5001 | 07 | 10.0000 | 0.4661 | 08 | 10.0000 | 0.4729 |
| 09 | 10.0000 | 0.4596 | | | | | | | | | |

**13C4-PFHpA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 1.248 | 02 | 2.5000 | 1.328 | 03 | 2.5000 | 1.298 | 04 | 2.5000 | 1.288 |
| 05 | 2.5000 | 1.216 | 06 | 2.5000 | 1.303 | 07 | 2.5000 | 1.106 | 08 | 2.5000 | 1.214 |
| 09 | 2.5000 | 1.208 | | | | | | | | | |

**13C5-PFHxA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 1.22 | 02 | 2.5000 | 1.275 | 03 | 2.5000 | 1.241 | 04 | 2.5000 | 1.213 |
| 05 | 2.5000 | 1.266 | 06 | 2.5000 | 1.126 | 07 | 2.5000 | 1.117 | 08 | 2.5000 | 1.204 |
| 09 | 2.5000 | 1.071 | | | | | | | | | |

**13C5-PFPeA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.2903 | 02 | 5.0000 | 0.2995 | 03 | 5.0000 | 0.2926 | 04 | 5.0000 | 0.2804 |
| 05 | 5.0000 | 0.2763 | 06 | 5.0000 | 0.2933 | 07 | 5.0000 | 0.2683 | 08 | 5.0000 | 0.2774 |
| 09 | 5.0000 | 0.2803 | | | | | | | | | |

**13C6-PFDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 1.072 | 02 | 1.2500 | 1.08 | 03 | 1.2500 | 0.9842 | 04 | 1.2500 | 0.9544 |
| 05 | 1.2500 | 1.097 | 06 | 1.2500 | 0.9767 | 07 | 1.2500 | 0.955 | 08 | 1.2500 | 1.105 |
| 09 | 1.2500 | 0.9633 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

**Analyte**

**13C7-PFUnDA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 1.939 | 02 | 1.2500 | 1.902 | 03 | 1.2500 | 1.761 | 04 | 1.2500 | 1.662 |
| 05 | 1.2500 | 1.761 | 06 | 1.2500 | 1.528 | 07 | 1.2500 | 1.467 | 08 | 1.2500 | 1.582 |
| 09 | 1.2500 | 1.292 | | | | | | | | | |

**13C8-FOSA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 2.058 | 02 | 2.5000 | 2.062 | 03 | 2.5000 | 1.996 | 04 | 2.5000 | 1.769 |
| 05 | 2.5000 | 1.653 | 06 | 2.5000 | 2.298 | 07 | 2.5000 | 2.267 | 08 | 2.5000 | 2.219 |
| 09 | 2.5000 | 2.684 | | | | | | | | | |

**13C8-PFOA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 14.21 | 02 | 2.5000 | 15.06 | 03 | 2.5000 | 15.14 | 04 | 2.5000 | 15.18 |
| 05 | 2.5000 | 14.89 | 06 | 2.5000 | 13.79 | 07 | 2.5000 | 12.59 | 08 | 2.5000 | 13.83 |
| 09 | 2.5000 | 12.87 | | | | | | | | | |

**13C8-PFOS**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.5964 | 02 | 2.5000 | 0.634 | 03 | 2.5000 | 0.6266 | 04 | 2.5000 | 0.5277 |
| 05 | 2.5000 | 0.5425 | 06 | 2.5000 | 0.6462 | 07 | 2.5000 | 0.6092 | 08 | 2.5000 | 0.5411 |
| 09 | 2.5000 | 0.5604 | | | | | | | | | |

**13C9-PFNA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.2500 | 0.8489 | 02 | 1.2500 | 0.8919 | 03 | 1.2500 | 0.8171 | 04 | 1.2500 | 0.8065 |
| 05 | 1.2500 | 0.8589 | 06 | 1.2500 | 0.8231 | 07 | 1.2500 | 0.8211 | 08 | 1.2500 | 0.7903 |
| 09 | 1.2500 | 0.8497 | | | | | | | | | |

**1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0480 | 2.521 | 02 | 0.0960 | 2.258 | 03 | 0.2400 | 2.405 | 04 | 0.4800 | 2.716 |
| 05 | 0.9600 | 3.111 | 06 | 4.8000 | 2.477 | 07 | 9.6000 | 2.716 | 08 | 14.4000 | 3.009 |
| 09 | 19.2000 | 2.54 | | | | | | | | | |

**1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0469 | 2.564 | 02 | 0.0940 | 3.116 | 03 | 0.2340 | 3.054 | 04 | 0.4690 | 2.481 |
| 05 | 0.9400 | 2.975 | 06 | 4.6900 | 2.994 | 07 | 9.4000 | 2.496 | 08 | 14.1000 | 2.909 |
| 09 | 18.7000 | 2.882 | | | | | | | | | |

**1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0476 | 3.228 | 02 | 0.0950 | 2.484 | 03 | 0.2380 | 2.228 | 04 | 0.4760 | 2.675 |
| 05 | 0.9500 | 2.682 | 06 | 4.7600 | 2.388 | 07 | 9.5000 | 2.454 | 08 | 14.3000 | 2.826 |
| 09 | 19.0000 | 2.31 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

### Analyte

**2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.0000 | 0.2676 | 02 | 5.0000 | 0.1693 | 03 | 10.0000 | 0.1931 | 04 | 15.0000 | 0.2048 |
| 05 | 20.0000 | 0.1903 | 06 | 50.0000 | 0.2212 | 07 | 80.0000 | 0.2094 | 08 | 100.0000 | 0.2152 |
| 09 | 150.0000 | 0.2666 | | | | | | | | | |

**2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.0000 | 0.2028 | 02 | 5.0000 | 0.1263 | 03 | 10.0000 | 0.1472 | 04 | 15.0000 | 0.1612 |
| 05 | 20.0000 | 0.1491 | 06 | 50.0000 | 0.1599 | 07 | 80.0000 | 0.1529 | 08 | 100.0000 | 0.1674 |
| 09 | 150.0000 | 0.2028 | | | | | | | | | |

**4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 1.0000 | 0.1817 | 02 | 5.0000 | 0.1273 | 03 | 10.0000 | 0.1528 | 04 | 15.0000 | 0.1655 |
| 05 | 20.0000 | 0.1612 | 06 | 50.0000 | 0.1507 | 07 | 80.0000 | 0.1551 | 08 | 100.0000 | 0.1681 |
| 09 | 150.0000 | 0.1741 | | | | | | | | | |

**4,8-Dioxa-3H-perfluorononanoic acid (DONA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0473 | 12.85 | 02 | 0.0950 | 10.87 | 03 | 0.2360 | 10.47 | 04 | 0.4730 | 12.09 |
| 05 | 0.9500 | 11.22 | 06 | 4.7300 | 8.786 | 07 | 9.5000 | 8.476 | 08 | 14.2000 | 9.85 |
| 09 | 18.9000 | 8.883 | | | | | | | | | |

**9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0467 | 11.48 | 02 | 0.0930 | 10.94 | 03 | 0.2340 | 11.61 | 04 | 0.4670 | 11.22 |
| 05 | 0.9300 | 10.48 | 06 | 4.6700 | 10.01 | 07 | 9.3000 | 9.347 | 08 | 14.0000 | 9.451 |
| 09 | 18.7000 | 8.985 | | | | | | | | | |

**D3-MeFOSA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.5966 | 02 | 2.5000 | 0.6077 | 03 | 2.5000 | 0.6243 | 04 | 2.5000 | 0.5828 |
| 05 | 2.5000 | 0.5081 | 06 | 2.5000 | 0.7016 | 07 | 2.5000 | 0.7305 | 08 | 2.5000 | 0.7185 |
| 09 | 2.5000 | 0.8076 | | | | | | | | | |

**D3-MeFOSAA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.7355 | 02 | 5.0000 | 0.7442 | 03 | 5.0000 | 0.659 | 04 | 5.0000 | 0.6131 |
| 05 | 5.0000 | 0.6312 | 06 | 5.0000 | 0.7405 | 07 | 5.0000 | 0.7951 | 08 | 5.0000 | 0.8096 |
| 09 | 5.0000 | 0.9282 | | | | | | | | | |

**D5-EtFOSA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 2.5000 | 0.8137 | 02 | 2.5000 | 0.8062 | 03 | 2.5000 | 0.801 | 04 | 2.5000 | 0.7422 |
| 05 | 2.5000 | 0.6848 | 06 | 2.5000 | 0.9244 | 07 | 2.5000 | 0.9466 | 08 | 2.5000 | 0.871 |
| 09 | 2.5000 | 1.057 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

### Analyte

**D5-EtFOSAA**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 5.0000 | 0.6658 | 02 | 5.0000 | 0.7149 | 03 | 5.0000 | 0.6248 | 04 | 5.0000 | 0.6084 |
| 05 | 5.0000 | 0.577 | 06 | 5.0000 | 0.7507 | 07 | 5.0000 | 0.7997 | 08 | 5.0000 | 0.8067 |
| 09 | 5.0000 | 0.8626 | | | | | | | | | |

**D7-MeFOSE**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 25.0000 | 0.8399 | 02 | 25.0000 | 0.8617 | 03 | 25.0000 | 0.796 | 04 | 25.0000 | 0.8077 |
| 05 | 25.0000 | 0.7427 | 06 | 25.0000 | 0.9056 | 07 | 25.0000 | 1.015 | 08 | 25.0000 | 0.9179 |
| 09 | 25.0000 | 1.116 | | | | | | | | | |

**D9-EtFOSE**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 25.0000 | 0.7567 | 02 | 25.0000 | 0.7811 | 03 | 25.0000 | 0.8294 | 04 | 25.0000 | 0.7395 |
| 05 | 25.0000 | 0.6919 | 06 | 25.0000 | 0.9699 | 07 | 25.0000 | 0.9388 | 08 | 25.0000 | 0.9628 |
| 09 | 25.0000 | 1.076 | | | | | | | | | |

**Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.575 | 02 | 0.1000 | 1.209 | 03 | 0.2500 | 1.268 | 04 | 0.5000 | 1.425 |
| 05 | 1.0000 | 1.215 | 06 | 5.0000 | 1.227 | 07 | 10.0000 | 1.103 | 08 | 15.0000 | 1.212 |
| 09 | 20.0000 | 1.216 | | | | | | | | | |

**N-Ethylperfluorooctane sulfonamide (EtFOSAm)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.566 | 02 | 0.1000 | 1.593 | 03 | 0.2500 | 1.611 | 04 | 0.5000 | 1.647 |
| 05 | 1.0000 | 1.639 | 06 | 5.0000 | 1.484 | 07 | 10.0000 | 1.48 | 08 | 15.0000 | 1.553 |
| 09 | 20.0000 | 1.491 | | | | | | | | | |

**N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 0.7521 | 03 | 0.2500 | 0.7613 | 04 | 0.5000 | 0.9619 | 05 | 1.0000 | 0.9005 |
| 06 | 5.0000 | 0.8914 | 07 | 10.0000 | 0.8461 | 08 | 15.0000 | 0.799 | 09 | 20.0000 | 0.8929 |

**N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.95 | 02 | 0.1000 | 2.469 | 03 | 0.2500 | 2.215 | 04 | 0.5000 | 2.244 |
| 05 | 1.0000 | 2.188 | 06 | 5.0000 | 1.785 | 07 | 10.0000 | 1.958 | 08 | 15.0000 | 1.731 |
| 09 | 20.0000 | 1.886 | | | | | | | | | |

**N-Methylperfluorooctane sulfonamide (MeFOSA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.81 | 02 | 0.1000 | 2.095 | 03 | 0.2500 | 2.053 | 04 | 0.5000 | 2.038 |
| 05 | 1.0000 | 2.189 | 06 | 5.0000 | 1.75 | 07 | 10.0000 | 1.819 | 08 | 15.0000 | 1.693 |
| 09 | 20.0000 | 1.933 | | | | | | | | | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

# Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

### Analyte

**N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 0.6927 | 02 | 0.1000 | 1.109 | 03 | 0.2500 | 0.8604 | 04 | 0.5000 | 1.099 |
| 05 | 1.0000 | 0.9071 | 06 | 5.0000 | 1.033 | 07 | 10.0000 | 0.99 | 08 | 15.0000 | 0.9888 |
| 09 | 20.0000 | 0.9898 | | | | | | | | | |

**N-Methylperfluorooctane sulfonamido ethanol (MeFOSE)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.441 | 02 | 0.1000 | 1.68 | 03 | 0.2500 | 1.72 | 04 | 0.5000 | 1.499 |
| 05 | 1.0000 | 1.421 | 06 | 5.0000 | 1.511 | 07 | 10.0000 | 1.284 | 08 | 15.0000 | 1.429 |
| 09 | 20.0000 | 1.359 | | | | | | | | | |

**Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 0.9871 | 02 | 0.1000 | 0.7441 | 03 | 0.2500 | 0.8655 | 04 | 0.5000 | 0.8368 |
| 05 | 1.0000 | 0.7836 | 06 | 5.0000 | 0.7755 | 07 | 10.0000 | 0.6933 | 08 | 15.0000 | 0.6562 |
| 09 | 20.0000 | 0.7712 | | | | | | | | | |

**Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0445 | 2.916 | 02 | 0.0890 | 2.823 | 03 | 0.2230 | 2.978 | 04 | 0.4450 | 3.018 |
| 05 | 0.8900 | 2.687 | 06 | 4.4500 | 2.952 | 07 | 8.9000 | 2.5 | 08 | 13.4000 | 2.398 |
| 09 | 17.8000 | 2.749 | | | | | | | | | |

**Perfluoro-3-methoxypropanoic acid (PFMPA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 3.002 | 02 | 0.1000 | 2.718 | 03 | 0.2500 | 2.867 | 04 | 0.5000 | 2.868 |
| 05 | 1.0000 | 2.701 | 06 | 5.0000 | 2.507 | 07 | 10.0000 | 2.43 | 08 | 15.0000 | 2.487 |
| 09 | 20.0000 | 2.462 | | | | | | | | | |

**Perfluoro-4-methoxybutanoic acid (PFMBA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 2.967 | 02 | 0.1000 | 2.849 | 03 | 0.2500 | 2.862 | 04 | 0.5000 | 2.985 |
| 05 | 1.0000 | 2.976 | 06 | 5.0000 | 2.634 | 07 | 10.0000 | 2.482 | 08 | 15.0000 | 2.533 |
| 09 | 20.0000 | 2.514 | | | | | | | | | |

**Perfluorobutane sulfonic acid (PFBS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0444 | 1.951 | 02 | 0.0890 | 1.678 | 03 | 0.2210 | 2.019 | 04 | 0.4440 | 1.866 |
| 05 | 0.8900 | 1.788 | 06 | 4.4400 | 1.656 | 07 | 8.9000 | 1.545 | 08 | 13.3000 | 1.517 |
| 09 | 17.7000 | 1.474 | | | | | | | | | |

**Perfluorobutanoic acid (PFBA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 1.369 | 03 | 0.2500 | 1.234 | 04 | 0.5000 | 1.201 | 05 | 1.0000 | 1.211 |
| 06 | 5.0000 | 1.115 | 07 | 10.0000 | 1.119 | 08 | 15.0000 | 1.135 | 09 | 20.0000 | 1.142 |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

### Analyte

**Perfluorodecane sulfonic acid (PFDS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0483 | 1.733 | 02 | 0.0970 | 1.703 | 03 | 0.2410 | 1.548 | 04 | 0.4830 | 1.806 |
| 05 | 0.9700 | 1.629 | 06 | 4.8300 | 1.559 | 07 | 9.7000 | 1.579 | 08 | 14.5000 | 1.67 |
| 09 | 19.3000 | 1.844 | | | | | | | | | |

**Perfluorodecanoic acid (PFDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 2.211 | 02 | 0.1000 | 2.415 | 03 | 0.2500 | 2.522 | 04 | 0.5000 | 2.23 |
| 05 | 1.0000 | 1.987 | 06 | 5.0000 | 2.055 | 07 | 10.0000 | 2.116 | 08 | 15.0000 | 1.852 |
| 09 | 20.0000 | 2.023 | | | | | | | | | |

**Perfluorododecane sulfonic acid (PFDoS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0485 | 0.8882 | 02 | 0.0970 | 0.9171 | 03 | 0.2430 | 0.9673 | 04 | 0.4850 | 1.011 |
| 05 | 0.9700 | 0.8583 | 06 | 4.8500 | 0.8486 | 07 | 9.7000 | 0.9352 | 08 | 14.6000 | 0.8535 |
| 09 | 19.4000 | 1.042 | | | | | | | | | |

**Perfluorododecanoic acid (PFDOA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 0.9916 | 02 | 0.1000 | 0.9823 | 03 | 0.2000 | 1.134 | 04 | 0.5000 | 0.8427 |
| 05 | 1.0000 | 0.868 | 06 | 5.0000 | 0.7738 | 07 | 10.0000 | 0.7729 | 08 | 15.0000 | 0.7791 |
| 09 | 20.0000 | 0.7887 | | | | | | | | | |

**Perfluoroheptane sulfonic acid (PFHpS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0477 | 2.668 | 02 | 0.0950 | 2.365 | 03 | 0.2390 | 2.369 | 04 | 0.4770 | 2.59 |
| 05 | 0.9500 | 2.281 | 06 | 4.7700 | 2.158 | 07 | 9.5000 | 2.194 | 08 | 14.3000 | 2.371 |
| 09 | 19.1000 | 2.512 | | | | | | | | | |

**Perfluoroheptanoic acid (PFHpA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.492 | 02 | 0.1000 | 1.168 | 03 | 0.2500 | 1.024 | 04 | 0.5000 | 1.112 |
| 05 | 1.0000 | 1.009 | 06 | 5.0000 | 0.9727 | 07 | 10.0000 | 0.9355 | 08 | 15.0000 | 0.9862 |
| 09 | 20.0000 | 0.9829 | | | | | | | | | |

**Perfluorohexane sulfonic acid (PFHxS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0457 | 2.198 | 02 | 0.0910 | 1.509 | 03 | 0.2290 | 1.444 | 04 | 0.4570 | 1.634 |
| 05 | 0.9100 | 1.655 | 06 | 4.5700 | 1.371 | 07 | 9.1000 | 1.447 | 08 | 13.7000 | 1.269 |
| 09 | 18.3000 | 1.356 | | | | | | | | | |

**Perfluorohexanoic acid (PFHxA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.189 | 02 | 0.1000 | 1.12 | 03 | 0.2500 | 1.161 | 04 | 0.5000 | 1.062 |
| 05 | 1.0000 | 1.11 | 06 | 5.0000 | 1.033 | 07 | 10.0000 | 0.9934 | 08 | 15.0000 | 0.9941 |
| 09 | 20.0000 | 1.014 | | | | | | | | | |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

### Analyte

**Perfluorononane sulfonic acid (PFNS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0481 | 2.285 | 02 | 0.0960 | 1.93 | 03 | 0.2400 | 1.585 | 04 | 0.4810 | 2.092 |
| 05 | 0.9600 | 1.708 | 06 | 4.8100 | 1.725 | 07 | 9.6000 | 1.686 | 08 | 14.4000 | 1.836 |
| 09 | 19.2000 | 2.014 | | | | | | | | | |

**Perfluorononanoic acid (PFNA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.363 | 02 | 0.1000 | 1.18 | 03 | 0.2500 | 1.174 | 04 | 0.5000 | 1.126 |
| 05 | 1.0000 | 1.113 | 06 | 5.0000 | 1.054 | 07 | 10.0000 | 1.047 | 08 | 15.0000 | 1.105 |
| 09 | 20.0000 | 1.027 | | | | | | | | | |

**Perfluorooctane sulfonamide (PFOSAm)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 0.9929 | 02 | 0.1000 | 0.9701 | 03 | 0.2500 | 0.9463 | 04 | 0.5000 | 1.002 |
| 05 | 1.0000 | 0.9729 | 06 | 5.0000 | 0.879 | 07 | 10.0000 | 0.8499 | 08 | 15.0000 | 0.85 |
| 09 | 20.0000 | 0.8865 | | | | | | | | | |

**Perfluorooctane sulfonic acid (PFOS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0464 | 3.646 | 02 | 0.0930 | 3.541 | 03 | 0.2330 | 2.873 | 04 | 0.4640 | 3.398 |
| 05 | 0.9300 | 3.066 | 06 | 4.6400 | 3.126 | 07 | 9.3000 | 3.08 | 08 | 13.9000 | 2.919 |
| 09 | 18.6000 | 3.335 | | | | | | | | | |

**Perfluorooctanoic acid (PFOA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 1.568 | 03 | 0.2500 | 1.587 | 04 | 0.5000 | 1.284 | 05 | 1.0000 | 1.41 |
| 06 | 5.0000 | 1.335 | 07 | 10.0000 | 1.39 | 08 | 15.0000 | 1.482 | 09 | 20.0000 | 1.563 |

**Perfluoropentane sulfonic acid (PFPeS)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0471 | 2.014 | 02 | 0.0940 | 1.565 | 03 | 0.2350 | 1.452 | 04 | 0.4710 | 1.639 |
| 05 | 0.9400 | 1.592 | 06 | 4.7100 | 1.3 | 07 | 9.4000 | 1.357 | 08 | 14.1000 | 1.314 |
| 09 | 18.8000 | 1.282 | | | | | | | | | |

**Perfluoropentanoic acid (PFPeA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 5.184 | 02 | 0.1000 | 4.928 | 03 | 0.2500 | 4.852 | 04 | 0.5000 | 4.354 |
| 05 | 1.0000 | 4.559 | 06 | 5.0000 | 4.147 | 07 | 10.0000 | 4.158 | 08 | 15.0000 | 4.116 |
| 09 | 20.0000 | 4.207 | | | | | | | | | |

**Perfluorotetradecanoic acid (PFTDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 1.543 | 03 | 0.2500 | 1.378 | 04 | 0.5000 | 1.377 | 05 | 1.0000 | 1.353 |
| 06 | 5.0000 | 1.215 | 07 | 10.0000 | 1.144 | 08 | 15.0000 | 1.212 | 09 | 20.0000 | 1.256 |

**Perfluorotridecanoic acid (PFTrDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 02 | 0.1000 | 1.904 | 03 | 0.2500 | 1.747 | 04 | 0.5000 | 1.879 | 05 | 1.0000 | 1.603 |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

**Analyte**

**Perfluorotridecanoic acid (PFTrDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 06 | 5.0000 | 1.513 | 07 | 10.0000 | 1.405 | 08 | 15.0000 | 1.376 | 09 | 20.0000 | 1.483 |

**Perfluoroundecanoic acid (PFUnDA)**

| # | Amount | RF | # | Amount | RF | # | Amount | RF | # | Amount | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 0.0500 | 1.22 | 02 | 0.1000 | 0.9393 | 03 | 0.2500 | 0.9438 | 04 | 0.5000 | 0.9767 |
| 05 | 1.0000 | 0.9749 | 06 | 5.0000 | 0.8717 | 07 | 10.0000 | 0.8551 | 08 | 15.0000 | 0.8405 |
| 09 | 20.0000 | 0.8917 | | | | | | | | | |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| Analyte Name | Compound Type | Calibration Evaluation | | | | Calibration Evaluation | |
|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval | Eval Result | Control Criteria | Average RRF | Minimum RRF |
| 11-Chloroeicosafluoro-3-oxaundecane -1-sulfonic acid (11-Cl-PF3OUdS) | TRG | Average RF | % RSD | 8.9 | ≤20 | 8.001 | |
| 13C2-4:2 FTS | SURR | Average RF | % RSD | 7.4 | ≤20 | 0.1432 | |
| 13C2-6:2 FTS | SURR | Average RF | % RSD | 12.4 | ≤20 | 0.1008 | |
| 13C2-8:2 FTS | SURR | Average RF | % RSD | 8.7 | ≤20 | 0.1003 | |
| 13C2-PFDoDA | SURR | Average RF | % RSD | 9.9 | ≤20 | 1.773 | |
| 13C2-PFTeDA | SURR | Average RF | % RSD | 10.9 | ≤20 | 1.018 | |
| 13C3-HFPO-DA | SURR | Average RF | % RSD | 2.6 | ≤20 | 0.2828 | |
| 13C3-PFBS | SURR | Average RF | % RSD | 7.8 | ≤20 | 0.9472 | |
| 13C3-PFHxS | SURR | Average RF | % RSD | 4.5 | ≤20 | 0.7905 | |
| 13C4-PFBA | SURR | Average RF | % RSD | 3.3 | ≤20 | 0.4782 | |
| 13C4-PFHpA | SURR | Average RF | % RSD | 5.5 | ≤20 | 1.245 | |
| 13C5-PFHxA | SURR | Average RF | % RSD | 6.0 | ≤20 | 1.192 | |
| 13C5-PFPeA | SURR | Average RF | % RSD | 3.6 | ≤20 | 0.2843 | |
| 13C6-PFDA | SURR | Average RF | % RSD | 6.4 | ≤20 | 1.021 | |
| 13C7-PFUnDA | SURR | Average RF | % RSD | 12.7 | ≤20 | 1.655 | |
| 13C8-FOSA | SURR | Average RF | % RSD | 14.5 | ≤20 | 2.112 | |
| 13C8-PFOA | SURR | Average RF | % RSD | 6.9 | ≤20 | 14.17 | |
| 13C8-PFOS | SURR | Average RF | % RSD | 7.7 | ≤20 | 0.5871 | |
| 13C9-PFNA | SURR | Average RF | % RSD | 3.7 | ≤20 | 0.8342 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | TRG | Average RF | % RSD | 10.6 | ≤20 | 2.639 | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | TRG | Average RF | % RSD | 8.8 | ≤20 | 2.83 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | TRG | Average RF | % RSD | 11.9 | ≤20 | 2.586 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | TRG | Average RF | % RSD | 15.4 | ≤20 | 0.2153 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | TRG | Average RF | % RSD | 15.4 | ≤20 | 0.1633 | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | TRG | Average RF | % RSD | 9.9 | ≤20 | 0.1596 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | TRG | Average RF | % RSD | 14.7 | ≤20 | 10.39 | |
| 9-Chlorohexadecafluoro-3-oxanonane -1-sulfonic acid (9-Cl-PF3ONS) | TRG | Average RF | % RSD | 9.5 | ≤20 | 10.39 | |
| D3-MeFOSA | SURR | Average RF | % RSD | 14.2 | ≤20 | 0.6531 | |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| Analyte Name | Compound Type | Calibration Evaluation | | | | Calibration Evaluation | |
|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval | Eval Result | Control Criteria | Average RRF | Minimum RRF |
| D3-MeFOSAA | SURR | Average RF | % RSD | 13.3 | ≤20 | 0.7396 | |
| D5-EtFOSA | SURR | Average RF | % RSD | 13.3 | ≤20 | 0.8497 | |
| D5-EtFOSAA | SURR | Average RF | % RSD | 14.0 | ≤20 | 0.7123 | |
| D7-MeFOSE | SURR | Average RF | % RSD | 13.1 | ≤20 | 0.8892 | |
| D9-EtFOSE | SURR | Average RF | % RSD | 15.2 | ≤20 | 0.8607 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | TRG | Average RF | % RSD | 11.1 | ≤20 | 1.272 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | TRG | Average RF | % RSD | 4.2 | ≤20 | 1.563 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | TRG | Average RF | % RSD | 8.7 | ≤20 | 0.8506 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | TRG | Average RF | % RSD | 11.9 | ≤20 | 2.048 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | TRG | Average RF | % RSD | 8.9 | ≤20 | 1.931 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | TRG | Average RF | % RSD | 13.4 | ≤20 | 0.9634 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | TRG | Average RF | % RSD | 9.5 | ≤20 | 1.483 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | TRG | Average RF | % RSD | 12.4 | ≤20 | 0.7904 | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | TRG | Average RF | % RSD | 7.8 | ≤20 | 2.78 | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | TRG | Average RF | % RSD | 7.9 | ≤20 | 2.672 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | TRG | Average RF | % RSD | 7.7 | ≤20 | 2.756 | |
| Perfluorobutane sulfonic acid (PFBS) | TRG | Average RF | % RSD | 11.4 | ≤20 | 1.721 | |
| Perfluorobutanoic acid (PFBA) | TRG | Average RF | % RSD | 7.1 | ≤20 | 1.191 | |
| Perfluorodecane sulfonic acid (PFDS) | TRG | Average RF | % RSD | 6.4 | ≤20 | 1.675 | |
| Perfluorodecanoic acid (PFDA) | TRG | Linear | R2 | 0.9972 | ≥ | 2.157 | |
| Perfluorododecane sulfonic acid (PFDoS) | TRG | Average RF | % RSD | 7.6 | ≤20 | 0.9246 | |
| Perfluorododecanoic acid (PFDOA) | TRG | Average RF | % RSD | 14.5 | ≤20 | 0.8815 | |
| Perfluoroheptane sulfonic acid (PFHpS) | TRG | Average RF | % RSD | 7.2 | ≤20 | 2.39 | |
| Perfluoroheptanoic acid (PFHpA) | TRG | Linear | R2 | 0.9995 | ≥ | 1.076 | |
| Perfluorohexane sulfonic acid (PFHxS) | TRG | Linear | R2 | 0.9968 | ≥ | 1.543 | |
| Perfluorohexanoic acid (PFHxA) | TRG | Average RF | % RSD | 6.8 | ≤20 | 1.075 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| Analyte Name | Compound Type | Calibration Evaluation | | | | Calibration Evaluation | |
|---|---|---|---|---|---|---|---|
| | | Fit Type | Eval | Eval Result | Control Criteria | Average RRF | Minimum RRF |
| Perfluorononane sulfonic acid (PFNS) | TRG | Average RF | % RSD | 12.1 | ≤20 | 1.873 | |
| Perfluorononanoic acid (PFNA) | TRG | Average RF | % RSD | 9.0 | ≤20 | 1.132 | |
| Perfluorooctane sulfonamide (PFOSAm) | TRG | Average RF | % RSD | 6.6 | ≤20 | 0.9277 | |
| Perfluorooctane sulfonic acid (PFOS) | TRG | Average RF | % RSD | 8.4 | ≤20 | 3.221 | |
| Perfluorooctanoic acid (PFOA) | TRG | Average RF | % RSD | 7.9 | ≤20 | 1.452 | |
| Perfluoropentane sulfonic acid (PFPeS) | TRG | Linear | R2 | 0.9985 | ≥ | 1.502 | |
| Perfluoropentanoic acid (PFPeA) | TRG | Average RF | % RSD | 8.9 | ≤20 | 4.5 | |
| Perfluorotetradecanoic acid (PFTDA) | TRG | Average RF | % RSD | 9.8 | ≤20 | 1.31 | |
| Perfluorotridecanoic acid (PFTrDA) | TRG | Average RF | % RSD | 12.8 | ≤20 | 1.614 | |
| Perfluoroundecanoic acid (PFUnDA) | TRG | Average RF | % RSD | 12.1 | ≤20 | 0.946 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| # | Lab Code | Sample Name | File Location | Acquisition Date |
|---|---|---|---|---|
| 10 | KC2200730-10 | 1633 ICV @ 1.0ppb | 221208F018 | 12/08/2022 22:41 |
| 11 | KC2200730-11 | 1633 Abs 533 ICV @ 1.0ppb | 221208F019 | 12/08/2022 23:03 |
| 12 | KC2200730-12 | 1633 Abs 537 ICV @ 1.0ppb | 221208F020 | 12/08/2022 23:25 |
| 13 | KC2200730-13 | Abs FTCAs ICV @ 20ppb | 221208F021 | 12/08/2022 23:47 |

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.890 | 0.857 | 1.102E0 | 1.061E0 | -3.726 | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.940 | 0.940 | 1.272E0 | 1.272E0 | -0.016 | ±30 | Average RF |
| Perfluorohexane sulfonic acid (PFHxS) | 0.910 | 0.956 | 1.05E0 | 1.128E0 | 5.06 | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.950 | 0.862 | 3.724E0 | 3.378E0 | -9.295 | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.930 | 0.745 | 4.453E0 | 3.534E0 | -19.840 | ±30 | Linear |
| Perfluorononane sulfonic acid (PFNS) | 0.960 | 0.910 | 2.601E0 | 2.465E0 | -5.243 | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.970 | 0.837 | 2.96E0 | 2.552E0 | -13.757 | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.970 | 0.920 | 1.503E0 | 1.425E0 | -5.167 | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 1.00 | 0.819 | 1.28E0 | 1.049E0 | -18.076 | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 1.00 | 0.815 | 2.812E0 | 2.293E0 | -18.452 | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 1.00 | 0.742 | 1.085E0 | 8.049E-1 | -25.834 | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 1.00 | 0.742 | 1.391E0 | 1.055E0 | -25.789 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 1.00 | 0.809 | 1.196E0 | 7.744E-1 | -19.056 | ±30 | Linear |
| Perfluorononanoic acid (PFNA) | 1.00 | 0.751 | 1.452E0 | 8.788E-1 | -24.931 | ±30 | Linear |
| Perfluorodecanoic acid (PFDA) | 1.00 | 0.701 | 1.703E0 | 9.777E-1 | -29.885 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 1.00 | 0.805 | 1.144E0 | 7.559E-1 | -19.523 | ±30 | Linear |
| Perfluorododecanoic acid (PFDOA) | 1.00 | 0.773 | 1.015E0 | 6.433E-1 | -22.737 | ±30 | Linear |
| Perfluorotridecanoic acid (PFTrDA) | 1.00 | 0.866 | 5.509E0 | 3.865E0 | -13.417 | ±30 | Linear |
| Perfluorotetradecanoic acid (PFTDA) | 1.00 | 0.960 | 2.684E0 | 2.572E0 | -4.026 | ±30 | Linear |
| Perfluorooctane sulfonamide (PFOSAm) | 1.00 | 0.829 | 1.412E0 | 1.168E0 | -17.150 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 1.00 | 0.840 | 2.555E0 | 2.309E0 | -16.008 | ±30 | Linear |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 1.00 | 0.866 | 1.574E0 | 1.46E0 | -13.359 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 1.00 | 0.827 | 1.215E0 | 1.005E0 | -17.276 | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 1.00 | 0.828 | 1.462E0 | 1.211E0 | -17.184 | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 1.00 | 0.953 | 1.229E0 | 1.172E0 | -4.678 | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 1.00 | 0.949 | 9.594E-1 | 9.1E-1 | -5.148 | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.940 | 0.849 | 3.367E0 | 3.126E0 | -9.696 | ±30 | Linear |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.950 | 0.893 | 2.873E0 | 2.7E0 | -6.014 | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | 0.960 | 0.790 | 2.663E0 | 2.197E0 | -17.679 | ±30 | Linear |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | 20.0 | 17.7 | 7.559E-2 | 6.425E-2 | -11.427 | ±30 | Linear |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 20.0 | 17.3 | 1.092E-1 | 9.103E-2 | -13.598 | ±30 | Linear |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 20.0 | 17.3 | 1.318E-1 | 1.111E-1 | -13.602 | ±30 | Linear |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | 0.930 | 0.829 | 6.786E0 | 6.04E0 | -10.853 | ±30 | Linear |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | 0.940 | 0.811 | 5.094E0 | 4.393E0 | -13.760 | ±30 | Average RF |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | 1.00 | 0.847 | 1.95E0 | 1.651E0 | -15.325 | ±30 | Average RF |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | 1.00 | 0.816 | 2.183E0 | 1.78E0 | -18.449 | ±30 | Average RF |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | 1.00 | 0.815 | 1.166E0 | 9.494E-1 | -18.549 | ±30 | Average RF |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | 1.00 | 0.827 | 9.69E-1 | 8.016E-1 | -17.273 | ±30 | Average RF |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | 0.950 | 0.818 | 1.035E1 | 8.913E0 | -13.858 | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| 13C3-PFBS | 2.50 | 3.14 | 1.089E0 | 1.369E0 | 25.76 | ±30 | Average RF |
| 13C3-PFBS | 2.50 | 2.39 | 1.089E0 | 1.042E0 | -4.275 | ±30 | Average RF |
| 13C3-PFBS | 2.50 | 2.58 | 1.089E0 | 1.125E0 | 3.30 | ±30 | Average RF |
| 13C3-PFBS | 2.50 | 2.77 | 1.089E0 | 1.208E0 | 10.99 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.59 | 1.089E0 | 1.126E0 | 3.43 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.27 | 1.089E0 | 9.887E-1 | -9.181 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.70 | 1.089E0 | 1.174E0 | 7.84 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.55 | 1.089E0 | 1.11E0 | 1.97 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.72 | 4.374E-1 | 4.754E-1 | 8.70 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.39 | 4.374E-1 | 4.188E-1 | -4.255 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.64 | 4.374E-1 | 4.614E-1 | 5.49 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.42 | 4.374E-1 | 4.225E-1 | -3.390 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 10.1 | 5.804E-1 | 5.879E-1 | 1.29 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 10.2 | 5.804E-1 | 5.93E-1 | 2.17 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 10.2 | 5.804E-1 | 5.906E-1 | 1.77 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 9.67 | 5.804E-1 | 5.611E-1 | -3.318 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 4.88 | 2.683E-1 | 2.618E-1 | -2.409 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 5.30 | 2.683E-1 | 2.844E-1 | 6.01 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 5.26 | 2.683E-1 | 2.82E-1 | 5.13 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 5.18 | 2.683E-1 | 2.777E-1 | 3.52 | ±30 | Average RF |
| 13C5-PFHxA | 2.50 | 2.56 | 1.04E0 | 1.065E0 | 2.41 | ±30 | Average RF |
| 13C5-PFHxA | 2.50 | 2.64 | 1.04E0 | 1.099E0 | 5.73 | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| 13C5-PFHxA | 2.50 | 2.58 | 1.04E0 | 1.074E0 | 3.27 | ±30 | Average RF |
| 13C5-PFHxA | 2.50 | 2.43 | 1.04E0 | 1.01E0 | -2.833 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.42 | 8.386E-1 | 8.129E-1 | -3.066 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.53 | 8.386E-1 | 8.493E-1 | 1.28 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.54 | 8.386E-1 | 8.507E-1 | 1.45 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.54 | 8.386E-1 | 8.521E-1 | 1.61 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.27 | 1.786E1 | 1.622E1 | -9.159 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.79 | 1.786E1 | 1.995E1 | 11.72 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.81 | 1.786E1 | 2.009E1 | 12.53 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.75 | 1.786E1 | 1.965E1 | 10.06 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.32 | 9.271E-1 | 9.789E-1 | 5.59 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.22 | 9.271E-1 | 9.071E-1 | -2.157 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.38 | 9.271E-1 | 1.02E0 | 10.01 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.20 | 9.271E-1 | 8.877E-1 | -4.243 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.16 | 1.068E0 | 9.919E-1 | -7.107 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.19 | 1.068E0 | 1.013E0 | -5.105 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.27 | 1.068E0 | 1.088E0 | 1.93 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.33 | 1.068E0 | 1.137E0 | 6.50 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.22 | 1.276E0 | 1.243E0 | -2.616 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.15 | 1.276E0 | 1.176E0 | -7.867 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.28 | 1.276E0 | 1.309E0 | 2.58 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.32 | 1.276E0 | 1.346E0 | 5.47 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.34 | 1.199E0 | 1.28E0 | 6.81 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.26 | 1.199E0 | 1.206E0 | 0.593 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.26 | 1.199E0 | 1.206E0 | 0.585 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.17 | 1.199E0 | 1.125E0 | -6.146 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.06 | 2.962E-1 | 2.516E-1 | -15.062 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.16 | 2.962E-1 | 2.755E-1 | -6.976 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.20 | 2.962E-1 | 2.831E-1 | -4.398 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.30 | 2.962E-1 | 3.077E-1 | 3.89 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.29 | 1.355E0 | 1.242E0 | -8.351 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.55 | 1.355E0 | 1.384E0 | 2.09 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.35 | 1.355E0 | 1.275E0 | -5.965 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.50 | 1.355E0 | 1.355E0 | -0.059 | ±30 | Average RF |
| D3-MeFOSA | 2.50 | 1.93 | 3.78E-1 | 2.912E-1 | -22.946 | ±30 | Average RF |
| D3-MeFOSA | 2.50 | 2.08 | 3.78E-1 | 3.137E-1 | -16.999 | ±30 | Average RF |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/8/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200730
**Instrument ID:** K-LCMS-05

**Signal ID:** 1

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| D3-MeFOSA | 2.50 | 1.79 | 3.78E-1 | 2.703E-1 | -28.480 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 1.96 | 6.412E-1 | 5.015E-1 | -21.785 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 2.48 | 6.412E-1 | 6.368E-1 | -0.690 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 2.12 | 6.412E-1 | 5.439E-1 | -15.173 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 2.18 | 6.412E-1 | 5.59E-1 | -12.828 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 18.4 | 6.873E-1 | 5.056E-1 | -26.441 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 20.8 | 6.873E-1 | 5.71E-1 | -16.922 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 18.5 | 6.873E-1 | 5.087E-1 | -25.983 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 19.8 | 6.873E-1 | 5.451E-1 | -20.685 | ±30 | Average RF |
| D9-EtFOSE | 25.0 | 17.5 | 8.853E-1 | 6.193E-1 | -30.045* | ±30 | Average RF |
| D9-EtFOSE | 25.0 | 16.0 | 8.853E-1 | 5.666E-1 | -36.000* | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 5.29 | 1.608E0 | 1.701E0 | 5.78 | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 4.90 | 1.608E0 | 1.575E0 | -2.042 | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 5.36 | 1.608E0 | 1.725E0 | 7.29 | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 4.96 | 1.608E0 | 1.596E0 | -0.734 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 5.09 | 1.389E0 | 1.413E0 | 1.72 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 4.88 | 1.389E0 | 1.356E0 | -2.375 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 5.27 | 1.389E0 | 1.464E0 | 5.43 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 4.73 | 1.389E0 | 1.313E0 | -5.458 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 4.52 | 5.628E-1 | 5.09E-1 | -9.553 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 4.87 | 5.628E-1 | 5.477E-1 | -2.677 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 5.11 | 5.628E-1 | 5.75E-1 | 2.18 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 4.78 | 5.628E-1 | 5.381E-1 | -4.379 | ±30 | Average RF |
| 13C2-6:2 FTS | 5.00 | 4.50 | 5.725E-1 | 5.156E-1 | -9.934 | ±30 | Average RF |
| 13C2-6:2 FTS | 5.00 | 5.02 | 5.725E-1 | 5.748E-1 | 0.403 | ±30 | Average RF |
| 13C2-6:2 FTS | 5.00 | 4.99 | 5.725E-1 | 5.716E-1 | -0.168 | ±30 | Average RF |
| 13C2-6:2 FTS | 5.00 | 4.44 | 5.725E-1 | 5.079E-1 | -11.292 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 4.15 | 5.818E-1 | 4.833E-1 | -16.922 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 4.32 | 5.818E-1 | 5.03E-1 | -13.539 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 4.92 | 5.818E-1 | 5.722E-1 | -1.653 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 5.03 | 5.818E-1 | 5.851E-1 | 0.560 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 10.3 | 1.88E-1 | 1.942E-1 | 3.31 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 9.81 | 1.88E-1 | 1.844E-1 | -1.910 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 10.8 | 1.88E-1 | 2.028E-1 | 7.87 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 10.4 | 1.88E-1 | 1.947E-1 | 3.56 | ±30 | Average RF |

**ALS Group USA, Corp.**
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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| # | Lab Code | Sample Name | File Location | Acquisition Date |
|---|---|---|---|---|
| 11 | KC2200776-11 | 22-OLC-03-21B | 221229_F016 | 12/29/2022 19:13 |
| 12 | KC2200776-12 | 22-OLC-03-17A | 221229_F017 | 12/29/2022 19:37 |
| 13 | KC2200776-13 | 22-OLC-03-17B | 221229_F018 | 12/29/2022 20:00 |
| 14 | KC2200776-14 | 22-OLC-03-17C | 221229_F019 | 12/29/2022 20:23 |

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.890 | 1.02 | 1.721E0 | 1.967E0 | 14.24 | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.940 | 1.06 | 1.502E0 | 1.529E0 | 13.16 | ±30 | Linear |
| Perfluorohexane sulfonic acid (PFHxS) | 0.910 | 0.958 | 1.543E0 | 1.47E0 | 5.32 | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.950 | 0.971 | 2.39E0 | 2.443E0 | 2.20 | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.930 | 0.840 | 3.221E0 | 2.908E0 | -9.703 | ±30 | Average RF |
| Perfluorononane sulfonic acid (PFNS) | 0.960 | 1.04 | 1.873E0 | 2.022E0 | 7.90 | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.970 | 1.04 | 1.675E0 | 1.8E0 | 7.49 | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.970 | 0.889 | 9.246E-1 | 8.474E-1 | -8.349 | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 1.00 | 0.976 | 1.191E0 | 1.162E0 | -2.389 | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 1.00 | 0.980 | 4.5E0 | 4.41E0 | -2.013 | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 1.00 | 0.712 | 1.075E0 | 7.655E-1 | -28.812 | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 1.00 | 0.962 | 1.076E0 | 9.599E-1 | -3.831 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 1.00 | 0.804 | 1.452E0 | 1.167E0 | -19.641 | ±30 | Average RF |
| Perfluorononanoic acid (PFNA) | 1.00 | 0.994 | 1.132E0 | 1.125E0 | -0.628 | ±30 | Average RF |
| Perfluorodecanoic acid (PFDA) | 1.00 | 0.967 | 2.157E0 | 1.966E0 | -3.308 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 1.00 | 0.945 | 9.46E-1 | 8.937E-1 | -5.530 | ±30 | Average RF |
| Perfluorododecanoic acid (PFDOA) | 1.00 | 0.827 | 8.815E-1 | 7.29E-1 | -17.297 | ±30 | Average RF |
| Perfluorotridecanoic acid (PFTrDA) | 1.00 | 0.789 | 1.614E0 | 1.273E0 | -21.140 | ±30 | Average RF |
| Perfluorotetradecanoic acid (PFTDA) | 1.00 | 0.971 | 1.31E0 | 1.272E0 | -2.895 | ±30 | Average RF |
| Perfluorooctane sulfonamide (PFOSAm) | 1.00 | 0.979 | 9.277E-1 | 9.086E-1 | -2.059 | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 1.00 | 0.855 | 1.931E0 | 1.651E0 | -14.491 | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 1.00 | 0.850 | 1.563E0 | 1.328E0 | -15.041 | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 1.00 | 0.922 | 1.483E0 | 1.368E0 | -7.770 | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 1.00 | 0.829 | 2.048E0 | 1.697E0 | -17.132 | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 1.00 | 1.01 | 9.634E-1 | 9.747E-1 | 1.17 | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 1.00 | 1.01 | 8.506E-1 | 8.59E-1 | 0.987 | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.940 | 0.817 | 2.83E0 | 2.459E0 | -13.119 | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.950 | 1.05 | 2.586E0 | 2.853E0 | 10.32 | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | 0.960 | 0.822 | 2.639E0 | 2.261E0 | -14.324 | ±30 | Average RF |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | 20.0 | 20.4 | 1.596E-1 | 1.632E-1 | 2.24 | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | 20.0 | 18.2 | 1.633E-1 | 1.483E-1 | -9.145 | ±30 | Average RF |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | 20.0 | 18.6 | 2.153E-1 | 1.997E-1 | -7.234 | ±30 | Average RF |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | 0.890 | 1.07 | 2.78E0 | 3.352E0 | 20.58 | ±30 | Average RF |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | 0.930 | 0.882 | 1.039E1 | 9.854E0 | -5.178 | ±30 | Average RF |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | 0.940 | 0.878 | 8.001E0 | 7.476E0 | -6.565 | ±30 | Average RF |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | 1.00 | 0.979 | 2.672E0 | 2.615E0 | -2.098 | ±30 | Average RF |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | 1.00 | 1.01 | 2.756E0 | 2.78E0 | 0.881 | ±30 | Average RF |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | 1.00 | 0.941 | 1.272E0 | 1.197E0 | -5.928 | ±30 | Average RF |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | 1.00 | 0.991 | 7.904E-1 | 7.833E-1 | -0.895 | ±30 | Average RF |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | 0.950 | 0.891 | 1.039E1 | 9.748E0 | -6.168 | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| 13C3-PFBS | 2.50 | 2.57 | 9.472E-1 | 9.731E-1 | 2.74 | ±30 | Average RF |
| 13C3-PFBS | 2.50 | 2.31 | 9.472E-1 | 8.755E-1 | -7.566 | ±30 | Average RF |
| 13C3-PFBS | 2.50 | 2.49 | 9.472E-1 | 9.422E-1 | -0.529 | ±30 | Average RF |
| 13C3-PFBS | 2.50 | 2.28 | 9.472E-1 | 8.653E-1 | -8.643 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.60 | 7.905E-1 | 8.214E-1 | 3.91 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.59 | 7.905E-1 | 8.192E-1 | 3.63 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.44 | 7.905E-1 | 7.724E-1 | -2.295 | ±30 | Average RF |
| 13C3-PFHxS | 2.50 | 2.40 | 7.905E-1 | 7.588E-1 | -4.016 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.61 | 5.871E-1 | 6.136E-1 | 4.51 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.39 | 5.871E-1 | 5.602E-1 | -4.587 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.43 | 5.871E-1 | 5.716E-1 | -2.638 | ±30 | Average RF |
| 13C8-PFOS | 2.50 | 2.37 | 5.871E-1 | 5.554E-1 | -5.400 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 10.2 | 4.782E-1 | 4.892E-1 | 2.30 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 10.4 | 4.782E-1 | 4.987E-1 | 4.28 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 10.2 | 4.782E-1 | 4.864E-1 | 1.71 | ±30 | Average RF |
| 13C4-PFBA | 10.0 | 10.2 | 4.782E-1 | 4.901E-1 | 2.48 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 5.28 | 2.843E-1 | 2.999E-1 | 5.50 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 5.06 | 2.843E-1 | 2.875E-1 | 1.15 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 5.06 | 2.843E-1 | 2.875E-1 | 1.15 | ±30 | Average RF |
| 13C5-PFPeA | 5.00 | 5.34 | 2.843E-1 | 3.036E-1 | 6.80 | ±30 | Average RF |
| 13C5-PFHxA | 2.50 | 2.38 | 1.192E0 | 1.137E0 | -4.670 | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| 13C5-PFHxA | 2.50 | 2.55 | 1.192E0 | 1.216E0 | 1.93 | ±30 | Average RF |
| 13C5-PFHxA | 2.50 | 2.75 | 1.192E0 | 1.313E0 | 10.08 | ±30 | Average RF |
| 13C5-PFHxA | 2.50 | 2.38 | 1.192E0 | 1.137E0 | -4.687 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.81 | 1.245E0 | 1.4E0 | 12.41 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.79 | 1.245E0 | 1.39E0 | 11.65 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.60 | 1.245E0 | 1.297E0 | 4.15 | ±30 | Average RF |
| 13C4-PFHpA | 2.50 | 2.78 | 1.245E0 | 1.387E0 | 11.36 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.30 | 1.417E1 | 1.305E1 | -7.927 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.51 | 1.417E1 | 1.424E1 | 0.445 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.45 | 1.417E1 | 1.39E1 | -1.921 | ±30 | Average RF |
| 13C8-PFOA | 2.50 | 2.57 | 1.417E1 | 1.457E1 | 2.82 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.20 | 8.342E-1 | 8.007E-1 | -4.017 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.25 | 8.342E-1 | 8.321E-1 | -0.243 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.30 | 8.342E-1 | 8.65E-1 | 3.69 | ±30 | Average RF |
| 13C9-PFNA | 1.25 | 1.22 | 8.342E-1 | 8.164E-1 | -2.135 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.35 | 1.021E0 | 1.102E0 | 7.94 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.18 | 1.021E0 | 9.65E-1 | -5.482 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.35 | 1.021E0 | 1.1E0 | 7.70 | ±30 | Average RF |
| 13C6-PFDA | 1.25 | 1.25 | 1.021E0 | 1.025E0 | 0.345 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.40 | 1.655E0 | 1.857E0 | 12.23 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.15 | 1.655E0 | 1.528E0 | -7.671 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.48 | 1.655E0 | 1.957E0 | 18.24 | ±30 | Average RF |
| 13C7-PFUnDA | 1.25 | 1.30 | 1.655E0 | 1.717E0 | 3.77 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.20 | 1.773E0 | 1.704E0 | -3.853 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.46 | 1.773E0 | 2.068E0 | 16.67 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.37 | 1.773E0 | 1.938E0 | 9.31 | ±30 | Average RF |
| 13C2-PFDoDA | 1.25 | 1.26 | 1.773E0 | 1.791E0 | 1.02 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.14 | 1.018E0 | 9.291E-1 | -8.722 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.43 | 1.018E0 | 1.162E0 | 14.13 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.47 | 1.018E0 | 1.197E0 | 17.56 | ±30 | Average RF |
| 13C2-PFTeDA | 1.25 | 1.41 | 1.018E0 | 1.146E0 | 12.61 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.67 | 2.112E0 | 2.256E0 | 6.83 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.45 | 2.112E0 | 2.069E0 | -2.003 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.37 | 2.112E0 | 1.999E0 | -5.324 | ±30 | Average RF |
| 13C8-FOSA | 2.50 | 2.20 | 2.112E0 | 1.856E0 | -12.105 | ±30 | Average RF |
| D3-MeFOSA | 2.50 | 2.81 | 6.531E-1 | 7.345E-1 | 12.47 | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Calibration Date:** 12/29/2022

## Initial Calibration Verification Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Calibration ID:** KC2200776
**Instrument ID:** K-LCMS-08

**Signal ID:** 1

| Analyte Name | Expected | Result | Average RF | SSV RF | % D | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|
| D3-MeFOSA | 2.50 | 2.28 | 6.531E-1 | 5.961E-1 | -8.722 | ±30 | Average RF |
| D3-MeFOSA | 2.50 | 2.22 | 6.531E-1 | 5.793E-1 | -11.292 | ±30 | Average RF |
| D3-MeFOSA | 2.50 | 2.47 | 6.531E-1 | 6.461E-1 | -1.066 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 2.58 | 8.497E-1 | 8.773E-1 | 3.25 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 2.43 | 8.497E-1 | 8.268E-1 | -2.696 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 2.18 | 8.497E-1 | 7.413E-1 | -12.758 | ±30 | Average RF |
| D5-EtFOSA | 2.50 | 2.04 | 8.497E-1 | 6.921E-1 | -18.546 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 25.8 | 8.892E-1 | 9.186E-1 | 3.31 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 24.3 | 8.892E-1 | 8.638E-1 | -2.855 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 20.5 | 8.892E-1 | 7.285E-1 | -18.075 | ±30 | Average RF |
| D7-MeFOSE | 25.0 | 22.1 | 8.892E-1 | 7.861E-1 | -11.593 | ±30 | Average RF |
| D9-EtFOSE | 25.0 | 27.7 | 8.607E-1 | 9.55E-1 | 10.96 | ±30 | Average RF |
| D9-EtFOSE | 25.0 | 25.7 | 8.607E-1 | 8.838E-1 | 2.68 | ±30 | Average RF |
| D9-EtFOSE | 25.0 | 22.9 | 8.607E-1 | 7.898E-1 | -8.237 | ±30 | Average RF |
| D9-EtFOSE | 25.0 | 22.6 | 8.607E-1 | 7.764E-1 | -9.798 | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 5.71 | 7.396E-1 | 8.453E-1 | 14.29 | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 4.71 | 7.396E-1 | 6.972E-1 | -5.732 | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 4.37 | 7.396E-1 | 6.465E-1 | -12.584 | ±30 | Average RF |
| D3-MeFOSAA | 5.00 | 3.94 | 7.396E-1 | 5.826E-1 | -21.226 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 5.44 | 7.123E-1 | 7.752E-1 | 8.83 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 5.03 | 7.123E-1 | 7.163E-1 | 0.563 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 4.23 | 7.123E-1 | 6.021E-1 | -15.472 | ±30 | Average RF |
| D5-EtFOSAA | 5.00 | 4.51 | 7.123E-1 | 6.424E-1 | -9.817 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 5.62 | 1.432E-1 | 1.609E-1 | 12.34 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 4.60 | 1.432E-1 | 1.318E-1 | -7.999 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 4.09 | 1.432E-1 | 1.171E-1 | -18.206 | ±30 | Average RF |
| 13C2-4:2 FTS | 5.00 | 4.80 | 1.432E-1 | 1.375E-1 | -4.014 | ±30 | Average RF |
| 13C2-6:2 FTS | 5.00 | 3.81 | 1.008E-1 | 7.685E-2 | -23.781 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 4.64 | 1.003E-1 | 9.3E-2 | -7.269 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 4.73 | 1.003E-1 | 9.486E-2 | -5.414 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 5.09 | 1.003E-1 | 1.022E-1 | 1.88 | ±30 | Average RF |
| 13C2-8:2 FTS | 5.00 | 5.19 | 1.003E-1 | 1.041E-1 | 3.77 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 11.0 | 2.828E-1 | 3.118E-1 | 10.27 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 11.0 | 2.828E-1 | 3.109E-1 | 9.94 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 10.3 | 2.828E-1 | 2.913E-1 | 3.01 | ±30 | Average RF |
| 13C3-HFPO-DA | 10.0 | 11.6 | 2.828E-1 | 3.28E-1 | 15.98 | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 12:55

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F008
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.222 | 0.215 | 1.1018 | 1.0663 | 96.8 | NA | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.235 | 0.237 | 1.272 | 1.2831 | 101 | NA | ±30 | Average RF |
| Perfluorohexane sulfonic acid (PFHxS) | 0.229 | 0.217 | 1.0496 | 0.9613 | 95.1 | -4.9 | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.238 | 0.253 | 3.7237 | 3.9484 | 106 | NA | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.232 | 0.224 | 4.4531 | 3.5992 | 96.7 | -3.3 | ±30 | Linear |
| Perfluorononane sulfonic acid (PFNS) | 0.241 | 0.236 | 2.6011 | 2.5541 | 98.2 | NA | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.241 | 0.248 | 2.9596 | 3.0358 | 103 | NA | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.243 | 0.275 | 1.5027 | 1.7038 | 113 | NA | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 0.250 | 0.256 | 1.2803 | 1.3102 | 102 | NA | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 0.250 | 0.252 | 2.8121 | 2.8359 | 101 | NA | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 0.250 | 0.217 | 1.0853 | 0.9432 | 86.9 | NA | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 0.250 | 0.246 | 1.3913 | 1.6805 | 98.3 | -1.7 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 0.250 | 0.213 | 1.1956 | 1.0559 | 85.2 | -14.8 | ±30 | Linear |
| Perfluorononanoic acid (PFNA) | 0.250 | 0.239 | 1.4519 | 1.3895 | 95.5 | -4.5 | ±30 | Linear |
| Perfluorodecanoic acid (PFDA) | 0.250 | 0.227 | 1.7033 | 1.5715 | 90.8 | -9.2 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 0.250 | 0.228 | 1.1444 | 1.058 | 91.2 | -8.8 | ±30 | Linear |
| Perfluorododecanoic acid (PFDOA) | 0.250 | 0.240 | 1.0149 | 0.9736 | 95.8 | -4.2 | ±30 | Linear |
| Perfluorotridecanoic acid (PFTrDA) | 0.250 | 0.238 | 5.5091 | 5.2588 | 95.2 | -4.8 | ±30 | Linear |
| Perfluorotetradecanoic acid (PFTDA) | 0.250 | 0.232 | 2.684 | 3.2741 | 92.8 | -7.2 | ±30 | Linear |
| Perfluorooctane sulfonamide (PFOSAm) | 0.250 | 0.276 | 1.4121 | 1.5087 | 110 | 10.4 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 0.250 | 0.418 | 2.555 | 4.462 | 167* | 67.1* | ±30 | Linear |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 0.250 | 0.251 | 1.5736 | 1.5867 | 100 | 0.4 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 0.250 | 0.289 | 1.2152 | 1.4069 | 116 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 0.250 | 0.292 | 1.4619 | 1.7096 | 117 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 0.250 | 0.161 | 1.2294 | 0.792 | 64.4* | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 0.250 | 0.206 | 0.9594 | 0.7888 | 82.2 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.234 | 0.219 | 3.3673 | 3.1387 | 93.3 | -6.7 | ±30 | Linear |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.238 | 0.253 | 2.8731 | 3.0596 | 106 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 12:55

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F008
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)** | 0.240 | 0.195 | 2.6627 | 2.2878 | 81.3 | -18.8 | ±30 | Linear |
| **4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)** | 10.0 | 9.92 | 0.0756 | 0.0647 | 99.2 | -0.8 | ±30 | Linear |
| **2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)** | 10.0 | 9.78 | 0.1092 | 0.0947 | 97.8 | -2.2 | ±30 | Linear |
| **2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)** | 10.0 | 9.77 | 0.1318 | 0.1185 | 97.7 | -2.3 | ±30 | Linear |
| **Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)** | 0.223 | 0.217 | 1.4602 | 1.4248 | 97.6 | NA | ±30 | Average RF |
| **9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)** | 0.233 | 0.214 | 6.7856 | 5.7641 | 91.9 | -8.1 | ±30 | Linear |
| **11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)** | 0.236 | 0.185 | 5.0939 | 3.9857 | 78.3 | NA | ±30 | Average RF |
| **Perfluoro-3-methoxypropanoic acid (PFMPA)** | 0.250 | 0.256 | 1.95 | 1.9995 | 103 | NA | ±30 | Average RF |
| **Perfluoro-4-methoxybutanoic acid (PFMBA)** | 0.250 | 0.232 | 2.1831 | 2.0278 | 92.9 | NA | ±30 | Average RF |
| **Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)** | 0.250 | 0.252 | 1.1656 | 1.1754 | 101 | NA | ±30 | Average RF |
| **Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)** | 0.250 | 0.260 | 0.969 | 1.0089 | 104 | NA | ±30 | Average RF |
| **4,8-Dioxa-3H-perfluorononanoic acid (DONA)** | 0.236 | 0.210 | 10.3473 | 9.2048 | 89.0 | NA | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| **13C3-PFBS** | 2.50 | 2.43 | 1.0888 | 1.0602 | 97.4 | NA | ±30 | Average RF |
| **13C3-PFHxS** | 2.50 | 2.34 | 1.0887 | 1.0181 | 93.5 | NA | ±30 | Average RF |
| **13C8-PFOS** | 2.50 | 2.37 | 0.4374 | 0.415 | 94.9 | NA | ±30 | Average RF |
| **13C4-PFBA** | 10.0 | 9.51 | 0.5804 | 0.5517 | 95.1 | NA | ±30 | Average RF |
| **13C5-PFPeA** | 5.00 | 4.79 | 0.2683 | 0.2571 | 95.8 | NA | ±30 | Average RF |
| **13C5-PFHxA** | 2.50 | 2.48 | 1.0397 | 1.0309 | 99.2 | NA | ±30 | Average RF |
| **13C4-PFHpA** | 2.50 | 2.46 | 0.8386 | 0.8252 | 98.4 | NA | ±30 | Average RF |
| **13C8-PFOA** | 2.50 | 2.63 | 17.8556 | 18.7726 | 105 | NA | ±30 | Average RF |
| **13C9-PFNA** | 1.25 | 1.33 | 0.9271 | 0.99 | 107 | NA | ±30 | Average RF |
| **13C6-PFDA** | 1.25 | 1.30 | 1.0678 | 1.1128 | 104 | NA | ±30 | Average RF |
| **13C7-PFUnDA** | 1.25 | 1.18 | 1.276 | 1.2015 | 94.2 | NA | ±30 | Average RF |
| **13C2-PFDoDA** | 1.25 | 1.16 | 1.1988 | 1.1151 | 93.0 | NA | ±30 | Average RF |
| **13C2-PFTeDA** | 1.25 | 1.17 | 0.2962 | 0.2775 | 93.7 | NA | ±30 | Average RF |
| **13C8-FOSA** | 2.50 | 2.32 | 1.3555 | 1.2568 | 92.7 | NA | ±30 | Average RF |
| **D3-MeFOSA** | 2.50 | 1.21 | 0.378 | 0.1834 | 48.5* | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 12:55

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F008
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D5-EtFOSA** | 2.50 | 2.21 | 0.6412 | 0.5676 | 88.5 | NA | ±30 | Average RF |
| **D7-MeFOSE** | 25.0 | 19.3 | 0.6873 | 0.5309 | 77.2 | NA | ±30 | Average RF |
| **D9-EtFOSE** | 25.0 | 18.1 | 0.8853 | 0.642 | 72.5 | NA | ±30 | Average RF |
| **D3-MeFOSAA** | 5.00 | 4.55 | 1.6082 | 1.4651 | 91.1 | NA | ±30 | Average RF |
| **D5-EtFOSAA** | 5.00 | 4.40 | 1.3889 | 1.2213 | 87.9 | NA | ±30 | Average RF |
| **13C2-4:2 FTS** | 5.00 | 4.13 | 0.5628 | 0.4651 | 82.6 | NA | ±30 | Average RF |
| **13C2-6:2 FTS** | 5.00 | 4.03 | 0.5725 | 0.4618 | 80.7 | NA | ±30 | Average RF |
| **13C2-8:2 FTS** | 5.00 | 3.95 | 0.5818 | 0.4594 | 79.0 | NA | ±30 | Average RF |
| **13C3-HFPO-DA** | 10.0 | 10.8 | 0.188 | 0.2023 | 108 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 13:17

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F009
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.887 | 0.951 | 1.1018 | 1.1808 | 107 | NA | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.941 | 1.06 | 1.272 | 1.4261 | 112 | NA | ±30 | Average RF |
| Perfluorohexane sulfonic acid (PFHxS) | 0.914 | 0.916 | 1.0496 | 1.075 | 100 | 0.2 | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.953 | 1.10 | 3.7237 | 4.3122 | 116 | NA | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.928 | 1.14 | 4.4531 | 5.5493 | 123 | 23.0 | ±30 | Linear |
| Perfluorononane sulfonic acid (PFNS) | 0.962 | 1.16 | 2.6011 | 3.1248 | 120 | NA | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.965 | 1.06 | 2.9596 | 3.2433 | 110 | NA | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.970 | 1.04 | 1.5027 | 1.6143 | 107 | NA | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 1.00 | 1.06 | 1.2803 | 1.3627 | 106 | NA | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 1.00 | 1.06 | 2.8121 | 2.9888 | 106 | NA | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 1.00 | 1.01 | 1.0853 | 1.0911 | 101 | NA | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 1.00 | 1.05 | 1.3913 | 1.4492 | 105 | 5.0 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 1.00 | 1.00 | 1.1956 | 0.938 | 100 | 0.1 | ±30 | Linear |
| Perfluorononanoic acid (PFNA) | 1.00 | 0.996 | 1.4519 | 1.1338 | 99.6 | -0.4 | ±30 | Linear |
| Perfluorodecanoic acid (PFDA) | 1.00 | 1.08 | 1.7033 | 1.4393 | 108 | 7.5 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 1.00 | 0.978 | 1.1444 | 0.9032 | 97.8 | -2.2 | ±30 | Linear |
| Perfluorododecanoic acid (PFDOA) | 1.00 | 1.01 | 1.0149 | 0.8179 | 101 | 0.5 | ±30 | Linear |
| Perfluorotridecanoic acid (PFTrDA) | 1.00 | 1.09 | 5.5091 | 4.7862 | 109 | 9.3 | ±30 | Linear |
| Perfluorotetradecanoic acid (PFTDA) | 1.00 | 1.07 | 2.684 | 2.8397 | 107 | 7.1 | ±30 | Linear |
| Perfluorooctane sulfonamide (PFOSAm) | 1.00 | 1.06 | 1.4121 | 1.5028 | 106 | 6.3 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 1.00 | 1.78 | 2.555 | 4.9608 | 178* | 77.8* | ±30 | Linear |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 1.00 | 1.03 | 1.5736 | 1.7484 | 103 | 3.4 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 1.00 | 1.07 | 1.2152 | 1.3015 | 107 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 1.00 | 1.12 | 1.4619 | 1.6355 | 112 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 1.00 | 1.03 | 1.2294 | 1.2603 | 103 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 1.00 | 1.03 | 0.9594 | 0.9886 | 103 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.937 | 1.06 | 3.3673 | 3.9157 | 113 | 12.9 | ±30 | Linear |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.951 | 1.05 | 2.8731 | 3.1726 | 110 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 13:17

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F009
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)** | 0.960 | 0.857 | 2.6627 | 2.3791 | 89.3 | -10.7 | ±30 | Linear |
| **4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)** | 20.0 | 20.9 | 0.0756 | 0.0772 | 104 | 4.4 | ±30 | Linear |
| **2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)** | 20.0 | 18.4 | 0.1092 | 0.0976 | 92.0 | -8.0 | ±30 | Linear |
| **2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)** | 20.0 | 18.7 | 0.1318 | 0.1211 | 93.6 | -6.4 | ±30 | Linear |
| **Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)** | 0.890 | 0.878 | 1.4602 | 1.4409 | 98.7 | NA | ±30 | Average RF |
| **9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)** | 0.933 | 0.854 | 6.7856 | 6.2055 | 91.5 | -8.5 | ±30 | Linear |
| **11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)** | 0.943 | 0.827 | 5.0939 | 4.4649 | 87.7 | NA | ±30 | Average RF |
| **Perfluoro-3-methoxypropanoic acid (PFMPA)** | 1.00 | 1.09 | 1.95 | 2.1251 | 109 | NA | ±30 | Average RF |
| **Perfluoro-4-methoxybutanoic acid (PFMBA)** | 1.00 | 1.08 | 2.1831 | 2.3583 | 108 | NA | ±30 | Average RF |
| **Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)** | 1.00 | 1.02 | 1.1656 | 1.1857 | 102 | NA | ±30 | Average RF |
| **Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)** | 1.00 | 1.09 | 0.969 | 1.0563 | 109 | NA | ±30 | Average RF |
| **4,8-Dioxa-3H-perfluorononanoic acid (DONA)** | 0.945 | 0.903 | 10.3473 | 9.8814 | 95.5 | NA | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| **13C3-PFBS** | 2.50 | 2.46 | 1.0888 | 1.0722 | 98.5 | NA | ±30 | Average RF |
| **13C3-PFHxS** | 2.50 | 2.37 | 1.0887 | 1.03 | 94.6 | NA | ±30 | Average RF |
| **13C8-PFOS** | 2.50 | 2.42 | 0.4374 | 0.4227 | 96.6 | NA | ±30 | Average RF |
| **13C4-PFBA** | 10.0 | 9.66 | 0.5804 | 0.5608 | 96.6 | NA | ±30 | Average RF |
| **13C5-PFPeA** | 5.00 | 4.83 | 0.2683 | 0.259 | 96.5 | NA | ±30 | Average RF |
| **13C5-PFHxA** | 2.50 | 2.63 | 1.0397 | 1.0958 | 105 | NA | ±30 | Average RF |
| **13C4-PFHpA** | 2.50 | 2.53 | 0.8386 | 0.8497 | 101 | NA | ±30 | Average RF |
| **13C8-PFOA** | 2.50 | 2.53 | 17.8556 | 18.0478 | 101 | NA | ±30 | Average RF |
| **13C9-PFNA** | 1.25 | 1.31 | 0.9271 | 0.9719 | 105 | NA | ±30 | Average RF |
| **13C6-PFDA** | 1.25 | 1.29 | 1.0678 | 1.0989 | 103 | NA | ±30 | Average RF |
| **13C7-PFUnDA** | 1.25 | 1.28 | 1.276 | 1.3027 | 102 | NA | ±30 | Average RF |
| **13C2-PFDoDA** | 1.25 | 1.19 | 1.1988 | 1.1428 | 95.3 | NA | ±30 | Average RF |
| **13C2-PFTeDA** | 1.25 | 1.16 | 0.2962 | 0.2756 | 93.0 | NA | ±30 | Average RF |
| **13C8-FOSA** | 2.50 | 2.29 | 1.3555 | 1.2433 | 91.7 | NA | ±30 | Average RF |
| **D3-MeFOSA** | 2.50 | 1.26 | 0.378 | 0.1908 | 50.5* | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 13:17

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F009
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D5-EtFOSA** | 2.50 | 2.32 | 0.6412 | 0.5943 | 92.7 | NA | ±30 | Average RF |
| **D7-MeFOSE** | 25.0 | 20.6 | 0.6873 | 0.5656 | 82.3 | NA | ±30 | Average RF |
| **D9-EtFOSE** | 25.0 | 18.7 | 0.8853 | 0.662 | 74.8 | NA | ±30 | Average RF |
| **D3-MeFOSAA** | 5.00 | 4.51 | 1.6082 | 1.4509 | 90.2 | NA | ±30 | Average RF |
| **D5-EtFOSAA** | 5.00 | 4.45 | 1.3889 | 1.2368 | 89.1 | NA | ±30 | Average RF |
| **13C2-4:2 FTS** | 5.00 | 3.96 | 0.5628 | 0.4458 | 79.2 | NA | ±30 | Average RF |
| **13C2-6:2 FTS** | 5.00 | 4.01 | 0.5725 | 0.459 | 80.2 | NA | ±30 | Average RF |
| **13C2-8:2 FTS** | 5.00 | 3.92 | 0.5818 | 0.4559 | 78.4 | NA | ±30 | Average RF |
| **13C3-HFPO-DA** | 10.0 | 11.2 | 0.188 | 0.2106 | 112 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 16:57

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F019
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.887 | 0.953 | 1.1018 | 1.1834 | 107 | NA | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.941 | 1.05 | 1.272 | 1.4231 | 112 | NA | ±30 | Average RF |
| Perfluorohexane sulfonic acid (PFHxS) | 0.914 | 0.930 | 1.0496 | 1.091 | 102 | 1.7 | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.953 | 0.961 | 3.7237 | 3.7558 | 101 | NA | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.928 | 0.966 | 4.4531 | 4.661 | 104 | 4.1 | ±30 | Linear |
| Perfluorononane sulfonic acid (PFNS) | 0.962 | 1.02 | 2.6011 | 2.7613 | 106 | NA | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.965 | 1.04 | 2.9596 | 3.1969 | 108 | NA | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.970 | 1.00 | 1.5027 | 1.5549 | 103 | NA | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 1.00 | 1.09 | 1.2803 | 1.3984 | 109 | NA | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 1.00 | 1.16 | 2.8121 | 3.2577 | 116 | NA | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 1.00 | 1.00 | 1.0853 | 1.0868 | 100 | NA | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 1.00 | 1.04 | 1.3913 | 1.4392 | 104 | 4.2 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 1.00 | 0.957 | 1.1956 | 0.9009 | 95.7 | -4.3 | ±30 | Linear |
| Perfluorononanoic acid (PFNA) | 1.00 | 0.944 | 1.4519 | 1.0793 | 94.4 | -5.6 | ±30 | Linear |
| Perfluorodecanoic acid (PFDA) | 1.00 | 1.14 | 1.7033 | 1.5205 | 114 | 14.1 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 1.00 | 0.930 | 1.1444 | 0.8627 | 93.0 | -7.0 | ±30 | Linear |
| Perfluorododecanoic acid (PFDOA) | 1.00 | 1.03 | 1.0149 | 0.8393 | 103 | 3.4 | ±30 | Linear |
| Perfluorotridecanoic acid (PFTrDA) | 1.00 | 1.06 | 5.5091 | 4.6603 | 106 | 6.2 | ±30 | Linear |
| Perfluorotetradecanoic acid (PFTDA) | 1.00 | 1.05 | 2.684 | 2.7962 | 105 | 5.3 | ±30 | Linear |
| Perfluorooctane sulfonamide (PFOSAm) | 1.00 | 1.08 | 1.4121 | 1.5214 | 108 | 7.6 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 1.00 | 1.33 | 2.555 | 3.6968 | 133* | 33.1* | ±30 | Linear |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 1.00 | 1.06 | 1.5736 | 1.7902 | 106 | 5.8 | ±30 | Linear |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 1.00 | 1.01 | 1.2152 | 1.2263 | 101 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 1.00 | 1.16 | 1.4619 | 1.6986 | 116 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 1.00 | 0.993 | 1.2294 | 1.2202 | 99.3 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 1.00 | 0.969 | 0.9594 | 0.9293 | 96.9 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.937 | 0.971 | 3.3673 | 3.5904 | 104 | 3.6 | ±30 | Linear |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.951 | 1.04 | 2.8731 | 3.135 | 109 | NA | ±30 | Average RF |

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Superset Reference:22-0000646198 rev 00

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 12/09/22 16:57

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS05\Data\221209_1633_B1\221209F019
**Signal ID:** 1

**Calibration Date:** 12/8/2022
**Calibration ID:** KC2200730
**Analysis Lot:** 788052
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)** | 0.960 | 0.913 | 2.6627 | 2.5332 | 95.1 | -4.9 | ±30 | Linear |
| **4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)** | 20.0 | 21.2 | 0.0756 | 0.0784 | 106 | 5.8 | ±30 | Linear |
| **2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)** | 20.0 | 19.7 | 0.1092 | 0.1054 | 98.7 | -1.3 | ±30 | Linear |
| **2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)** | 20.0 | 19.0 | 0.1318 | 0.1228 | 94.9 | -5.1 | ±30 | Linear |
| **Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)** | 0.890 | 0.929 | 1.4602 | 1.5234 | 104 | NA | ±30 | Average RF |
| **9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)** | 0.933 | 0.871 | 6.7856 | 6.3323 | 93.3 | -6.7 | ±30 | Linear |
| **11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)** | 0.943 | 0.829 | 5.0939 | 4.4757 | 87.9 | NA | ±30 | Average RF |
| **Perfluoro-3-methoxypropanoic acid (PFMPA)** | 1.00 | 1.17 | 1.95 | 2.2753 | 117 | NA | ±30 | Average RF |
| **Perfluoro-4-methoxybutanoic acid (PFMBA)** | 1.00 | 1.16 | 2.1831 | 2.5224 | 116 | NA | ±30 | Average RF |
| **Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)** | 1.00 | 1.12 | 1.1656 | 1.3073 | 112 | NA | ±30 | Average RF |
| **Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)** | 1.00 | 1.19 | 0.969 | 1.1494 | 119 | NA | ±30 | Average RF |
| **4,8-Dioxa-3H-perfluorononanoic acid (DONA)** | 0.945 | 0.940 | 10.3473 | 10.295 | 99.5 | NA | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| **13C3-PFBS** | 2.50 | 2.56 | 1.0888 | 1.1132 | 102 | NA | ±30 | Average RF |
| **13C3-PFHxS** | 2.50 | 2.42 | 1.0887 | 1.0543 | 96.8 | NA | ±30 | Average RF |
| **13C8-PFOS** | 2.50 | 2.56 | 0.4374 | 0.4475 | 102 | NA | ±30 | Average RF |
| **13C4-PFBA** | 10.0 | 9.70 | 0.5804 | 0.5629 | 97.0 | NA | ±30 | Average RF |
| **13C5-PFPeA** | 5.00 | 4.65 | 0.2683 | 0.2493 | 92.9 | NA | ±30 | Average RF |
| **13C5-PFHxA** | 2.50 | 2.52 | 1.0397 | 1.0494 | 101 | NA | ±30 | Average RF |
| **13C4-PFHpA** | 2.50 | 2.58 | 0.8386 | 0.8652 | 103 | NA | ±30 | Average RF |
| **13C8-PFOA** | 2.50 | 2.26 | 17.8556 | 16.1373 | 90.4 | NA | ±30 | Average RF |
| **13C9-PFNA** | 1.25 | 1.31 | 0.9271 | 0.9743 | 105 | NA | ±30 | Average RF |
| **13C6-PFDA** | 1.25 | 1.24 | 1.0678 | 1.0582 | 99.1 | NA | ±30 | Average RF |
| **13C7-PFUnDA** | 1.25 | 1.32 | 1.276 | 1.3443 | 105 | NA | ±30 | Average RF |
| **13C2-PFDoDA** | 1.25 | 1.12 | 1.1988 | 1.0749 | 89.7 | NA | ±30 | Average RF |
| **13C2-PFTeDA** | 1.25 | 1.11 | 0.2962 | 0.2625 | 88.6 | NA | ±30 | Average RF |
| **13C8-FOSA** | 2.50 | 2.07 | 1.3555 | 1.1239 | 82.9 | NA | ±30 | Average RF |
| **D3-MeFOSA** | 2.50 | 1.36 | 0.378 | 0.2062 | 54.5* | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Analyzed:** | 12/09/22 16:57 |

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

| | | | |
|---|---|---|---|
| **Analysis Method:** | Draft EPA Method 1633 | **Calibration Date:** | 12/8/2022 |
| **File ID:** | J:\LCMS05\Data\221209_1633_B1\221209F019 | **Calibration ID:** | KC2200730 |
| **Signal ID:** | 1 | **Analysis Lot:** | 788052 |
| | | **Units:** | ng/mL |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D5-EtFOSA** | 2.50 | 2.07 | 0.6412 | 0.5299 | 82.6 | NA | ±30 | Average RF |
| **D7-MeFOSE** | 25.0 | 17.9 | 0.6873 | 0.4934 | 71.8 | NA | ±30 | Average RF |
| **D9-EtFOSE** | 25.0 | 15.2 | 0.8853 | 0.5374 | 60.7* | NA | ±30 | Average RF |
| **D3-MeFOSAA** | 5.00 | 4.31 | 1.6082 | 1.3877 | 86.3 | NA | ±30 | Average RF |
| **D5-EtFOSAA** | 5.00 | 4.32 | 1.3889 | 1.1986 | 86.3 | NA | ±30 | Average RF |
| **13C2-4:2 FTS** | 5.00 | 3.94 | 0.5628 | 0.4435 | 78.8 | NA | ±30 | Average RF |
| **13C2-6:2 FTS** | 5.00 | 3.79 | 0.5725 | 0.4342 | 75.8 | NA | ±30 | Average RF |
| **13C2-8:2 FTS** | 5.00 | 3.78 | 0.5818 | 0.44 | 75.6 | NA | ±30 | Average RF |
| **13C3-HFPO-DA** | 10.0 | 11.2 | 0.188 | 0.2101 | 112 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/04/23 15:13

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F014
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.222 | 0.197 | 1.7214 | 1.5254 | 88.6 | NA | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.235 | 0.251 | 1.5017 | 1.5842 | 107 | 6.9 | ±30 | Linear |
| Perfluorohexane sulfonic acid (PFHxS) | 0.229 | 0.204 | 1.5427 | 1.391 | 89.3 | -10.7 | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.238 | 0.283 | 2.39 | 2.837 | 119 | NA | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.232 | 0.227 | 3.2207 | 3.1472 | 97.7 | NA | ±30 | Average RF |
| Perfluorononane sulfonic acid (PFNS) | 0.241 | 0.254 | 1.8735 | 1.9751 | 105 | NA | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.241 | 0.273 | 1.6747 | 1.896 | 113 | NA | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.243 | 0.312 | 0.9246 | 1.1909 | 129 | NA | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 0.250 | 0.280 | 1.1908 | 1.3331 | 112 | NA | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 0.250 | 0.252 | 4.5005 | 4.5423 | 101 | NA | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 0.250 | 0.264 | 1.0753 | 1.1342 | 105 | NA | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 0.250 | 0.265 | 1.0758 | 1.1318 | 106 | 6.2 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 0.250 | 0.302 | 1.4522 | 1.7529 | 121 | NA | ±30 | Average RF |
| Perfluorononanoic acid (PFNA) | 0.250 | 0.272 | 1.1321 | 1.2331 | 109 | NA | ±30 | Average RF |
| Perfluorodecanoic acid (PFDA) | 0.250 | 0.230 | 2.1567 | 1.991 | 92.0 | -8.0 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 0.250 | 0.267 | 0.946 | 1.0111 | 107 | NA | ±30 | Average RF |
| Perfluorododecanoic acid (PFDOA) | 0.250 | 0.259 | 0.8815 | 0.9117 | 103 | NA | ±30 | Average RF |
| Perfluorotridecanoic acid (PFTrDA) | 0.250 | 0.266 | 1.6139 | 1.7183 | 106 | NA | ±30 | Average RF |
| Perfluorotetradecanoic acid (PFTDA) | 0.250 | 0.250 | 1.31 | 1.3104 | 100 | NA | ±30 | Average RF |
| Perfluorooctane sulfonamide (PFOSAm) | 0.250 | 0.266 | 0.9277 | 0.9878 | 106 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 0.250 | 0.249 | 1.9313 | 1.9194 | 99.4 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 0.250 | 0.265 | 1.5628 | 1.6533 | 106 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 0.250 | 0.296 | 1.4828 | 1.7535 | 118 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 0.250 | 0.274 | 2.0475 | 2.2425 | 110 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 0.250 | 0.218 | 0.9634 | 0.8412 | 87.3 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 0.250 | 0.296 | 0.8506 | 1.0073 | 118 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.234 | 0.250 | 2.8301 | 3.0254 | 107 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.238 | 0.306 | 2.5861 | 3.3261 | 129 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/04/23 15:13

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F014
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)** | 0.240 | 0.234 | 2.6393 | 2.5682 | 97.3 | NA | ±30 | Average RF |
| **4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)** | 10.0 | 10.4 | 0.1596 | 0.1655 | 104 | NA | ±30 | Average RF |
| **2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)** | 10.0 | 10.2 | 0.1633 | 0.1673 | 102 | NA | ±30 | Average RF |
| **2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)** | 10.0 | 9.58 | 0.2153 | 0.2063 | 95.8 | NA | ±30 | Average RF |
| **Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)** | 0.223 | 0.213 | 2.7802 | 2.6597 | 95.7 | NA | ±30 | Average RF |
| **9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)** | 0.233 | 0.195 | 10.3923 | 8.6756 | 83.5 | NA | ±30 | Average RF |
| **11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)** | 0.236 | 0.200 | 8.0008 | 6.7797 | 84.8 | NA | ±30 | Average RF |
| **Perfluoro-3-methoxypropanoic acid (PFMPA)** | 0.250 | 0.229 | 2.6715 | 2.4434 | 91.5 | NA | ±30 | Average RF |
| **Perfluoro-4-methoxybutanoic acid (PFMBA)** | 0.250 | 0.264 | 2.7556 | 2.9091 | 106 | NA | ±30 | Average RF |
| **Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)** | 0.250 | 0.250 | 1.2722 | 1.2727 | 100 | NA | ±30 | Average RF |
| **Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)** | 0.250 | 0.246 | 0.7904 | 0.7766 | 98.3 | NA | ±30 | Average RF |
| **4,8-Dioxa-3H-perfluorononanoic acid (DONA)** | 0.236 | 0.196 | 10.3892 | 8.596 | 82.8 | NA | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| **13C3-PFBS** | 2.50 | 2.41 | 0.9472 | 0.9147 | 96.6 | NA | ±30 | Average RF |
| **13C3-PFHxS** | 2.50 | 2.36 | 0.7905 | 0.7477 | 94.6 | NA | ±30 | Average RF |
| **13C8-PFOS** | 2.50 | 2.52 | 0.5871 | 0.5917 | 101 | NA | ±30 | Average RF |
| **13C4-PFBA** | 10.0 | 8.89 | 0.4782 | 0.4249 | 88.9 | NA | ±30 | Average RF |
| **13C5-PFPeA** | 5.00 | 4.24 | 0.2843 | 0.2409 | 84.8 | NA | ±30 | Average RF |
| **13C5-PFHxA** | 2.50 | 2.24 | 1.1925 | 1.0701 | 89.7 | NA | ±30 | Average RF |
| **13C4-PFHpA** | 2.50 | 2.22 | 1.2453 | 1.1064 | 88.8 | NA | ±30 | Average RF |
| **13C8-PFOA** | 2.50 | 2.53 | 14.1734 | 14.3597 | 101 | NA | ±30 | Average RF |
| **13C9-PFNA** | 1.25 | 1.24 | 0.8342 | 0.8248 | 98.9 | NA | ±30 | Average RF |
| **13C6-PFDA** | 1.25 | 1.41 | 1.021 | 1.148 | 112 | NA | ±30 | Average RF |
| **13C7-PFUnDA** | 1.25 | 1.28 | 1.6549 | 1.693 | 102 | NA | ±30 | Average RF |
| **13C2-PFDoDA** | 1.25 | 1.09 | 1.7727 | 1.549 | 87.4 | NA | ±30 | Average RF |
| **13C2-PFTeDA** | 1.25 | 1.17 | 1.0179 | 0.952 | 93.5 | NA | ±30 | Average RF |
| **13C8-FOSA** | 2.50 | 2.72 | 2.1118 | 2.3006 | 109 | NA | ±30 | Average RF |
| **D3-MeFOSA** | 2.50 | 2.58 | 0.6531 | 0.6734 | 103 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/04/23 15:13

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F014
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D5-EtFOSA** | 2.50 | 2.38 | 0.8497 | 0.8093 | 95.2 | NA | ±30 | Average RF |
| **D7-MeFOSE** | 25.0 | 21.8 | 0.8892 | 0.7757 | 87.2 | NA | ±30 | Average RF |
| **D9-EtFOSE** | 25.0 | 21.5 | 0.8607 | 0.7392 | 85.9 | NA | ±30 | Average RF |
| **D3-MeFOSAA** | 5.00 | 5.15 | 0.7396 | 0.7619 | 103 | NA | ±30 | Average RF |
| **D5-EtFOSAA** | 5.00 | 4.96 | 0.7123 | 0.7071 | 99.3 | NA | ±30 | Average RF |
| **13C2-4:2 FTS** | 5.00 | 3.35 | 0.1432 | 0.0961 | 67.1* | NA | ±30 | Average RF |
| **13C2-6:2 FTS** | 5.00 | 3.63 | 0.1008 | 0.0732 | 72.6 | NA | ±30 | Average RF |
| **13C2-8:2 FTS** | 5.00 | 3.49 | 0.1003 | 0.0701 | 69.9* | NA | ±30 | Average RF |
| **13C3-HFPO-DA** | 10.0 | 9.79 | 0.2828 | 0.2769 | 97.9 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/04/23 21:14

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F029
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.887 | 0.917 | 1.7214 | 1.7788 | 103 | NA | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.941 | 1.06 | 1.5017 | 1.5216 | 113 | 12.6 | ±30 | Linear |
| Perfluorohexane sulfonic acid (PFHxS) | 0.914 | 0.911 | 1.5427 | 1.3923 | 99.6 | -0.4 | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.953 | 0.995 | 2.39 | 2.4957 | 104 | NA | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.928 | 0.889 | 3.2207 | 3.0843 | 95.8 | NA | ±30 | Average RF |
| Perfluorononane sulfonic acid (PFNS) | 0.962 | 1.00 | 1.8735 | 1.9469 | 104 | NA | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.965 | 0.936 | 1.6747 | 1.6242 | 97.0 | NA | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.970 | 0.975 | 0.9246 | 0.9296 | 101 | NA | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 1.00 | 1.08 | 1.1908 | 1.2806 | 108 | NA | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 1.00 | 1.01 | 4.5005 | 4.5395 | 101 | NA | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 1.00 | 1.03 | 1.0753 | 1.1124 | 103 | NA | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 1.00 | 1.06 | 1.0758 | 1.0514 | 106 | 5.6 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 1.00 | 1.14 | 1.4522 | 1.6514 | 114 | NA | ±30 | Average RF |
| Perfluorononanoic acid (PFNA) | 1.00 | 1.02 | 1.1321 | 1.1538 | 102 | NA | ±30 | Average RF |
| Perfluorodecanoic acid (PFDA) | 1.00 | 1.02 | 2.1567 | 2.0704 | 102 | 1.9 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 1.00 | 1.01 | 0.946 | 0.9595 | 101 | NA | ±30 | Average RF |
| Perfluorododecanoic acid (PFDOA) | 1.00 | 1.02 | 0.8815 | 0.9002 | 102 | NA | ±30 | Average RF |
| Perfluorotridecanoic acid (PFTrDA) | 1.00 | 1.11 | 1.6139 | 1.7855 | 111 | NA | ±30 | Average RF |
| Perfluorotetradecanoic acid (PFTDA) | 1.00 | 1.04 | 1.31 | 1.366 | 104 | NA | ±30 | Average RF |
| Perfluorooctane sulfonamide (PFOSAm) | 1.00 | 1.06 | 0.9277 | 0.9811 | 106 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 1.00 | 1.21 | 1.9313 | 2.3429 | 121 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 1.00 | 1.10 | 1.5628 | 1.717 | 110 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 1.00 | 1.11 | 1.4828 | 1.6475 | 111 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 1.00 | 1.10 | 2.0475 | 2.2454 | 110 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 1.00 | 1.09 | 0.9634 | 1.0523 | 109 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 1.00 | 1.03 | 0.8506 | 0.8789 | 103 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.937 | 1.08 | 2.8301 | 3.2627 | 115 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.951 | 0.969 | 2.5861 | 2.6357 | 102 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/04/23 21:14

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F029
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)** | 0.960 | 1.09 | 2.6393 | 2.9991 | 114 | NA | ±30 | Average RF |
| **4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)** | 20.0 | 21.2 | 0.1596 | 0.1695 | 106 | NA | ±30 | Average RF |
| **2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)** | 20.0 | 19.0 | 0.1633 | 0.1551 | 95.0 | NA | ±30 | Average RF |
| **2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)** | 20.0 | 18.5 | 0.2153 | 0.1996 | 92.7 | NA | ±30 | Average RF |
| **Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)** | 0.890 | 0.889 | 2.7802 | 2.776 | 99.9 | NA | ±30 | Average RF |
| **9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)** | 0.933 | 0.930 | 10.3923 | 10.3612 | 99.7 | NA | ±30 | Average RF |
| **11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)** | 0.943 | 0.884 | 8.0008 | 7.4968 | 93.7 | NA | ±30 | Average RF |
| **Perfluoro-3-methoxypropanoic acid (PFMPA)** | 1.00 | 0.968 | 2.6715 | 2.5856 | 96.8 | NA | ±30 | Average RF |
| **Perfluoro-4-methoxybutanoic acid (PFMBA)** | 1.00 | 1.18 | 2.7556 | 3.2401 | 118 | NA | ±30 | Average RF |
| **Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)** | 1.00 | 1.05 | 1.2722 | 1.3388 | 105 | NA | ±30 | Average RF |
| **Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)** | 1.00 | 1.02 | 0.7904 | 0.8029 | 102 | NA | ±30 | Average RF |
| **4,8-Dioxa-3H-perfluorononanoic acid (DONA)** | 0.945 | 0.803 | 10.3892 | 8.8306 | 85.0 | NA | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| **13C3-PFBS** | 2.50 | 2.37 | 0.9472 | 0.8961 | 94.6 | NA | ±30 | Average RF |
| **13C3-PFHxS** | 2.50 | 2.38 | 0.7905 | 0.7526 | 95.2 | NA | ±30 | Average RF |
| **13C8-PFOS** | 2.50 | 2.38 | 0.5871 | 0.5588 | 95.2 | NA | ±30 | Average RF |
| **13C4-PFBA** | 10.0 | 9.43 | 0.4782 | 0.4511 | 94.3 | NA | ±30 | Average RF |
| **13C5-PFPeA** | 5.00 | 4.34 | 0.2843 | 0.2467 | 86.8 | NA | ±30 | Average RF |
| **13C5-PFHxA** | 2.50 | 2.34 | 1.1925 | 1.1142 | 93.4 | NA | ±30 | Average RF |
| **13C4-PFHpA** | 2.50 | 2.28 | 1.2453 | 1.1337 | 91.0 | NA | ±30 | Average RF |
| **13C8-PFOA** | 2.50 | 2.52 | 14.1734 | 14.2678 | 101 | NA | ±30 | Average RF |
| **13C9-PFNA** | 1.25 | 1.17 | 0.8342 | 0.781 | 93.6 | NA | ±30 | Average RF |
| **13C6-PFDA** | 1.25 | 1.19 | 1.021 | 0.9696 | 95.0 | NA | ±30 | Average RF |
| **13C7-PFUnDA** | 1.25 | 1.27 | 1.6549 | 1.6865 | 102 | NA | ±30 | Average RF |
| **13C2-PFDoDA** | 1.25 | 1.16 | 1.7727 | 1.6463 | 92.9 | NA | ±30 | Average RF |
| **13C2-PFTeDA** | 1.25 | 1.15 | 1.0179 | 0.9384 | 92.2 | NA | ±30 | Average RF |
| **13C8-FOSA** | 2.50 | 2.11 | 2.1118 | 1.7787 | 84.2 | NA | ±30 | Average RF |
| **D3-MeFOSA** | 2.50 | 1.89 | 0.6531 | 0.4946 | 75.7 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/04/23 21:14

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F029
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D5-EtFOSA** | 2.50 | 1.89 | 0.8497 | 0.6408 | 75.4 | NA | ±30 | Average RF |
| **D7-MeFOSE** | 25.0 | 20.0 | 0.8892 | 0.7116 | 80.0 | NA | ±30 | Average RF |
| **D9-EtFOSE** | 25.0 | 18.3 | 0.8607 | 0.631 | 73.3 | NA | ±30 | Average RF |
| **D3-MeFOSAA** | 5.00 | 3.81 | 0.7396 | 0.5636 | 76.2 | NA | ±30 | Average RF |
| **D5-EtFOSAA** | 5.00 | 4.21 | 0.7123 | 0.5991 | 84.1 | NA | ±30 | Average RF |
| **13C2-4:2 FTS** | 5.00 | 3.36 | 0.1432 | 0.0961 | 67.1* | NA | ±30 | Average RF |
| **13C2-6:2 FTS** | 5.00 | 3.80 | 0.1008 | 0.0766 | 76.0 | NA | ±30 | Average RF |
| **13C2-8:2 FTS** | 5.00 | 4.25 | 0.1003 | 0.0853 | 85.1 | NA | ±30 | Average RF |
| **13C3-HFPO-DA** | 10.0 | 10.1 | 0.2828 | 0.2866 | 101 | NA | ±30 | Average RF |

**ALS Group USA, Corp.**
**dba ALS Environmental**

QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/05/23 01:30

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F040
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| Perfluorobutane sulfonic acid (PFBS) | 0.887 | 0.942 | 1.7214 | 1.8275 | 106 | NA | ±30 | Average RF |
| Perfluoropentane sulfonic acid (PFPeS) | 0.941 | 1.24 | 1.5017 | 1.7752 | 132* | 31.9* | ±30 | Linear |
| Perfluorohexane sulfonic acid (PFHxS) | 0.914 | 1.22 | 1.5427 | 1.853 | 134* | 33.7* | ±30 | Linear |
| Perfluoroheptane sulfonic acid (PFHpS) | 0.953 | 1.06 | 2.39 | 2.666 | 112 | NA | ±30 | Average RF |
| Perfluorooctane sulfonic acid (PFOS) | 0.928 | 0.970 | 3.2207 | 3.3658 | 105 | NA | ±30 | Average RF |
| Perfluorononane sulfonic acid (PFNS) | 0.962 | 0.983 | 1.8735 | 1.915 | 102 | NA | ±30 | Average RF |
| Perfluorodecane sulfonic acid (PFDS) | 0.965 | 1.07 | 1.6747 | 1.8608 | 111 | NA | ±30 | Average RF |
| Perfluorododecane sulfonic acid (PFDoS) | 0.970 | 0.980 | 0.9246 | 0.9341 | 101 | NA | ±30 | Average RF |
| Perfluorobutanoic acid (PFBA) | 1.00 | 1.12 | 1.1908 | 1.3327 | 112 | NA | ±30 | Average RF |
| Perfluoropentanoic acid (PFPeA) | 1.00 | 1.10 | 4.5005 | 4.9282 | 110 | NA | ±30 | Average RF |
| Perfluorohexanoic acid (PFHxA) | 1.00 | 0.962 | 1.0753 | 1.0341 | 96.2 | NA | ±30 | Average RF |
| Perfluoroheptanoic acid (PFHpA) | 1.00 | 1.04 | 1.0758 | 1.0319 | 104 | 3.6 | ±30 | Linear |
| Perfluorooctanoic acid (PFOA) | 1.00 | 1.16 | 1.4522 | 1.6894 | 116 | NA | ±30 | Average RF |
| Perfluorononanoic acid (PFNA) | 1.00 | 0.991 | 1.1321 | 1.1224 | 99.1 | NA | ±30 | Average RF |
| Perfluorodecanoic acid (PFDA) | 1.00 | 1.03 | 2.1567 | 2.0847 | 103 | 2.7 | ±30 | Linear |
| Perfluoroundecanoic acid (PFUnDA) | 1.00 | 1.04 | 0.946 | 0.9806 | 104 | NA | ±30 | Average RF |
| Perfluorododecanoic acid (PFDOA) | 1.00 | 1.01 | 0.8815 | 0.8875 | 101 | NA | ±30 | Average RF |
| Perfluorotridecanoic acid (PFTrDA) | 1.00 | 1.13 | 1.6139 | 1.8304 | 113 | NA | ±30 | Average RF |
| Perfluorotetradecanoic acid (PFTDA) | 1.00 | 1.04 | 1.31 | 1.3682 | 104 | NA | ±30 | Average RF |
| Perfluorooctane sulfonamide (PFOSAm) | 1.00 | 1.03 | 0.9277 | 0.9566 | 103 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | 1.00 | 1.12 | 1.9313 | 2.1697 | 112 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | 1.00 | 1.07 | 1.5628 | 1.6798 | 107 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | 1.00 | 1.06 | 1.4828 | 1.5725 | 106 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | 1.00 | 1.12 | 2.0475 | 2.2943 | 112 | NA | ±30 | Average RF |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | 1.00 | 1.04 | 0.9634 | 1 | 104 | NA | ±30 | Average RF |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | 1.00 | 1.24 | 0.8506 | 1.0554 | 124 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | 0.937 | 1.06 | 2.8301 | 3.2035 | 113 | NA | ±30 | Average RF |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 0.951 | 1.50 | 2.5861 | 4.07 | 157* | NA | ±30 | Average RF |

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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/05/23 01:30

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F040
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS)** | 0.960 | 1.02 | 2.6393 | 2.8102 | 106 | NA | ±30 | Average RF |
| **4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA)** | 20.0 | 22.1 | 0.1596 | 0.1766 | 111 | NA | ±30 | Average RF |
| **2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)** | 20.0 | 19.2 | 0.1633 | 0.1569 | 96.1 | NA | ±30 | Average RF |
| **2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA)** | 20.0 | 18.1 | 0.2153 | 0.1951 | 90.6 | NA | ±30 | Average RF |
| **Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)** | 0.890 | 0.931 | 2.7802 | 2.9071 | 105 | NA | ±30 | Average RF |
| **9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)** | 0.933 | 0.855 | 10.3923 | 9.528 | 91.7 | NA | ±30 | Average RF |
| **11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)** | 0.943 | 0.855 | 8.0008 | 7.2554 | 90.7 | NA | ±30 | Average RF |
| **Perfluoro-3-methoxypropanoic acid (PFMPA)** | 1.00 | 0.937 | 2.6715 | 2.5032 | 93.7 | NA | ±30 | Average RF |
| **Perfluoro-4-methoxybutanoic acid (PFMBA)** | 1.00 | 1.15 | 2.7556 | 3.1798 | 115 | NA | ±30 | Average RF |
| **Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX)** | 1.00 | 1.09 | 1.2722 | 1.3829 | 109 | NA | ±30 | Average RF |
| **Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)** | 1.00 | 0.879 | 0.7904 | 0.695 | 87.9 | NA | ±30 | Average RF |
| **4,8-Dioxa-3H-perfluorononanoic acid (DONA)** | 0.945 | 0.805 | 10.3892 | 8.8472 | 85.2 | NA | ±30 | Average RF |

| Analyte Name | Expected | Result | Average RF | CCV RF | Rec. | % Drift | Criteria | Curve Fit |
|---|---|---|---|---|---|---|---|---|
| **13C3-PFBS** | 2.50 | 2.91 | 0.9472 | 1.1007 | 116 | NA | ±30 | Average RF |
| **13C3-PFHxS** | 2.50 | 2.47 | 0.7905 | 0.7809 | 98.8 | NA | ±30 | Average RF |
| **13C8-PFOS** | 2.50 | 2.61 | 0.5871 | 0.6131 | 104 | NA | ±30 | Average RF |
| **13C4-PFBA** | 10.0 | 9.30 | 0.4782 | 0.4445 | 93.0 | NA | ±30 | Average RF |
| **13C5-PFPeA** | 5.00 | 4.59 | 0.2843 | 0.2607 | 91.7 | NA | ±30 | Average RF |
| **13C5-PFHxA** | 2.50 | 2.53 | 1.1925 | 1.2072 | 101 | NA | ±30 | Average RF |
| **13C4-PFHpA** | 2.50 | 2.41 | 1.2453 | 1.1994 | 96.3 | NA | ±30 | Average RF |
| **13C8-PFOA** | 2.50 | 2.38 | 14.1734 | 13.498 | 95.2 | NA | ±30 | Average RF |
| **13C9-PFNA** | 1.25 | 1.22 | 0.8342 | 0.8144 | 97.6 | NA | ±30 | Average RF |
| **13C6-PFDA** | 1.25 | 1.31 | 1.021 | 1.0666 | 104 | NA | ±30 | Average RF |
| **13C7-PFUnDA** | 1.25 | 1.19 | 1.6549 | 1.5736 | 95.1 | NA | ±30 | Average RF |
| **13C2-PFDoDA** | 1.25 | 1.09 | 1.7727 | 1.5409 | 86.9 | NA | ±30 | Average RF |
| **13C2-PFTeDA** | 1.25 | 1.04 | 1.0179 | 0.8463 | 83.1 | NA | ±30 | Average RF |
| **13C8-FOSA** | 2.50 | 2.43 | 2.1118 | 2.0528 | 97.2 | NA | ±30 | Average RF |
| **D3-MeFOSA** | 2.50 | 2.38 | 0.6531 | 0.6226 | 95.3 | NA | ±30 | Average RF |

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QA/QC Report

**Client:** Pace Analytical Services
**Project:** 22K0850

**Service Request:** K2213469
**Date Analyzed:** 01/05/23 01:30

## Continuing Calibration Verification (CCV) Summary
## Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633
**File ID:** J:\LCMS08\Data\230104_1633_B1\230104_F040
**Signal ID:** 1

**Calibration Date:** 12/29/2022
**Calibration ID:** KC2200776
**Analysis Lot:** 790610
**Units:** ng/mL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D5-EtFOSA** | 2.50 | 2.39 | 0.8497 | 0.8116 | 95.5 | NA | ±30 | Average RF |
| **D7-MeFOSE** | 25.0 | 24.3 | 0.8892 | 0.866 | 97.4 | NA | ±30 | Average RF |
| **D9-EtFOSE** | 25.0 | 23.5 | 0.8607 | 0.809 | 94.0 | NA | ±30 | Average RF |
| **D3-MeFOSAA** | 5.00 | 4.62 | 0.7396 | 0.6827 | 92.3 | NA | ±30 | Average RF |
| **D5-EtFOSAA** | 5.00 | 5.05 | 0.7123 | 0.7188 | 101 | NA | ±30 | Average RF |
| **13C2-4:2 FTS** | 5.00 | 4.59 | 0.1432 | 0.1316 | 91.9 | NA | ±30 | Average RF |
| **13C2-6:2 FTS** | 5.00 | 3.56 | 0.1008 | 0.0717 | 71.1 | NA | ±30 | Average RF |
| **13C2-8:2 FTS** | 5.00 | 5.04 | 0.1003 | 0.101 | 101 | NA | ±30 | Average RF |
| **13C3-HFPO-DA** | 10.0 | 10.9 | 0.2828 | 0.309 | 109 | NA | ±30 | Average RF |

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QA/QC Report

**Client:** Pace Analytical Services **Service Request:**K2213469
**Project:** 22K0850

**Analysis Run Log**
**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633 **Analysis Lot:**788052
**Instrument ID:**K-LCMS-05

| Raw Data File | Sample Name | Lab Code | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| J:\LCMS05\Data\221209_1633_B1\221209F007 | Continuing Calibration Blank | KQ2222406-01 | 12/9/2022 | 12:33 | |
| J:\LCMS05\Data\221209_1633_B1\221209F008 | Low Level Continuing Calibration Verification | KQ2222406-02 | 12/9/2022 | 12:55 | |
| J:\LCMS05\Data\221209_1633_B1\221209F009 | Continuing Calibration Verification | KQ2222406-03 | 12/9/2022 | 13:17 | |
| J:\LCMS05\Data\221209_1633_B1\221209F011 | Continuing Calibration Blank | KQ2222406-04 | 12/9/2022 | 14:01 | |
| J:\LCMS05\Data\221209_1633_B1\221209F013 | Method Blank | KQ2220707-05 | 12/9/2022 | 14:45 | |
| J:\LCMS05\Data\221209_1633_B1\221209F014 | Low Level Lab Control Sample | KQ2220707-03 | 12/9/2022 | 15:07 | |
| J:\LCMS05\Data\221209_1633_B1\221209F015 | Lab Control Sample | KQ2220707-04 | 12/9/2022 | 15:29 | |
| J:\LCMS05\Data\221209_1633_B1\221209F016 | 22K0850-01 | K2213469-001 | 12/9/2022 | 15:51 | |
| J:\LCMS05\Data\221209_1633_B1\221209F017 | 22K0850-01 MS | KQ2220707-01 | 12/9/2022 | 16:13 | |
| J:\LCMS05\Data\221209_1633_B1\221209F018 | 22K0850-01 DMS | KQ2220707-02 | 12/9/2022 | 16:35 | |
| J:\LCMS05\Data\221209_1633_B1\221209F019 | Continuing Calibration Verification | KQ2222406-05 | 12/9/2022 | 16:57 | |
| J:\LCMS05\Data\221209_1633_B1\221209F020 | Continuing Calibration Blank | KQ2222406-06 | 12/9/2022 | 17:19 | |
| J:\LCMS05\Data\221209_1633_B1\221209F021 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 17:41 | |
| J:\LCMS05\Data\221209_1633_B1\221209F022 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 18:03 | |
| J:\LCMS05\Data\221209_1633_B1\221209F023 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 18:25 | |
| J:\LCMS05\Data\221209_1633_B1\221209F024 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 18:47 | |
| J:\LCMS05\Data\221209_1633_B1\221209F025 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 19:09 | |
| J:\LCMS05\Data\221209_1633_B1\221209F026 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 19:31 | |
| J:\LCMS05\Data\221209_1633_B1\221209F027 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 19:53 | |
| J:\LCMS05\Data\221209_1633_B1\221209F028 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 20:15 | |
| J:\LCMS05\Data\221209_1633_B1\221209F029 | Continuing Calibration Blank | KQ2222406-09 | 12/9/2022 | 20:37 | |
| J:\LCMS05\Data\221209_1633_B1\221209F030 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 20:59 | |
| J:\LCMS05\Data\221209_1633_B1\221209F031 | ZZZZZZZ | ZZZZZZZ | 12/9/2022 | 21:21 | |

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QA/QC Report

**Client:** Pace Analytical Services **Service Request:**K2213469
**Project:** 22K0850

**Analysis Run Log**

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633 **Analysis Lot:**788052
**Instrument ID:**K-LCMS-05

| Raw Data File | Sample Name | Lab Code | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| J:\LCMS05\Data\221209_1633_B1\221209F032 | Continuing Calibration Blank | KQ2222406-07 | 12/9/2022 | 21:43 | |

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QA/QC Report

**Client:** Pace Analytical Services **Service Request:**K2213469
**Project:** 22K0850

**Analysis Run Log**
**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633 **Analysis Lot:**790610
**Instrument ID:**K-LCMS-08

| Raw Data File | Sample Name | Lab Code | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| J:\LCMS08\Data\230104_1633_B1\230104_F012 | Continuing Calibration Blank | KQ2300281-01 | 1/4/2023 | 14:27 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F014 | Low Level Continuing Calibration Verification | KQ2300281-02 | 1/4/2023 | 15:13 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F015 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 15:36 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F017 | Continuing Calibration Blank | KQ2300281-04 | 1/4/2023 | 16:23 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F020 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 17:45 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F021 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 18:08 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F022 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 18:31 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F023 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 18:55 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F024 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 19:18 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F025 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 19:41 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F026 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 20:04 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F027 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 20:28 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F028 | ZZZZZZZ | ZZZZZZZ | 1/4/2023 | 20:51 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F029 | Continuing Calibration Verification | KQ2300281-06 | 1/4/2023 | 21:14 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F030 | Continuing Calibration Blank | KQ2300281-05 | 1/4/2023 | 21:37 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F031 | 22K0850-02 | K2213469-002 | 1/4/2023 | 22:01 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F032 | 22K0850-03 | K2213469-003 | 1/4/2023 | 22:24 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F033 | 22K0850-04 | K2213469-004 | 1/4/2023 | 22:47 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F034 | 22K0850-05 | K2213469-005 | 1/4/2023 | 23:11 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F035 | 22K0850-06 | K2213469-006 | 1/4/2023 | 23:34 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F036 | 22K0850-07 | K2213469-007 | 1/4/2023 | 23:57 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F037 | 22K0850-08 | K2213469-008 | 1/5/2023 | 00:20 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F038 | ZZZZZZZ | ZZZZZZZ | 1/5/2023 | 00:44 | |

Printed 1/17/2023 9:49:16 AM Superset Reference:

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QA/QC Report

**Client:** Pace Analytical Services **Service Request:**K2213469
**Project:** 22K0850

## Analysis Run Log

### Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4

**Analysis Method:** Draft EPA Method 1633 **Analysis Lot:**790610
**Instrument ID:**K-LCMS-08

| Raw Data File | Sample Name | Lab Code | Date Analyzed | Time Analyzed | Q |
|---|---|---|---|---|---|
| J:\LCMS08\Data\230104_1633_B1\230104_F039 | ZZZZZZZ | ZZZZZZZ | 1/5/2023 | 01:07 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F040 | Continuing Calibration Verification | KQ2300281-08 | 1/5/2023 | 01:30 | |
| J:\LCMS08\Data\230104_1633_B1\230104_F041 | Continuing Calibration Blank | KQ2300281-07 | 1/5/2023 | 01:53 | |

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Prep Summary Report

**Client:** Pace Analytical Services
**Project:** 22K0850
**Sample Matrix:** Water

**Service Request:**K2213469

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Prep Method:** Method
**Analytical Method:** Draft EPA Method 1633

**Extraction Lot:** 410440
**Extraction Date:** 11/22/22 09:13

| Sample Name | Lab Code | Date Collected | Date Received | Sample Amount | Final Amount | Percent Solids |
|---|---|---|---|---|---|---|
| 22K0850-01 | K2213469-001 | 11/1/22 | 11/9/22 | 277.8000 mL | 5 mL | |
| 22K0850-02 | K2213469-002 | 11/1/22 | 11/9/22 | 280.7300 mL | 5 mL | |
| 22K0850-03 | K2213469-003 | 11/1/22 | 11/9/22 | 280.3100 mL | 5 mL | |
| 22K0850-04 | K2213469-004 | 11/1/22 | 11/9/22 | 277.6100 mL | 5 mL | |
| 22K0850-05 | K2213469-005 | 11/2/22 | 11/9/22 | 275.1200 mL | 5 mL | |
| 22K0850-06 | K2213469-006 | 11/2/22 | 11/9/22 | 275.4500 mL | 5 mL | |
| 22K0850-07 | K2213469-007 | 11/3/22 | 11/9/22 | 274.8600 mL | 5 mL | |
| 22K0850-08 | K2213469-008 | 11/3/22 | 11/9/22 | 271.9000 mL | 5 mL | |
| Matrix Spike | KQ2220707-01MS | 11/1/22 | 11/9/22 | 276.6300 mL | 5 mL | |
| Duplicate Matrix Spike | KQ2220707-02DMS | 11/1/22 | 11/9/22 | 280.2500 mL | 5 mL | |
| Low Level Lab Control Sample | KQ2220707-03LCS_LL | NA | NA | 250 mL | 5 mL | |
| Lab Control Sample | KQ2220707-04LCS | NA | NA | 250 mL | 5 mL | |
| Method Blank | KQ2220707-05MB | NA | NA | 250 mL | 5 mL | |

# APPENDIX E

# DATA USABILITY SUMMARY REPORTS

# Data Usability Summary Report

**Site:** SMP B – Mahopac Business District Wells
**Laboratory:** Eurofins TestAmerica – Sacramento, CA
**SDG No.:** 480-177077-1
**Parameters:** Per- and Poly-fluoroalkyl Substances (PFAS)
**Data Reviewer:** Kristen Morin/TRC
**Peer Reviewer:** Elizabeth Denly/TRC
**Date:** November 5, 2020

## Samples Reviewed and Evaluation Summary

6 Groundwater Samples: MW-02D, MW-02I, MW-02S, MW-03I, MW-06I, DUP[1]

[1] Field duplicate for MW-02D

The above-listed groundwater samples were collected on October 21-23, 2020 and were analyzed for PFAS (21 target analytes) based on EPA Method 537.1 (modified) using Eurofins TestAmerica – Sacramento, CA standard operating procedure (SOP) WS-LC-0025, revision 3.8, effective date 09/23/19.

The data validation was performed in accordance with the following guidance, modified for the methodology utilized:

- USEPA National Functional Guidelines for High Resolution Superfund Methods Data Review (EPA-542-B-16-001), April 2016
- USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances Analyzed Using EPA Method 537 (EPA 910-R-18-001), November 2018
- New York State Department of Environmental Conservation Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids, October 2020

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
* • Data Completeness
* • Holding Times and Sample Preservation
* • Initial and Continuing Calibrations
* • Blanks
* • Isotopically Labeled Surrogate Results
* • Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
* • Laboratory Control Sample (LCS) Results
* • Internal Standards
* • Field Duplicate Results
- Sample Results and Reported Quantitation Limits (QLs)
* • Target Compound Identification

* - All criteria were met.

## Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. There were no qualifications applied to the data

because of sampling error. Qualifications applied to the data because of analytical error are discussed below.

- Potential uncertainty exists for select PFAS results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) in the associated samples. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

**Data Completeness**

The data package was a complete Level IV data deliverable.

**Holding Times and Sample Preservation**

All holding time and sample preservation criteria were met.

**Initial and Continuing Calibrations**

The percent relative standard deviations were within the method acceptance criteria in the initial calibration. The percent differences met the method acceptance criteria in the continuing calibration standards associated with the samples in this data set.

**Blanks**

PFAS compounds were not detected in the laboratory method blank.

**Isotopically Labeled Surrogate Results**

Eighteen isotopically labeled surrogates were spiked into the samples prior to extraction for isotope dilution quantitation. The isotopically labeled surrogate percent recoveries (%Rs) were within the acceptance criteria.

**MS/MSD Results**

MS/MSD analyses were performed on sample MW-02D. All %Rs and relative percent differences (RPDs) were within the laboratory acceptance criteria.

**LCS Results**

The LCS %Rs were within the laboratory acceptance criteria.

**Internal Standards**

One isotopically labeled internal standard, 13C2 PFOA, was added to each sample prior to injection to monitor for ion suppression/enhancement at the instrument level. The %Rs were within the laboratory acceptance limits of 50-150%.

**Field Duplicate Results**

Samples MW-02D and DUP were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected results; all criteria were met.

| Analyte | QL (ng/L) | MW-02D (ng/L) | DUP (ng/L) | RPD (%) | Validation Action |
|---|---|---|---|---|---|
| PFBA | 4.2 | 23 | 23 | 0 | None; all criteria were met. |
| PFPeA | 1.7 | 59 | 58 | 1.7 | |
| PFHxA | 1.7 | 48 | 49 | 2.1 | |
| PFHpA | 1.7 | 39 | 37 | 5.3 | |
| PFOA | 1.7 | 69 | 65 | 6.0 | |
| PFNA | 1.7 | 14 | 15 | 6.9 | |
| PFDA | 1.7 | 26 | 27 | 3.8 | |
| PFUnA | 1.7 | 5.6 | 5.2 | 7.4 | |
| PFDoA | 1.7 | 14 | 14 | 0 | |
| PFTeA | 1.7 | 2.5 | 1.7 | 38.1 | |
| PFBS | 1.7 | 5.4 | 5.1 | 5.7 | |
| PFHxS | 1.7 | 3.6 | 3.5 | 2.8 | |
| PFHpS | 1.7 | 0.4 J | 0.37 J | 7.8 | |
| PFOS | 1.7 | 22 | 21 | 4.7 | |

Criteria:

- When both results are ≥ 2x the QL, RPDs must be ≤ 30%.
- When one or both results are < 2x the QL, absolute difference must be < the QL.

**Sample Results and Reported Quantitation Limits**

Sample calculations were spot-checked; there were no errors noted.

Select PFAS results were reported below the lowest calibration standard level and QL. These results were qualified as estimated (J) in the associated samples by the laboratory.

There were no dilutions performed on the samples in this data set.

The laboratory narrative noted that all samples in this data set contained a thin layer of sediment at the bottom of the bottle prior to extraction.

**Target Compound Identification**

Extracted ion chromatograms were reviewed to verify the target compound identifications. The laboratory manually integrated several peaks to ensure the inclusion of linear and branched isomers for PFOA, PFOS, NEtFOSAA, NMeFOSAA, and/or PFHxS; and/or to ensure proper integration of all PFAS.

Two precursor/product ion transitions were used for identification for all compounds except for PFBA, PFPeA, PFOSA, NMeFOSAA, NEtFOSAA, 6:2 FTS, and 8:2 FTS which only used one precursor/product ion transition for identification. The ratios between the two precursor/product ion transitions for detected results were within the laboratory acceptance criteria.

# QUALIFIED FORM 1s

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02I  Lab Sample ID: 480-177077-1

Matrix: Water  Lab File ID: 2020.10.27_A18_PFC_AA_052.d

Analysis Method: 537 (modified)  Date Collected: 10/21/2020 09:00

Extraction Method: 3535  Date Extracted: 10/26/2020 18:56

Sample wt/vol: 298.7(mL)  Date Analyzed: 10/27/2020 21:30

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 425872  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 43 | | 4.2 | 2.0 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 180 | | 1.7 | 0.41 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 85 | | 1.7 | 0.49 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 45 | | 1.7 | 0.21 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 78 | | 1.7 | 0.71 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 6.4 | | 1.7 | 0.23 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 5.5 | | 1.7 | 0.26 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | ND | | 1.7 | 0.92 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.72 | J | 1.7 | 0.46 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | ND | | 1.7 | 0.61 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 8.8 | | 1.7 | 0.17 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 3.9 | | 1.7 | 0.48 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.59 | J | 1.7 | 0.16 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 28 | | 1.7 | 0.45 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.27 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.82 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.2 | 1.0 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.2 | 1.1 |
| 27619-97-2 | 6:2 FTS | ND | | 4.2 | 2.1 |
| 39108-34-4 | 8:2 FTS | ND | | 1.7 | 0.39 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02S  Lab Sample ID: 480-177077-2

Matrix: Water  Lab File ID: 2020.10.27_A18_PFC_AA_053.d

Analysis Method: 537 (modified)  Date Collected: 10/21/2020 10:25

Extraction Method: 3535  Date Extracted: 10/26/2020 18:56

Sample wt/vol: 304.2(mL)  Date Analyzed: 10/27/2020 21:39

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 425872  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 12 | | 4.1 | 2.0 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 9.0 | | 1.6 | 0.40 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 7.2 | | 1.6 | 0.48 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 5.7 | | 1.6 | 0.21 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 28 | | 1.6 | 0.70 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 8.5 | | 1.6 | 0.22 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 2.3 | | 1.6 | 0.25 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | ND | | 1.6 | 0.90 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.50 | J | 1.6 | 0.45 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | ND | | 1.6 | 1.1 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | ND | | 1.6 | 0.60 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 9.5 | | 1.6 | 0.16 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 2.3 | | 1.6 | 0.47 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.44 | J | 1.6 | 0.16 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 46 | | 1.6 | 0.44 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | ND | | 1.6 | 0.26 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | | 1.6 | 0.81 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.1 | 0.99 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.1 | 1.1 |
| 27619-97-2 | 6:2 FTS | ND | | 4.1 | 2.1 |
| 39108-34-4 | 8:2 FTS | ND | | 1.6 | 0.38 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02D  Lab Sample ID: 480-177077-3

Matrix: Water  Lab File ID: 2020.10.27_A18_PFC_AA_056.d

Analysis Method: 537 (modified)  Date Collected: 10/23/2020 11:05

Extraction Method: 3535  Date Extracted: 10/26/2020 18:56

Sample wt/vol: 299.9(mL)  Date Analyzed: 10/27/2020 22:06

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 425872  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 23 | | 4.2 | 2.0 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 59 | | 1.7 | 0.41 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 48 | | 1.7 | 0.48 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 39 | | 1.7 | 0.21 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 69 | | 1.7 | 0.71 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 14 | | 1.7 | 0.23 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 26 | | 1.7 | 0.26 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 5.6 | | 1.7 | 0.92 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 14 | | 1.7 | 0.46 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 2.5 | | 1.7 | 0.61 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 5.4 | | 1.7 | 0.17 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 3.6 | | 1.7 | 0.48 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.40 | J | 1.7 | 0.16 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 22 | | 1.7 | 0.45 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.27 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.82 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.2 | 1.0 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.2 | 1.1 |
| 27619-97-2 | 6:2 FTS | ND | | 4.2 | 2.1 |
| 39108-34-4 | 8:2 FTS | ND | | 1.7 | 0.38 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 480-177077-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 480-177077-4

Matrix: Water  Lab File ID: 2020.10.27_A18_PFC_AA_059.d

Analysis Method: 537 (modified)  Date Collected: 10/22/2020 10:30

Extraction Method: 3535  Date Extracted: 10/26/2020 18:56

Sample wt/vol: 295.7(mL)  Date Analyzed: 10/27/2020 22:34

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 425872  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 23 | | 4.2 | 2.0 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 58 | | 1.7 | 0.41 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 49 | | 1.7 | 0.49 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 37 | | 1.7 | 0.21 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 65 | | 1.7 | 0.72 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 15 | | 1.7 | 0.23 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 27 | | 1.7 | 0.26 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 5.2 | | 1.7 | 0.93 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 14 | | 1.7 | 0.46 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | 1.7 | | 1.7 | 0.62 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 5.1 | | 1.7 | 0.17 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 3.5 | | 1.7 | 0.48 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.37 | J | 1.7 | 0.16 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 21 | | 1.7 | 0.46 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.27 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.83 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.2 | 1.0 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.2 | 1.1 |
| 27619-97-2 | 6:2 FTS | ND | | 4.2 | 2.1 |
| 39108-34-4 | 8:2 FTS | ND | | 1.7 | 0.39 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-06  Lab Sample ID: 480-177077-7

Matrix: Water  Lab File ID: 2020.10.27_A18_PFC_AA_060.d

Analysis Method: 537 (modified)  Date Collected: 10/21/2020 11:55

Extraction Method: 3535  Date Extracted: 10/26/2020 18:56

Sample wt/vol: 283(mL)  Date Analyzed: 10/27/2020 22:43

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 425872  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 15 | | 4.4 | 2.1 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 43 | | 1.8 | 0.43 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 32 | | 1.8 | 0.51 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 15 | | 1.8 | 0.22 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 38 | | 1.8 | 0.75 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 4.4 | | 1.8 | 0.24 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 9.4 | | 1.8 | 0.27 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | ND | | 1.8 | 0.97 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 3.5 | | 1.8 | 0.49 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | ND | | 1.8 | 1.1 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | ND | | 1.8 | 0.64 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 6.7 | | 1.8 | 0.18 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 3.2 | | 1.8 | 0.50 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | 0.48 | J | 1.8 | 0.17 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 36 | | 1.8 | 0.48 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | ND | | 1.8 | 0.28 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | | 1.8 | 0.87 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.4 | 1.1 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.4 | 1.1 |
| 27619-97-2 | 6:2 FTS | ND | | 4.4 | 2.2 |
| 39108-34-4 | 8:2 FTS | ND | | 1.8 | 0.41 |

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-03I  Lab Sample ID: 480-177077-10

Matrix: Water  Lab File ID: 2020.10.27_A18_PFC_AA_061.d

Analysis Method: 537 (modified)  Date Collected: 10/21/2020 14:30

Extraction Method: 3535  Date Extracted: 10/26/2020 18:56

Sample wt/vol: 302(mL)  Date Analyzed: 10/27/2020 22:52

Con. Extract Vol.: 10.00(mL)  Dilution Factor: 1

Injection Volume: 20(uL)  GC Column: Gemini C18 3x50 ID: 3(mm)

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 425872  Units: ng/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 375-22-4 | Perfluorobutanoic acid (PFBA) | 6.3 | | 4.1 | 2.0 |
| 2706-90-3 | Perfluoropentanoic acid (PFPeA) | 3.0 | | 1.7 | 0.41 |
| 307-24-4 | Perfluorohexanoic acid (PFHxA) | 3.0 | | 1.7 | 0.48 |
| 375-85-9 | Perfluoroheptanoic acid (PFHpA) | 5.5 | | 1.7 | 0.21 |
| 335-67-1 | Perfluorooctanoic acid (PFOA) | 26 | | 1.7 | 0.70 |
| 375-95-1 | Perfluorononanoic acid (PFNA) | 8.5 | | 1.7 | 0.22 |
| 335-76-2 | Perfluorodecanoic acid (PFDA) | 6.3 | | 1.7 | 0.26 |
| 2058-94-8 | Perfluoroundecanoic acid (PFUnA) | 0.95 | J | 1.7 | 0.91 |
| 307-55-1 | Perfluorododecanoic acid (PFDoA) | 0.88 | J | 1.7 | 0.46 |
| 72629-94-8 | Perfluorotridecanoic acid (PFTriA) | ND | | 1.7 | 1.1 |
| 376-06-7 | Perfluorotetradecanoic acid (PFTeA) | ND | | 1.7 | 0.60 |
| 375-73-5 | Perfluorobutanesulfonic acid (PFBS) | 4.0 | | 1.7 | 0.17 |
| 355-46-4 | Perfluorohexanesulfonic acid (PFHxS) | 2.8 | | 1.7 | 0.47 |
| 375-92-8 | Perfluoroheptanesulfonic Acid (PFHpS) | ND | | 1.7 | 0.16 |
| 1763-23-1 | Perfluorooctanesulfonic acid (PFOS) | 11 | | 1.7 | 0.45 |
| 335-77-3 | Perfluorodecanesulfonic acid (PFDS) | ND | | 1.7 | 0.26 |
| 754-91-6 | Perfluorooctanesulfonamide (FOSA) | ND | | 1.7 | 0.81 |
| 2355-31-9 | N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | ND | | 4.1 | 0.99 |
| 2991-50-6 | N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | ND | | 4.1 | 1.1 |
| 27619-97-2 | 6:2 FTS | ND | | 4.1 | 2.1 |
| 39108-34-4 | 8:2 FTS | ND | | 1.7 | 0.38 |

# QC NONCONFORMANCE DOCUMENTATION

*Not applicable to this SDG.*

# Data Usability Summary Report

**Site:** SMP B - Mahopac Business District Wells
**Laboratory:** Eurofins TestAmerica Buffalo – Amherst, NY
**SDG No.:** 480-177077-1
**Parameters:** Volatile Organic Compounds (VOCs); 1,4-Dioxane
**Data Reviewer:** Amy Bass/TRC
**Peer Reviewer:** Elizabeth Denly/TRC
**Date:** November 11, 2020

## Samples Reviewed and Evaluation Summary

11 / Groundwater: MW-02I, MW-02S, MW-02D, DUP*, MW-03I, MW-04S, MW-06, MW-08S, MW-09S, MW-10S, MW-11S

1 / Trip Blank: TRIP BLANK

* Field Duplicate for MW-02D

The above-listed samples were collected on October 21-23, 2020 and were analyzed for the following parameters:

- VOCs by SW-846 Method 8260C
- 1,4-Dioxane by SW-846 Method 8270D using selective ion monitoring (SIM) / isotope dilution

The data validation was performed in accordance with *USEPA National Functional Guidelines for Organic Superfund Methods Data Review (EPA-540-R-017-002),* January 2017, modified for the SW-846 methodologies utilized.

The data were evaluated based on the following parameters:

- Overall Evaluation of Data and Potential Usability Issues
- Data Completeness
* • Holding Times and Sample Preservation
* • Gas Chromatography/Mass Spectrometry (GC/MS) Tunes
- Initial and Continuing Calibrations
* • Blanks
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
* • Internal Standards
* • Laboratory Control Sample (LCS) Results
* • Field Duplicate Results
- Sample Results and Reported Quantitation Limits (QLs)
* • Target Compound Identification
* • Tentatively Identified Compounds (TICs)

* - All criteria were met.

## Overall Evaluation of Data and Potential Usability Issues

All results are usable for project objectives. Qualifications applied to the data as a result of sampling error were not required. Qualifications applied to the data as a result of analytical error are discussed below.

- Potential uncertainty exists for select VOC results that were below the lowest calibration standard and QL. These results were qualified as estimated (J) by the laboratory. These results can be used for project objectives as estimated values, which may have a minor impact on the data usability.

- The nondetect results for select VOCs in several samples were qualified as estimated (UJ) due to continuing calibration nonconformances. These results can be used for project objectives as nondetects with estimated QLs, which may have a minor impact on the data usability.

- The positive result for methylene chloride in sample MW-09S was qualified as estimated (J) due to high surrogate recovery. This result can be used for project objectives as an estimated value, which may have a minor impact on the data usability

## Data Completeness

The data package was a complete Level IV data deliverable package with some exceptions.

- The laboratory did not report LCS or MS/MSD percent recoveries (%Rs) for total xylenes on the summary forms. The %Rs were calculated during validation and were within the laboratory acceptance criteria; no validation actions were required on this basis.

- The laboratory did not report the results for the initial calibration verification (ICV) analysis associated with the VOC calibration on 10/21/2020. The run log noted that the ICV analysis was performed, but the ICV results were not provided. Other ICV results were summarized in the report. Since the ICV analyses are not used to qualify sample data, no validation action was required on this basis.

## Holding Times and Sample Preservation

All holding time and sample preservation method criteria were met for the VOC and 1,4-dioxane analyses.

## GC/MS Tunes

All method acceptance criteria were met in the VOC and 1,4-dioxane analyses.

## Initial and Continuing Calibrations

### VOCs

The percent relative standard deviations (%RSDs), coefficients of determination, and relative response factors (RRFs) were within the method acceptance criteria in the initial calibrations.

The following table summarizes the percent differences or percent drifts (%Ds) that did not meet the acceptance criteria in the continuing calibration (CC) standards associated with the samples in this data set, the associated samples, and the validation actions. All RRFs were within acceptance criteria in the CC standards.

| CC | Compound | %D | Validation Actions |
|---|---|---|---|
| 10/26/20 @09:28 HP5973C | Methyl acetate | -25.4 | The nondetect results for these VOCs in the associated samples were qualified as estimated (UJ). |
| | 2-Butanone | -34.7 | |
| | 2-Hexanone | -35.1 | |
| **Associated samples**: DUP, MW-09S, MW-10S, MW-06, MW-11S, MW-04S, MW-03I, MW-08S, TRIP BLANK | | | |

### 1,4-Dioxane

All %RSDs and RRFs were within the method acceptance criteria in the 1,4-dioxane IC associated with the samples in this data set. All RRFs and %Ds were within the acceptance criteria in the CC standards for the associated 1,4-dioxane analyses.

## Blanks

Target analytes were not detected in the laboratory method blanks for the VOC or 1,4-dioxane analyses. Target VOCs were not detected in the trip blank.

## Surrogate Recoveries

The surrogate %Rs met the laboratory acceptance criteria in the VOC and 1,4-dioxane analyses, with one exception in the VOC analyses. The following table summarizes the surrogate %R that did not meet the acceptance criteria, the associated sample, and the resulting validation action.

| Sample ID | Surrogate (VOCs) | %R | %R QC Limits | Validation Actions |
|---|---|---|---|---|
| MW-09S | Dibromofluoromethane | 125 | 75-123 | The positive result for methylene chloride in sample MW-09S would have been qualified as estimated (J+) with a potential high bias. However, this result was qualified as estimated (J) by the laboratory due to detection below the QL; therefore, the overall qualification is estimated (J), with no bias. Qualification was not required for the remaining VOCs since only detected results are affected. |

## MS/MSD Results

MS/MSD analyses for VOCs and 1,4-dioxane were performed on sample MW-02D. The MS and MSD %Rs for 1,4-dioxane, and the relative percent differences (RPDs) for the VOCs and 1,4-dioxane met the laboratory acceptance criteria. The following table summarizes the VOC MS and MSD %Rs that did not meet the laboratory acceptance criteria and the resulting validation actions. Qualification of the data is not required in the case of nonconformances when the sample concentration is >4x the spike concentration; thus, these results were not evaluated or summarized in this report.

| MS/MSD Parent Sample ID | Compound | MS %R | MSD %R | MS/MSD QC Limits | Validation Action |
|---|---|---|---|---|---|
| MW-02D | 1,1,1-Trichloroethane | 140 | 127 | 73-126 | Qualification was not required since these VOCs were nondetect in sample MW-02D. |
| | 1,1-Dichloroethane | 127 | - | 77-120 | |
| | 1,1-Dichloroethene | 141 | 128 | 66-127 | |
| | 1,2,4-Trichlorobenzene | 126 | - | 79-122 | |
| | Carbon tetrachloride | 143 | - | 72-134 | |
| | Chloroethane | 140 | - | 69-136 | |
| | Chloromethane | 140 | 130 | 68-124 | |
| | cis-1,2-Dichloroethene | 128 | - | 74-124 | |
| | Isopropylbenzene | 147 | 138 | 77-122 | |
| | Methyl tert-butyl ether | 122 | - | 77-120 | |
| | Methylene Chloride | 142 | 130 | 75-124 | |
| | trans-1,2-Dichloroethene | 133 | - | 73-127 | |
| | Vinyl chloride | 142 | - | 65-133 | |

Note that the laboratory did not report the MS/MSD %Rs for total xylenes. The %Rs were calculated during validation and were within the laboratory acceptance criteria.

## Internal Standards

All internal standards met the method acceptance criteria in the VOC and 1,4-dioxane analyses.

## LCS Results

All laboratory acceptance criteria were met in the LCS analyses for VOCs and 1,4-dioxane.

## Field Duplicate Results

Samples MW-02D and DUP were submitted as the field duplicate pair with this sample set. The duplicate RPD is applicable only when both results are ≥5× the QL. Acetone was the only detected analyte, and concentrations in both samples were below the QL; therefore, the duplicate comparisons were based on the absolute difference (AbsD) between the results rather than the RPD. The following table summarizes the acetone concentrations detected in the field duplicate pair and the calculated AbsD value. Criteria were met (AbsD ≤QL); therefore, no validation action was required.

| Analyte | QL (µg/L) | MW-02D (µg/L) | DUP (µg/L) | AbsD (µg/L) | Criteria | Validation Action |
|---|---|---|---|---|---|---|
| Acetone | 10 | 4.1 J | 3.1 J | 1.0 | AbsD ≤ QL | Qualification was not required since criteria were met. |

## Sample Results and Reported QLs

Select VOC results were reported below the lowest calibration standard level and QL. These results were qualified as estimated (J) by the laboratory.

Sample calculations were spot-checked; there were no errors noted.

No dilutions were performed for the 1,4-dioxane analyses. The following table summarizes the dilutions performed for the VOC analyses; QLs were elevated accordingly by the laboratory.

| Parameter | Sample ID | Dilution | Reason for Dilution |
|---|---|---|---|
| VOCs | MW-09S | 10-fold | The indicated dilutions were performed due to sample foaming during the initial analysis. |
| | MW-10S | 4-fold | |
| | MW-04S | 4-fold | |
| | MW-08S | 4-fold | |

## Target Compound Identification

All criteria were met for the VOC and 1,4-dioxane analyses.

## Tentatively Identified Compounds

There were no issues noted regarding VOC TIC identifications. There were no TICs in the VOC method blanks or trip blank. All criteria were met.

# QUALIFIED FORM 1s

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02I Lab Sample ID: 480-177077-1

Matrix: Water Lab File ID: T8125.D

Analysis Method: 8260C Date Collected: 10/21/2020 09:00

Sample wt/vol: 5(mL) Date Analyzed: 10/25/2020 15:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 555654 Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 |
| 67-64-1 | Acetone | ND | | 10 | 3.0 |
| 71-43-2 | Benzene | ND | | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | ND | | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02I  Lab Sample ID: 480-177077-1

Matrix: Water  Lab File ID: T8125.D

Analysis Method: 8260C  Date Collected: 10/21/2020 09:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 15:31

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | 0.56 | J | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | | 1.0 | 0.36 |
| 108-88-3 | Toluene | ND | | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 102 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 106 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 97 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 103 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02I  Lab Sample ID: 480-177077-1

Matrix: Water  Lab File ID: T8125.D

Analysis Method: 8260C  Date Collected: 10/21/2020 09:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 15:31

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02S  Lab Sample ID: 480-177077-2

Matrix: Water  Lab File ID: T8126.D

Analysis Method: 8260C  Date Collected: 10/21/2020 10:25

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 15:55

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 |
| 67-64-1 | Acetone | ND | | 10 | 3.0 |
| 71-43-2 | Benzene | ND | | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | ND | | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02S  Lab Sample ID: 480-177077-2

Matrix: Water  Lab File ID: T8126.D

Analysis Method: 8260C  Date Collected: 10/21/2020 10:25

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 15:55

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | | 1.0 | 0.36 |
| 108-88-3 | Toluene | ND | | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 101 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 101 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 96 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 98 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02S  Lab Sample ID: 480-177077-2

Matrix: Water  Lab File ID: T8126.D

Analysis Method: 8260C  Date Collected: 10/21/2020 10:25

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 15:55

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02D  Lab Sample ID: 480-177077-3

Matrix: Water  Lab File ID: T8127.D

Analysis Method: 8260C  Date Collected: 10/23/2020 11:05

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 16:19

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | ~~F1 F2~~ | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | F1 F2 | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | F1 F2 | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | F1 F2 | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | F1 F2 | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | F1 F2 | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | F1 F2 | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | F1 F2 | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | F1 F2 | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | F1 F2 | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | F1 F2 | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | F1 F2 | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | F1 F2 | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | F1 F2 | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | F1 F2 | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | ~~F1 F2~~ | 5.0 | 2.1 |
| 67-64-1 | Acetone | 4.1 | J ~~F1 F2~~ | 10 | 3.0 |
| 71-43-2 | Benzene | ND | ~~F1 F2~~ | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | F1 F2 | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | F1 F2 | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | F1 F2 | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | ND | F1 F2 | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | F1 F2 | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | F1 F2 | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | F1 F2 | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | F1 F2 | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | F1 F2 | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | F1 F2 | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | F1 F2 | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | F1 F2 | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | F1 F2 | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | F1 F2 | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | F1 F2 | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | F1 F2 | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | ~~F1 F2~~ | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02D  Lab Sample ID: 480-177077-3

Matrix: Water  Lab File ID: T8127.D

Analysis Method: 8260C  Date Collected: 10/23/2020 11:05

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 16:19

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | F1 F2 | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | ND | F1 F2 | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | F1 F2 | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | F1 F2 | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | F1 F2 | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | F1 F2 | 1.0 | 0.36 |
| 108-88-3 | Toluene | ND | F1 F2 | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | F1 F2 | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | F1 F2 | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | F1 F2 | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | F1 F2 | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | F1 F2 | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | F1 F2 | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 99 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 105 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 94 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 102 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02D  Lab Sample ID: 480-177077-3

Matrix: Water  Lab File ID: T8127.D

Analysis Method: 8260C  Date Collected: 10/23/2020 11:05

Sample wt/vol: 5(mL)  Date Analyzed: 10/25/2020 16:19

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555654  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 480-177077-4

Matrix: Water  Lab File ID: C1469.D

Analysis Method: 8260C  Date Collected: 10/22/2020 10:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 12:21

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 |
| 67-64-1 | Acetone | 3.1 | J | 10 | 3.0 |
| 71-43-2 | Benzene | ND | | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | ND | | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 480-177077-4

Matrix: Water  Lab File ID: C1469.D

Analysis Method: 8260C  Date Collected: 10/22/2020 10:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 12:21

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | | 1.0 | 0.36 |
| 108-88-3 | Toluene | ND | | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 116 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 103 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 93 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 112 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 480-177077-4

Matrix: Water  Lab File ID: C1469.D

Analysis Method: 8260C  Date Collected: 10/22/2020 10:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 12:21

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-09S  Lab Sample ID: 480-177077-5

Matrix: Water  Lab File ID: C1470.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:15

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 12:45

Soil Aliquot Vol:  Dilution Factor: 10

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 10 | 8.2 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 10 | 2.1 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 10 | 2.3 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 10 | 3.1 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 10 | 3.8 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 10 | 2.9 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 10 | 4.1 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 10 | 3.9 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 10 | 7.9 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 10 | 2.1 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 10 | 7.2 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 10 | 7.8 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 10 | 8.4 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 100 | 13 |
| 591-78-6 | 2-Hexanone | ND | UJ | 50 | 12 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 50 | 21 |
| 67-64-1 | Acetone | ND | | 100 | 30 |
| 71-43-2 | Benzene | ND | | 10 | 4.1 |
| 75-27-4 | Bromodichloromethane | ND | | 10 | 3.9 |
| 75-25-2 | Bromoform | ND | | 10 | 2.6 |
| 74-83-9 | Bromomethane | ND | | 10 | 6.9 |
| 75-15-0 | Carbon disulfide | ND | | 10 | 1.9 |
| 56-23-5 | Carbon tetrachloride | ND | | 10 | 2.7 |
| 108-90-7 | Chlorobenzene | ND | | 10 | 7.5 |
| 124-48-1 | Dibromochloromethane | ND | | 10 | 3.2 |
| 75-00-3 | Chloroethane | ND | | 10 | 3.2 |
| 67-66-3 | Chloroform | ND | | 10 | 3.4 |
| 74-87-3 | Chloromethane | ND | | 10 | 3.5 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 10 | 8.1 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 10 | 3.6 |
| 110-82-7 | Cyclohexane | ND | | 10 | 1.8 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 10 | 6.8 |
| 100-41-4 | Ethylbenzene | ND | | 10 | 7.4 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 10 | 7.3 |
| 98-82-8 | Isopropylbenzene | ND | | 10 | 7.9 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-09S  Lab Sample ID: 480-177077-5

Matrix: Water  Lab File ID: C1470.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:15

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 12:45

Soil Aliquot Vol:  Dilution Factor: 10

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 25 | 13 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 10 | 1.6 |
| 108-87-2 | Methylcyclohexane | ND | | 10 | 1.6 |
| 75-09-2 | Methylene Chloride | 6.3 | ~~J~~ J | 10 | 4.4 |
| 100-42-5 | Styrene | ND | | 10 | 7.3 |
| 127-18-4 | Tetrachloroethene | ND | | 10 | 3.6 |
| 108-88-3 | Toluene | ND | | 10 | 5.1 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 10 | 9.0 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 10 | 3.7 |
| 79-01-6 | Trichloroethene | ND | | 10 | 4.6 |
| 75-69-4 | Trichlorofluoromethane | ND | | 10 | 8.8 |
| 75-01-4 | Vinyl chloride | ND | | 10 | 9.0 |
| 1330-20-7 | Xylenes, Total | ND | | 20 | 6.6 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 111 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 105 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 82 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 125 | X | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-09S  Lab Sample ID: 480-177077-5

Matrix: Water  Lab File ID: C1470.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:15

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 12:45

Soil Aliquot Vol:  Dilution Factor: 10

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-10S  Lab Sample ID: 480-177077-6

Matrix: Water  Lab File ID: C1471.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:45

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 13:10

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 4.0 | 3.3 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 4.0 | 0.84 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 4.0 | 0.92 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 4.0 | 1.2 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 4.0 | 1.5 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 4.0 | 1.2 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 4.0 | 1.6 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 4.0 | 1.6 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 4.0 | 3.2 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 4.0 | 0.84 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 4.0 | 2.9 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 4.0 | 3.1 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 4.0 | 3.4 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 40 | 5.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 20 | 5.0 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 20 | 8.4 |
| 67-64-1 | Acetone | ND | | 40 | 12 |
| 71-43-2 | Benzene | ND | | 4.0 | 1.6 |
| 75-27-4 | Bromodichloromethane | ND | | 4.0 | 1.6 |
| 75-25-2 | Bromoform | ND | | 4.0 | 1.0 |
| 74-83-9 | Bromomethane | ND | | 4.0 | 2.8 |
| 75-15-0 | Carbon disulfide | ND | | 4.0 | 0.76 |
| 56-23-5 | Carbon tetrachloride | ND | | 4.0 | 1.1 |
| 108-90-7 | Chlorobenzene | ND | | 4.0 | 3.0 |
| 124-48-1 | Dibromochloromethane | ND | | 4.0 | 1.3 |
| 75-00-3 | Chloroethane | ND | | 4.0 | 1.3 |
| 67-66-3 | Chloroform | ND | | 4.0 | 1.4 |
| 74-87-3 | Chloromethane | ND | | 4.0 | 1.4 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 4.0 | 3.2 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 4.0 | 1.4 |
| 110-82-7 | Cyclohexane | ND | | 4.0 | 0.72 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 4.0 | 2.7 |
| 100-41-4 | Ethylbenzene | ND | | 4.0 | 3.0 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 4.0 | 2.9 |
| 98-82-8 | Isopropylbenzene | ND | | 4.0 | 3.2 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-10S  Lab Sample ID: 480-177077-6

Matrix: Water  Lab File ID: C1471.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:45

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 13:10

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 10 | 5.2 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 4.0 | 0.64 |
| 108-87-2 | Methylcyclohexane | ND | | 4.0 | 0.64 |
| 75-09-2 | Methylene Chloride | ND | | 4.0 | 1.8 |
| 100-42-5 | Styrene | ND | | 4.0 | 2.9 |
| 127-18-4 | Tetrachloroethene | ND | | 4.0 | 1.4 |
| 108-88-3 | Toluene | ND | | 4.0 | 2.0 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 4.0 | 3.6 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 4.0 | 1.5 |
| 79-01-6 | Trichloroethene | ND | | 4.0 | 1.8 |
| 75-69-4 | Trichlorofluoromethane | ND | | 4.0 | 3.5 |
| 75-01-4 | Vinyl chloride | ND | | 4.0 | 3.6 |
| 1330-20-7 | Xylenes, Total | ND | | 8.0 | 2.6 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 110 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 104 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 83 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 115 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-10S  Lab Sample ID: 480-177077-6

Matrix: Water  Lab File ID: C1471.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:45

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 13:10

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-06  Lab Sample ID: 480-177077-7

Matrix: Water  Lab File ID: C1472.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:55

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 13:35

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 |
| 67-64-1 | Acetone | ND | | 10 | 3.0 |
| 71-43-2 | Benzene | ND | | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | ND | | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-06  Lab Sample ID: 480-177077-7

Matrix: Water  Lab File ID: C1472.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:55

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 13:35

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | | 1.0 | 0.36 |
| 108-88-3 | Toluene | ND | | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 111 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 107 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 86 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 117 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-06  Lab Sample ID: 480-177077-7

Matrix: Water  Lab File ID: C1472.D

Analysis Method: 8260C  Date Collected: 10/21/2020 11:55

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 13:35

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I-TIC 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-11S  Lab Sample ID: 480-177077-8

Matrix: Water  Lab File ID: C1473.D

Analysis Method: 8260C  Date Collected: 10/21/2020 13:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:00

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 |
| 67-64-1 | Acetone | 5.4 | J | 10 | 3.0 |
| 71-43-2 | Benzene | ND | | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | 0.37 | J | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-11S  Lab Sample ID: 480-177077-8

Matrix: Water  Lab File ID: C1473.D

Analysis Method: 8260C  Date Collected: 10/21/2020 13:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:00

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | | 1.0 | 0.36 |
| 108-88-3 | Toluene | 5.5 | | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 110 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 105 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 84 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 114 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-11S  Lab Sample ID: 480-177077-8

Matrix: Water  Lab File ID: C1473.D

Analysis Method: 8260C  Date Collected: 10/21/2020 13:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:00

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 2  TIC Result Total: 5.6

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| 26952-21-6 | Isooctanol | 8.94 | 2.6 | T J N | 90% |
|  | Unknown | 9.35 | 3.0 | T J |  |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-04S  Lab Sample ID: 480-177077-9

Matrix: Water  Lab File ID: C1474.D

Analysis Method: 8260C  Date Collected: 10/21/2020 14:10

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:24

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 4.0 | 3.3 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 4.0 | 0.84 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 4.0 | 0.92 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 4.0 | 1.2 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 4.0 | 1.5 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 4.0 | 1.2 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 4.0 | 1.6 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 4.0 | 1.6 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 4.0 | 3.2 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 4.0 | 0.84 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 4.0 | 2.9 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 4.0 | 3.1 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 4.0 | 3.4 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 40 | 5.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 20 | 5.0 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 20 | 8.4 |
| 67-64-1 | Acetone | 12 | J | 40 | 12 |
| 71-43-2 | Benzene | ND | | 4.0 | 1.6 |
| 75-27-4 | Bromodichloromethane | ND | | 4.0 | 1.6 |
| 75-25-2 | Bromoform | ND | | 4.0 | 1.0 |
| 74-83-9 | Bromomethane | ND | | 4.0 | 2.8 |
| 75-15-0 | Carbon disulfide | ND | | 4.0 | 0.76 |
| 56-23-5 | Carbon tetrachloride | ND | | 4.0 | 1.1 |
| 108-90-7 | Chlorobenzene | ND | | 4.0 | 3.0 |
| 124-48-1 | Dibromochloromethane | ND | | 4.0 | 1.3 |
| 75-00-3 | Chloroethane | ND | | 4.0 | 1.3 |
| 67-66-3 | Chloroform | ND | | 4.0 | 1.4 |
| 74-87-3 | Chloromethane | ND | | 4.0 | 1.4 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 4.0 | 3.2 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 4.0 | 1.4 |
| 110-82-7 | Cyclohexane | ND | | 4.0 | 0.72 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 4.0 | 2.7 |
| 100-41-4 | Ethylbenzene | ND | | 4.0 | 3.0 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 4.0 | 2.9 |
| 98-82-8 | Isopropylbenzene | ND | | 4.0 | 3.2 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-04S  Lab Sample ID: 480-177077-9

Matrix: Water  Lab File ID: C1474.D

Analysis Method: 8260C  Date Collected: 10/21/2020 14:10

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:24

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 10 | 5.2 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 4.0 | 0.64 |
| 108-87-2 | Methylcyclohexane | ND | | 4.0 | 0.64 |
| 75-09-2 | Methylene Chloride | 1.8 | J | 4.0 | 1.8 |
| 100-42-5 | Styrene | ND | | 4.0 | 2.9 |
| 127-18-4 | Tetrachloroethene | ND | | 4.0 | 1.4 |
| 108-88-3 | Toluene | 2.0 | J | 4.0 | 2.0 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 4.0 | 3.6 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 4.0 | 1.5 |
| 79-01-6 | Trichloroethene | ND | | 4.0 | 1.8 |
| 75-69-4 | Trichlorofluoromethane | ND | | 4.0 | 3.5 |
| 75-01-4 | Vinyl chloride | ND | | 4.0 | 3.6 |
| 1330-20-7 | Xylenes, Total | ND | | 8.0 | 2.6 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 108 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 107 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 85 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 118 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-04S  Lab Sample ID: 480-177077-9

Matrix: Water  Lab File ID: C1474.D

Analysis Method: 8260C  Date Collected: 10/21/2020 14:10

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:24

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-03I  Lab Sample ID: 480-177077-10

Matrix: Water  Lab File ID: C1475.D

Analysis Method: 8260C  Date Collected: 10/21/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:49

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 |
| 67-64-1 | Acetone | 5.7 | J | 10 | 3.0 |
| 71-43-2 | Benzene | ND | | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | ND | | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-03I  Lab Sample ID: 480-177077-10

Matrix: Water  Lab File ID: C1475.D

Analysis Method: 8260C  Date Collected: 10/21/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:49

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | 0.18 | J | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | | 1.0 | 0.36 |
| 108-88-3 | Toluene | ND | | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 109 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 101 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 80 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 116 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-03I  Lab Sample ID: 480-177077-10

Matrix: Water  Lab File ID: C1475.D

Analysis Method: 8260C  Date Collected: 10/21/2020 14:30

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 14:49

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I-TIC 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-08S  Lab Sample ID: 480-177077-11

Matrix: Water  Lab File ID: C1476.D

Analysis Method: 8260C  Date Collected: 10/22/2020 11:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 15:14

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 4.0 | 3.3 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 4.0 | 0.84 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 4.0 | 0.92 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 4.0 | 1.2 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 4.0 | 1.5 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 4.0 | 1.2 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 4.0 | 1.6 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 4.0 | 1.6 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 4.0 | 3.2 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 4.0 | 0.84 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 4.0 | 2.9 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 4.0 | 3.1 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 4.0 | 3.4 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 40 | 5.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 20 | 5.0 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 20 | 8.4 |
| 67-64-1 | Acetone | ND | | 40 | 12 |
| 71-43-2 | Benzene | ND | | 4.0 | 1.6 |
| 75-27-4 | Bromodichloromethane | ND | | 4.0 | 1.6 |
| 75-25-2 | Bromoform | ND | | 4.0 | 1.0 |
| 74-83-9 | Bromomethane | ND | | 4.0 | 2.8 |
| 75-15-0 | Carbon disulfide | ND | | 4.0 | 0.76 |
| 56-23-5 | Carbon tetrachloride | ND | | 4.0 | 1.1 |
| 108-90-7 | Chlorobenzene | ND | | 4.0 | 3.0 |
| 124-48-1 | Dibromochloromethane | ND | | 4.0 | 1.3 |
| 75-00-3 | Chloroethane | ND | | 4.0 | 1.3 |
| 67-66-3 | Chloroform | ND | | 4.0 | 1.4 |
| 74-87-3 | Chloromethane | ND | | 4.0 | 1.4 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 4.0 | 3.2 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 4.0 | 1.4 |
| 110-82-7 | Cyclohexane | ND | | 4.0 | 0.72 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 4.0 | 2.7 |
| 100-41-4 | Ethylbenzene | ND | | 4.0 | 3.0 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 4.0 | 2.9 |
| 98-82-8 | Isopropylbenzene | ND | | 4.0 | 3.2 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-08S  Lab Sample ID: 480-177077-11

Matrix: Water  Lab File ID: C1476.D

Analysis Method: 8260C  Date Collected: 10/22/2020 11:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 15:14

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 10 | 5.2 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 4.0 | 0.64 |
| 108-87-2 | Methylcyclohexane | ND | | 4.0 | 0.64 |
| 75-09-2 | Methylene Chloride | 4.5 | | 4.0 | 1.8 |
| 100-42-5 | Styrene | ND | | 4.0 | 2.9 |
| 127-18-4 | Tetrachloroethene | ND | | 4.0 | 1.4 |
| 108-88-3 | Toluene | ND | | 4.0 | 2.0 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 4.0 | 3.6 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 4.0 | 1.5 |
| 79-01-6 | Trichloroethene | ND | | 4.0 | 1.8 |
| 75-69-4 | Trichlorofluoromethane | ND | | 4.0 | 3.5 |
| 75-01-4 | Vinyl chloride | ND | | 4.0 | 3.6 |
| 1330-20-7 | Xylenes, Total | ND | | 8.0 | 2.6 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 112 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 108 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 82 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 120 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-08S  Lab Sample ID: 480-177077-11

Matrix: Water  Lab File ID: C1476.D

Analysis Method: 8260C  Date Collected: 10/22/2020 11:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 15:14

Soil Aliquot Vol:  Dilution Factor: 4

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: TRIP BLANK  Lab Sample ID: 480-177077-12

Matrix: Water  Lab File ID: C1477.D

Analysis Method: 8260C  Date Collected: 10/22/2020 00:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 15:38

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 1.0 | 0.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | | 1.0 | 0.21 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 1.0 | 0.23 |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane | ND | | 1.0 | 0.31 |
| 75-34-3 | 1,1-Dichloroethane | ND | | 1.0 | 0.38 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 1.0 | 0.29 |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | | 1.0 | 0.41 |
| 96-12-8 | 1,2-Dibromo-3-Chloropropane | ND | | 1.0 | 0.39 |
| 95-50-1 | 1,2-Dichlorobenzene | ND | | 1.0 | 0.79 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 1.0 | 0.21 |
| 78-87-5 | 1,2-Dichloropropane | ND | | 1.0 | 0.72 |
| 541-73-1 | 1,3-Dichlorobenzene | ND | | 1.0 | 0.78 |
| 106-46-7 | 1,4-Dichlorobenzene | ND | | 1.0 | 0.84 |
| 78-93-3 | 2-Butanone (MEK) | ND | UJ | 10 | 1.3 |
| 591-78-6 | 2-Hexanone | ND | UJ | 5.0 | 1.2 |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | ND | | 5.0 | 2.1 |
| 67-64-1 | Acetone | ND | | 10 | 3.0 |
| 71-43-2 | Benzene | ND | | 1.0 | 0.41 |
| 75-27-4 | Bromodichloromethane | ND | | 1.0 | 0.39 |
| 75-25-2 | Bromoform | ND | | 1.0 | 0.26 |
| 74-83-9 | Bromomethane | ND | | 1.0 | 0.69 |
| 75-15-0 | Carbon disulfide | ND | | 1.0 | 0.19 |
| 56-23-5 | Carbon tetrachloride | ND | | 1.0 | 0.27 |
| 108-90-7 | Chlorobenzene | ND | | 1.0 | 0.75 |
| 124-48-1 | Dibromochloromethane | ND | | 1.0 | 0.32 |
| 75-00-3 | Chloroethane | ND | | 1.0 | 0.32 |
| 67-66-3 | Chloroform | ND | | 1.0 | 0.34 |
| 74-87-3 | Chloromethane | ND | | 1.0 | 0.35 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 1.0 | 0.81 |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | | 1.0 | 0.36 |
| 110-82-7 | Cyclohexane | ND | | 1.0 | 0.18 |
| 75-71-8 | Dichlorodifluoromethane | ND | | 1.0 | 0.68 |
| 100-41-4 | Ethylbenzene | ND | | 1.0 | 0.74 |
| 106-93-4 | 1,2-Dibromoethane | ND | | 1.0 | 0.73 |
| 98-82-8 | Isopropylbenzene | ND | | 1.0 | 0.79 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: TRIP BLANK  Lab Sample ID: 480-177077-12

Matrix: Water  Lab File ID: C1477.D

Analysis Method: 8260C  Date Collected: 10/22/2020 00:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 15:38

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 79-20-9 | Methyl acetate | ND | UJ | 2.5 | 1.3 |
| 1634-04-4 | Methyl tert-butyl ether | ND | | 1.0 | 0.16 |
| 108-87-2 | Methylcyclohexane | ND | | 1.0 | 0.16 |
| 75-09-2 | Methylene Chloride | ND | | 1.0 | 0.44 |
| 100-42-5 | Styrene | ND | | 1.0 | 0.73 |
| 127-18-4 | Tetrachloroethene | ND | | 1.0 | 0.36 |
| 108-88-3 | Toluene | ND | | 1.0 | 0.51 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 1.0 | 0.90 |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | | 1.0 | 0.37 |
| 79-01-6 | Trichloroethene | ND | | 1.0 | 0.46 |
| 75-69-4 | Trichlorofluoromethane | ND | | 1.0 | 0.88 |
| 75-01-4 | Vinyl chloride | ND | | 1.0 | 0.90 |
| 1330-20-7 | Xylenes, Total | ND | | 2.0 | 0.66 |

| CAS NO. | SURROGATE | %REC | Q | LIMITS |
|---|---|---|---|---|
| 2037-26-5 | Toluene-d8 (Surr) | 110 | | 80-120 |
| 17060-07-0 | 1,2-Dichloroethane-d4 (Surr) | 105 | | 77-120 |
| 460-00-4 | 4-Bromofluorobenzene (Surr) | 80 | | 73-120 |
| 1868-53-7 | Dibromofluoromethane (Surr) | 110 | | 75-123 |

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: TRIP BLANK  Lab Sample ID: 480-177077-12

Matrix: Water  Lab File ID: C1477.D

Analysis Method: 8260C  Date Collected: 10/22/2020 00:00

Sample wt/vol: 5(mL)  Date Analyzed: 10/26/2020 15:38

Soil Aliquot Vol:  Dilution Factor: 1

Soil Extract Vol.:  GC Column: ZB-624 (20)  ID: 0.18(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 555715  Units: ug/L

Number TICs Found: 0  TIC Result Total: 0

| CAS NO. | COMPOUND NAME | RT | RESULT | Q | MATCH QUALITY |
|---|---|---|---|---|---|
| | Tentatively Identified Compound | | None | | |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02I  Lab Sample ID: 480-177077-1

Matrix: Water  Lab File ID: U33159023.D

Analysis Method: 8270D SIM ID  Date Collected: 10/21/2020 09:00

Extract. Method: 3510C  Date Extracted: 10/26/2020 15:19

Sample wt/vol: 1000(mL)  Date Analyzed: 10/28/2020 17:58

Con. Extract Vol.: 1(mL)  Dilution Factor: 1

Injection Volume: 1(uL)  Level: (low/med) Low

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 556213  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | | 0.20 | 0.10 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17647-74-4 | 1,4-Dioxane-d8 | 26 | | 15-110 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02S  Lab Sample ID: 480-177077-2

Matrix: Water  Lab File ID: U33159024.D

Analysis Method: 8270D SIM ID  Date Collected: 10/21/2020 10:25

Extract. Method: 3510C  Date Extracted: 10/26/2020 15:19

Sample wt/vol: 1000(mL)  Date Analyzed: 10/28/2020 18:21

Con. Extract Vol.: 1(mL)  Dilution Factor: 1

Injection Volume: 1(uL)  Level: (low/med) Low

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 556213  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | | 0.20 | 0.10 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17647-74-4 | 1,4-Dioxane-d8 | 26 | | 15-110 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-02D  Lab Sample ID: 480-177077-3

Matrix: Water  Lab File ID: U33159021.D

Analysis Method: 8270D SIM ID  Date Collected: 10/23/2020 11:05

Extract. Method: 3510C  Date Extracted: 10/26/2020 15:19

Sample wt/vol: 1000(mL)  Date Analyzed: 10/28/2020 17:11

Con. Extract Vol.: 1(mL)  Dilution Factor: 1

Injection Volume: 1(uL)  Level: (low/med) Low

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 556213  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | | 0.20 | 0.10 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17647-74-4 | 1,4-Dioxane-d8 | 25 | | 15-110 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: DUP  Lab Sample ID: 480-177077-4

Matrix: Water  Lab File ID: U33159025.D

Analysis Method: 8270D SIM ID  Date Collected: 10/22/2020 10:30

Extract. Method: 3510C  Date Extracted: 10/26/2020 15:19

Sample wt/vol: 1000(mL)  Date Analyzed: 10/28/2020 18:45

Con. Extract Vol.: 1(mL)  Dilution Factor: 1

Injection Volume: 1(uL)  Level: (low/med) Low

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 556213  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | | 0.20 | 0.10 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17647-74-4 | 1,4-Dioxane-d8 | 24 | | 15-110 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-06  Lab Sample ID: 480-177077-7

Matrix: Water  Lab File ID: U33159026.D

Analysis Method: 8270D SIM ID  Date Collected: 10/21/2020 11:55

Extract. Method: 3510C  Date Extracted: 10/26/2020 15:19

Sample wt/vol: 1000(mL)  Date Analyzed: 10/28/2020 19:08

Con. Extract Vol.: 1(mL)  Dilution Factor: 1

Injection Volume: 1(uL)  Level: (low/med) Low

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 556213  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | | 0.20 | 0.10 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17647-74-4 | 1,4-Dioxane-d8 | 28 | | 15-110 |

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Client Sample ID: MW-03I  Lab Sample ID: 480-177077-10

Matrix: Water  Lab File ID: U33159027.D

Analysis Method: 8270D SIM ID  Date Collected: 10/21/2020 14:30

Extract. Method: 3510C  Date Extracted: 10/26/2020 15:19

Sample wt/vol: 1000(mL)  Date Analyzed: 10/28/2020 19:31

Con. Extract Vol.: 1(mL)  Dilution Factor: 1

Injection Volume: 1(uL)  Level: (low/med) Low

% Moisture:  GPC Cleanup:(Y/N) N

Analysis Batch No.: 556213  Units: ug/L

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | MDL |
|---|---|---|---|---|---|
| 123-91-1 | 1,4-Dioxane | ND | | 0.20 | 0.10 |

| CAS NO. | ISOTOPE DILUTION | %REC | Q | LIMITS |
|---|---|---|---|---|
| 17647-74-4 | 1,4-Dioxane-d8 | 30 | | 15-110 |

# QC NONCONFORMANCE DOCUMENTATION

FORM VII

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Lab Sample ID:  Calibration Date:

Instrument ID:  Calib Start Date: 10/20/2020 16:24

GC Column: ZB-624 (20) ID: 0.18(mm)  Calib End Date: 10/20/2020 19:18

Lab File ID: C1463.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | Ave | 1.847 | 1.890 | 0.1000 | 25.6 | 25.0 | 2.4 | 50.0 |
| Chloromethane | Ave | 1.830 | 1.853 | 0.1000 | 25.3 | 25.0 | 1.2 | 20.0 |
| Vinyl chloride | Ave | 1.726 | 1.790 | 0.1000 | 25.9 | 25.0 | 3.7 | 20.0 |
| Butadiene | Ave | 1.757 | 1.841 | | 26.2 | 25.0 | 4.8 | 20.0 |
| Bromomethane | Ave | 1.174 | 1.132 | 0.1000 | 24.1 | 25.0 | -3.6 | 50.0 |
| Chloroethane | Ave | 1.057 | 1.066 | 0.1000 | 25.2 | 25.0 | 0.9 | 50.0 |
| Dichlorofluoromethane | Ave | 2.552 | 2.599 | | 25.5 | 25.0 | 1.8 | 20.0 |
| Trichlorofluoromethane | Ave | 2.398 | 2.503 | 0.1000 | 26.1 | 25.0 | 4.4 | 20.0 |
| Ethyl ether | Ave | 1.406 | 1.339 | | 23.8 | 25.0 | -4.7 | 20.0 |
| Acrolein | Ave | 0.3308 | 0.2210 | | 83.5 | 125 | -33.2 | 50.0 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | Ave | 1.434 | 1.415 | 0.1000 | 24.7 | 25.0 | -1.3 | 20.0 |
| 1,1-Dichloroethene | Ave | 1.265 | 1.258 | 0.1000 | 24.9 | 25.0 | -0.5 | 20.0 |
| Acetone | Ave | 0.7546 | 0.6146 | 0.1000 | 102 | 125 | -18.6 | 50.0 |
| Iodomethane | Ave | 2.479 | 2.465 | | 24.9 | 25.0 | -0.6 | 20.0 |
| Carbon disulfide | Ave | 4.657 | 4.564 | 0.1000 | 24.5 | 25.0 | -2.0 | 20.0 |
| Allyl chloride | Ave | 2.371 | 2.324 | | 24.5 | 25.0 | -2.0 | 20.0 |
|  | Ave | 1.809 | 1.349 | 0.1000 | 37.3 | 50.0 |  | 50.0 |
| Methylene Chloride | Lin1 | | 1.471 | 0.1000 | 25.3 | 25.0 | 1.4 | 20.0 |
| 2-Methyl-2-propanol | Ave | 0.2903 | 0.2312 | | 199 | 250 | -20.4 | 50.0 |
| Methyl tert-butyl ether | Ave | 4.856 | 4.559 | 0.1000 | 23.5 | 25.0 | -6.1 | 20.0 |
| trans-1,2-Dichloroethene | Ave | 1.532 | 1.506 | 0.1000 | 24.6 | 25.0 | -1.7 | 20.0 |
| Acrylonitrile | Ave | 0.9331 | 0.7162 | | 192 | 250 | -23.2* | 20.0 |
| Hexane | Ave | 2.155 | 2.117 | | 24.6 | 25.0 | -1.8 | 20.0 |
| 1,1-Dichloroethane | Ave | 2.724 | 2.645 | 0.2000 | 24.3 | 25.0 | -2.9 | 20.0 |
| Vinyl acetate | Ave | 3.497 | 2.939 | | 42.0 | 50.0 | -16.0 | 20.0 |
| 2,2-Dichloropropane | Ave | 1.764 | 1.886 | | 26.7 | 25.0 | 6.9 | 20.0 |
| cis-1,2-Dichloroethene | Ave | 1.677 | 1.598 | 0.1000 | 23.8 | 25.0 | -4.7 | 20.0 |
|  | Ave | 1.154 | 0.7538 | 0.1000 | 81.6 | 125 | * | 20.0 |
| Chlorobromomethane | Ave | 0.8975 | 0.8456 | | 23.6 | 25.0 | -5.8 | 20.0 |
| Tetrahydrofuran | Ave | 0.7667 | 0.5324 | | 34.7 | 50.0 | -30.6* | 20.0 |
| Chloroform | Ave | 2.722 | 2.537 | 0.2000 | 23.3 | 25.0 | -6.8 | 20.0 |
| 1,1,1-Trichloroethane | Ave | 2.116 | 2.127 | 0.1000 | 25.1 | 25.0 | 0.5 | 20.0 |
| Cyclohexane | Ave | 2.627 | 2.722 | 0.1000 | 25.9 | 25.0 | 3.6 | 20.0 |
| Carbon tetrachloride | Ave | 1.672 | 1.801 | 0.1000 | 26.9 | 25.0 | 7.7 | 20.0 |
| 1,1-Dichloropropene | Ave | 1.979 | 1.900 | | 24.0 | 25.0 | -4.0 | 20.0 |
| Benzene | Ave | 5.452 | 4.983 | 0.5000 | 22.9 | 25.0 | -8.6 | 20.0 |
| Isobutyl alcohol | Ave | 0.0957 | 0.0663 | | 433 | 625 | -30.7 | 50.0 |
| 1,2-Dichloroethane | Ave | 2.357 | 2.103 | 0.1000 | 22.3 | 25.0 | -10.8 | 20.0 |
| n-Heptane | Ave | 2.182 | 1.985 | | 22.7 | 25.0 | -9.1 | 20.0 |
| Trichloroethene | Ave | 1.494 | 1.350 | 0.2000 | 22.6 | 25.0 | -9.6 | 20.0 |

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Lab Sample ID: CCVIS 480-555715/3  Calibration Date: 10/26/2020 09:28

Instrument ID: HP5973C  Calib Start Date: 10/20/2020 16:24

GC Column: ZB-624 (20)  ID: 0.18(mm)  Calib End Date: 10/20/2020 19:18

Lab File ID: C1463.D  Conc. Units: ug/L  Heated Purge: (Y/N) N

| ANALYTE | CURVE TYPE | AVE RRF | RRF | MIN RRF | CALC AMOUNT | SPIKE AMOUNT | %D | MAX %D |
|---|---|---|---|---|---|---|---|---|
| Methylcyclohexane | Ave | 2.418 | 2.490 | 0.1000 | 25.7 | 25.0 | 3.0 | 20.0 |
| 1,2-Dichloropropane | Ave | 1.323 | 1.168 | 0.1000 | 22.1 | 25.0 | -11.7 | 20.0 |
| 1,4-Dioxane | Ave | 0.0096 | 0.0095 | | 499 | 500 | -0.2 | 50.0 |
| Dibromomethane | Ave | 0.9945 | 0.8499 | 0.1000 | 21.4 | 25.0 | -14.5 | 20.0 |
| Bromodichloromethane | Ave | 1.669 | 1.521 | 0.2000 | 22.8 | 25.0 | -8.9 | 20.0 |
| 2-Chloroethyl vinyl ether | Ave | 0.9718 | 0.6402 | | 16.5 | 25.0 | -34.1* | 20.0 |
| cis-1,3-Dichloropropene | Ave | 1.907 | 1.545 | 0.2000 | 20.3 | 25.0 | -18.9 | 20.0 |
| 4-Methyl-2-pentanone (MIBK) | Ave | 1.022 | 0.8582 | 0.1000 | 105 | 125 | -16.0 | 20.0 |
| Toluene | Ave | 1.524 | 1.475 | 0.4000 | 24.2 | 25.0 | -3.2 | 20.0 |
| trans-1,3-Dichloropropene | Ave | 0.8439 | 0.7312 | 0.1000 | 21.7 | 25.0 | -13.4 | 20.0 |
| Ethyl methacrylate | Ave | 0.8209 | 0.6960 | | 21.2 | 25.0 | -15.2 | 20.0 |
| 1,1,2-Trichloroethane | Ave | 0.4986 | 0.4360 | 0.1000 | 21.9 | 25.0 | -12.5 | 20.0 |
| Tetrachloroethene | Ave | 0.6486 | 0.6436 | 0.2000 | 24.8 | 25.0 | -0.8 | 20.0 |
| 1,3-Dichloropropane | Ave | 1.044 | 0.8673 | | 20.8 | 25.0 | -17.0 | 20.0 |
| [redacted] | Ave | 0.7544 | 0.4899 | 0.1000 | 81.2 | 125 | [redacted]* | 20.0 |
| Dibromochloromethane | Ave | 0.5680 | 0.5451 | 0.1000 | 24.0 | 25.0 | -4.0 | 20.0 |
| 1,2-Dibromoethane | Ave | 0.6739 | 0.5505 | | 20.4 | 25.0 | -18.3 | 20.0 |
| Chlorobenzene | Ave | 1.873 | 1.649 | 0.5000 | 22.0 | 25.0 | -12.0 | 20.0 |
| Ethylbenzene | Ave | 3.143 | 2.867 | 0.1000 | 22.8 | 25.0 | -8.8 | 20.0 |
| 1,1,1,2-Tetrachloroethane | Ave | 0.5737 | 0.6593 | | 28.7 | 25.0 | 14.9 | 20.0 |
| m,p-Xylene | Ave | 1.280 | 1.121 | 0.1000 | 21.9 | 25.0 | -12.5 | 20.0 |
| o-Xylene | Ave | 1.238 | 1.193 | 0.3000 | 24.1 | 25.0 | -3.6 | 20.0 |
| Styrene | Ave | 2.060 | 1.767 | 0.3000 | 21.4 | 25.0 | -14.2 | 20.0 |
| Bromoform | Ave | 0.3937 | 0.3195 | 0.1000 | 20.3 | 25.0 | -18.8 | 50.0 |
| Isopropylbenzene | Ave | 2.967 | 3.333 | 0.1000 | 28.1 | 25.0 | 12.3 | 20.0 |
| Bromobenzene | Ave | 0.7870 | 0.7158 | | 22.7 | 25.0 | -9.1 | 20.0 |
| 1,1,2,2-Tetrachloroethane | Ave | 0.9812 | 0.8558 | 0.3000 | 21.8 | 25.0 | -12.8 | 20.0 |
| N-Propylbenzene | Ave | 3.641 | 3.657 | | 25.1 | 25.0 | 0.4 | 20.0 |
| 1,2,3-Trichloropropane | Ave | 0.3452 | 0.2793 | | 20.2 | 25.0 | -19.1 | 20.0 |
| trans-1,4-Dichloro-2-butene | Ave | 0.3505 | 0.1943 | | 13.9 | 25.0 | -44.6 | 50.0 |
| 2-Chlorotoluene | Ave | 0.7383 | 0.7596 | | 25.7 | 25.0 | 2.9 | 20.0 |
| 1,3,5-Trimethylbenzene | Ave | 2.608 | 2.837 | | 27.2 | 25.0 | 8.8 | 20.0 |
| 4-Chlorotoluene | Ave | 0.7788 | 0.7147 | | 22.9 | 25.0 | -8.2 | 20.0 |
| tert-Butylbenzene | Ave | 0.5840 | 0.5978 | | 25.6 | 25.0 | 2.4 | 20.0 |
| 1,2,4-Trimethylbenzene | Ave | 2.651 | 2.843 | | 26.8 | 25.0 | 7.2 | 20.0 |
| sec-Butylbenzene | Ave | 3.318 | 3.589 | | 27.0 | 25.0 | 8.2 | 20.0 |
| 4-Isopropyltoluene | Ave | 2.843 | 3.153 | | 27.7 | 25.0 | 10.9 | 20.0 |
| 1,3-Dichlorobenzene | Ave | 1.543 | 1.414 | 0.6000 | 22.9 | 25.0 | -8.4 | 20.0 |
| 1,4-Dichlorobenzene | Ave | 1.599 | 1.391 | 0.5000 | 21.7 | 25.0 | -13.0 | 20.0 |
| n-Butylbenzene | Ave | 2.585 | 2.735 | | 26.4 | 25.0 | 5.8 | 20.0 |
| 1,2-Dichlorobenzene | Ave | 1.554 | 1.476 | 0.4000 | 23.7 | 25.0 | -5.0 | 20.0 |

# Surrogate Summary

Client: New York State D.E.C.
Job ID: 480-177077-1
Project/Site: SMP B - Mahopac Business District Wells

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | TOL | DCA | BFB | | | | | |
| Lab Sample ID | Client Sample ID | (80-120) | (77-120) | (73-120) | (75-123) | | | | |
| 480-177077-1 | MW-02I | 102 | 106 | 97 | 103 | | | | |
| 480-177077-2 | MW-02S | 101 | 101 | 96 | 98 | | | | |
| 480-177077-3 | MW-02D | 99 | 105 | 94 | 102 | | | | |
| 480-177077-3 MS | MW-02D | 106 | 97 | 87 | 111 | | | | |
| 480-177077-3 MSD | MW-02D | 114 | 103 | 90 | 113 | | | | |
| 480-177077-4 | DUP | 116 | 103 | 93 | 112 | | | | |
| 480-177077-5 | | 111 | 105 | 82 | X | | | | |
| 480-177077-6 | MW-10S | 110 | 104 | 83 | 115 | | | | |
| 480-177077-7 | MW-06 | 111 | 107 | 86 | 117 | | | | |
| 480-177077-8 | MW-11S | 110 | 105 | 84 | 114 | | | | |
| 480-177077-9 | MW-04S | 108 | 107 | 85 | 118 | | | | |
| 480-177077-10 | MW-03I | 109 | 101 | 80 | 116 | | | | |
| 480-177077-11 | MW-08S | 112 | 108 | 82 | 120 | | | | |
| 480-177077-12 | TRIP BLANK | 110 | 105 | 80 | 110 | | | | |
| LCS 480-555654/5 | Lab Control Sample | 105 | 101 | 102 | 104 | | | | |
| LCS 480-555715/29 | Lab Control Sample | 105 | 105 | 90 | 110 | | | | |
| MB 480-555654/7 | Method Blank | 102 | 101 | 98 | 98 | | | | |
| MB 480-555715/7 | Method Blank | 108 | 111 | 84 | 115 | | | | |

**Surrogate Legend**

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

FORM III

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-177077-1

SDG No.:

Matrix: Water Level: Low Lab File ID: C1487.D

Lab ID: 480-177077-3 MS Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|---|
| | 25.0 | ND | 35.0 | | 73-126 | F1 |
| 1,1,2,2-Tetrachloroethane | 25.0 | ND | 26.0 | 104 | 76-120 | |
| 1,1,2-Trichloroethane | 25.0 | ND | 24.0 | 96 | 76-122 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 25.0 | ND | 30.9 | 124 | 61-148 | |
| | 25.0 | ND | 31.8 | | 77-120 | F1 |
| | 25.0 | ND | 35.3 | | 66-127 | F1 |
| | 25.0 | ND | 31.5 | | 79-122 | F1 |
| 1,2-Dibromo-3-Chloropropane | 25.0 | ND | 23.5 | 94 | 56-134 | |
| 1,2-Dichlorobenzene | 25.0 | ND | 30.8 | 123 | 80-124 | |
| 1,2-Dichloroethane | 25.0 | ND | 25.3 | 101 | 75-120 | |
| 1,2-Dichloropropane | 25.0 | ND | 26.9 | 108 | 76-120 | |
| 1,3-Dichlorobenzene | 25.0 | ND | 27.9 | 112 | 77-120 | |
| 1,4-Dichlorobenzene | 25.0 | ND | 26.5 | 106 | 78-124 | |
| 2-Butanone (MEK) | 125 | ND | 84.8 | 68 | 57-140 | |
| 2-Hexanone | 125 | ND | 85.9 | 69 | 65-127 | |
| 4-Methyl-2-pentanone (MIBK) | 125 | ND | 114 | 91 | 71-125 | |
| Acetone | 125 | 4.1 J | 116 | 89 | 56-142 | |
| Benzene | 25.0 | ND | 28.8 | 115 | 71-124 | |
| Bromodichloromethane | 25.0 | ND | 26.6 | 106 | 80-122 | |
| Bromoform | 25.0 | ND | 20.7 | 83 | 61-132 | |
| Bromomethane | 25.0 | ND | 33.6 | 134 | 55-144 | |
| Carbon disulfide | 25.0 | ND | 31.8 | 127 | 59-134 | |
| | 25.0 | ND | 35.6 | | 72-134 | F1 |
| Chlorobenzene | 25.0 | ND | 26.0 | 104 | 80-120 | |
| Dibromochloromethane | 25.0 | ND | 26.0 | 104 | 75-125 | |
| | 25.0 | ND | 34.9 | | 69-136 | F1 |
| Chloroform | 25.0 | ND | 30.4 | 122 | 73-127 | |
| | 25.0 | ND | 34.9 | | 68-124 | F1 |
| | 25.0 | ND | 32.0 | | 74-124 | F1 |
| cis-1,3-Dichloropropene | 25.0 | ND | 21.8 | 87 | 74-124 | |
| Cyclohexane | 25.0 | ND | 31.6 | 127 | 59-135 | |
| Dichlorodifluoromethane | 25.0 | ND | 29.6 | 119 | 59-135 | |
| Ethylbenzene | 25.0 | ND | 27.9 | 112 | 77-123 | |
| 1,2-Dibromoethane | 25.0 | ND | 22.2 | 89 | 77-120 | |
| | 25.0 | ND | 36.7 | | 77-122 | F1 |
| Methyl acetate | 50.0 | ND | 37.0 | 74 | 74-133 | |
| | 25.0 | ND | 30.5 | | 77-120 | F1 |
| Methylcyclohexane | 25.0 | ND | 29.9 | 120 | 68-134 | |
| | 25.0 | ND | 35.5 | | 75-124 | F1 |
| Styrene | 25.0 | ND | 24.8 | 99 | 80-120 | |
| Tetrachloroethene | 25.0 | ND | 29.1 | 117 | 74-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: C1487.D

Lab ID: 480-177077-3 MS  Client ID: MW-02D MS

| COMPOUND | SPIKE ADDED (ug/L) | SAMPLE CONCENTRATION (ug/L) | MS CONCENTRATION (ug/L) | MS % REC | QC LIMITS REC | # |
|---|---|---|---|---|---|---|
| Toluene | 25.0 | ND | 29.1 | 116 | 80-122 | |
| [redacted] | 25.0 | ND | 33.3 | [redacted] | 73-127 | F1 |
| trans-1,3-Dichloropropene | 25.0 | ND | 22.0 | 88 | 80-120 | |
| Trichloroethene | 25.0 | ND | 27.1 | 108 | 74-123 | |
| Trichlorofluoromethane | 25.0 | ND | 34.7 | 139 | 62-150 | |
| [redacted] | 25.0 | ND | 35.6 | [redacted] | 65-133 | F1 |
| Total Xylenes | 50.0 | ND | 56.7 | 113 | 76-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo  Job No.: 480-177077-1

SDG No.:

Matrix: Water  Level: Low  Lab File ID: C1488.D

Lab ID: 480-177077-3 MSD  Client ID:

| COMPOUND | SPIKE ADDED (ug/L) | MSD CONCENTRATION (ug/L) | MSD % REC | % RPD | QC LIMITS RPD | QC LIMITS REC | # |
|---|---|---|---|---|---|---|---|
| | 25.0 | 31.7 | | 10 | 15 | 73-126 | F1 |
| 1,1,2,2-Tetrachloroethane | 25.0 | 25.0 | 100 | 4 | 15 | 76-120 | |
| 1,1,2-Trichloroethane | 25.0 | 24.1 | 96 | 0 | 15 | 76-122 | |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 25.0 | 27.9 | 112 | 10 | 20 | 61-148 | |
| 1,1-Dichloroethane | 25.0 | 30.1 | 120 | 6 | 20 | 77-120 | |
| | 25.0 | 32.0 | | 10 | 16 | 66-127 | F1 |
| 1,2,4-Trichlorobenzene | 25.0 | 29.1 | 116 | 8 | 20 | 79-122 | |
| 1,2-Dibromo-3-Chloropropane | 25.0 | 22.3 | 89 | 5 | 15 | 56-134 | |
| 1,2-Dichlorobenzene | 25.0 | 28.5 | 114 | 8 | 20 | 80-124 | |
| 1,2-Dichloroethane | 25.0 | 25.5 | 102 | 1 | 20 | 75-120 | |
| 1,2-Dichloropropane | 25.0 | 26.4 | 106 | 2 | 20 | 76-120 | |
| 1,3-Dichlorobenzene | 25.0 | 26.9 | 108 | 4 | 20 | 77-120 | |
| 1,4-Dichlorobenzene | 25.0 | 25.5 | 102 | 4 | 20 | 78-124 | |
| 2-Butanone (MEK) | 125 | 89.8 | 72 | 6 | 20 | 57-140 | |
| 2-Hexanone | 125 | 88.5 | 71 | 3 | 15 | 65-127 | |
| 4-Methyl-2-pentanone (MIBK) | 125 | 114 | 91 | 0 | 35 | 71-125 | |
| Acetone | 125 | 114 | 88 | 1 | 15 | 56-142 | |
| Benzene | 25.0 | 28.1 | 113 | 3 | 13 | 71-124 | |
| Bromodichloromethane | 25.0 | 27.5 | 110 | 3 | 15 | 80-122 | |
| Bromoform | 25.0 | 21.6 | 87 | 4 | 15 | 61-132 | |
| Bromomethane | 25.0 | 31.3 | 125 | 7 | 15 | 55-144 | |
| Carbon disulfide | 25.0 | 28.8 | 115 | 10 | 15 | 59-134 | |
| Carbon tetrachloride | 25.0 | 32.8 | 131 | 8 | 15 | 72-134 | |
| Chlorobenzene | 25.0 | 25.8 | 103 | 1 | 25 | 80-120 | |
| Dibromochloromethane | 25.0 | 26.5 | 106 | 2 | 15 | 75-125 | |
| Chloroethane | 25.0 | 32.0 | 128 | 9 | 15 | 69-136 | |
| Chloroform | 25.0 | 29.3 | 117 | 4 | 20 | 73-127 | |
| | 25.0 | 32.5 | | 7 | 15 | 68-124 | F1 |
| cis-1,2-Dichloroethene | 25.0 | 29.6 | 119 | 8 | 15 | 74-124 | |
| cis-1,3-Dichloropropene | 25.0 | 23.1 | 92 | 6 | 15 | 74-124 | |
| Cyclohexane | 25.0 | 29.0 | 116 | 9 | 20 | 59-135 | |
| Dichlorodifluoromethane | 25.0 | 28.4 | 114 | 4 | 20 | 59-135 | |
| Ethylbenzene | 25.0 | 27.1 | 109 | 3 | 15 | 77-123 | |
| 1,2-Dibromoethane | 25.0 | 22.8 | 91 | 3 | 15 | 77-120 | |
| | 25.0 | 34.5 | | 6 | 20 | 77-122 | F1 |
| Methyl acetate | 50.0 | 38.9 | 78 | 5 | 20 | 74-133 | |
| Methyl tert-butyl ether | 25.0 | 27.9 | 111 | 9 | 37 | 77-120 | |
| Methylcyclohexane | 25.0 | 27.8 | 111 | 7 | 20 | 68-134 | |
| | 25.0 | 32.4 | | 9 | 15 | 75-124 | F1 |
| Styrene | 25.0 | 24.2 | 97 | 3 | 20 | 80-120 | |
| Tetrachloroethene | 25.0 | 28.9 | 116 | 1 | 20 | 74-122 | |

# Column to be used to flag recovery and RPD values

FORM III 8260C

ENVIRONMENTAL
Data Services, Inc.

# DATA USABILITY SUMMARY REPORT
# SOUTH LAKE BOULEVARD, MAHOPAC, NEW YORK

Client: TRC Engineering, Inc., New York, New York
SDG: 22K0850
Laboratory: Con-Test, East Longmeadow, Massachusetts
ALS Environmental, Kelso, Washington
Site: South Lake Boulevard, Mahopac, New York &
Date: April 5, 2023

| EDS ID | Client Sample ID | Laboratory Sample ID | Matrix |
|---|---|---|---|
| 1 | MBDW-MW-2I | 22K0850-01 | Water |
| 1MS | MBDW-MW-2IMS | 22K0850-01MS | Water |
| 1MSD | MBDW-MW-2IMSD | 22K0850-01MSD | Water |
| 2 | MBDW-MS-2S | 22K0850-02 | Water |
| 3 | MBDW-MW-3I | 22K0850-03 | Water |
| 4 | DUP-01 | 22K0850-04 | Water |
| 5 | MBDW-MW-6S | 22K0850-05 | Water |
| 6 | MBDW-MW-6I | 22K0850-06 | Water |
| 7 | MBDW-MW-2D | 22K0850-07 | Water |
| 8 | EB-01 | 22K0850-08 | Water |
| 9† | FB-01 | 22K0850-09 | Water |
| 10* | TB-01 | 22K0850-10 | Water |

* - VOC only † - Not Received by Laboratory

A Data Usability Summary Review was performed on the analytical data for seven water samples, one aqueous equipment blank sample, one aqueous trip blank sample, and one aqueous field blank sample collected on November 1-3, 2022 by TRC at the South Lake Blvd. site in Mahopac, New York. The samples were analyzed under the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions" and the USEPA Method for the Determination of Selected Per- and Polyfluorinated Alkyl Substances in Environmental Samples by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).

Specific method references are as follows:

| *Analysis* | *Method References* |
|---|---|
| VOC | USEPA SW-846 Method 8260D |
| PFAS | USEPA Draft Method 1633 |

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, the USEPA Region II Data Review Standard Operating Procedures (SOPs), and the USEPA Data Review Guidelines as follows:

- SOP Number HW-33A, Revision 1, September 2016: Low/Medium Volatile Data Validation;
- USEPA Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFAS) Analyzed Using EPA Method 537, November 2018;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

***Organics***

- Holding times and sample preservation
- Gas Chromatography/Mass Spectrometry (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

***PFAS***

- Data Completeness
- Holding times and sample preservation
- Liquid Chromatography (LC)/Mass Spectroscopy (MS) tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Compound Quantitation
- Internal standard area and retention time summary forms
- Field Duplicate sample precision

## Data Usability Assessment

There were no rejections of data.

The data are acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedances of QC criteria.

## Data Completeness

- The data is a complete Category B data package as defined under the requirements for the NYS Department of Environmental Conservation Analytical Services Protocol.

## Volatile Organic Compounds (VOC)

## Holding Times

- All samples were analyzed within 14 days for preserved water samples.

## GC/MS Tuning

- All criteria were met.

## Initial Calibration

- All %RSD and/or correlation coefficients and mean RRF criteria were met.

## Continuing Calibration

- The following table presents compounds that exceeded percent difference (%D) and/or RRF values <0.05 (0.01 for poor performers) in the continuing calibration (CCAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives. A high %D may indicate a potential high or low bias. All results for these compounds in affected samples are considered estimated and qualified (J/UJ).

| CCAL Date | Compound | %D/RRF | Qualifier | Affected Samples |
|---|---|---|---|---|
| 11/07/22 (2213) | Bromomethane | 61.2% | UJ | All Samples |
| | Carbon Disulfide | 35.0% | | |
| | Methyl Acetate | 66.0% | | |
| | Freon 113 | 26.7% | | |
| | Vinyl Chloride | 146% | | |

## Method Blank

- The method blanks were free of contamination.

## Field Blank

- The field blanks are summarized below.

| Sample ID | Compound | Conc. ug/L | Qualifier | Affected Samples |
|---|---|---|---|---|
| TB-01 | None - ND | - | - | - |
| EB-01 | Acetone | 4.0 | U | 7 |
| | Chloroform | 2.1 | None | None - Sample ND |
| | Toluene | 0.27 | | |

## Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

## Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The following table presents MS/MSD samples that exhibited percent recoveries (%R) outside the QC limits and/or relative percent differences (RPD) above QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

| Sample ID | Compound | MS %R/MSD %R/RPD | Qualifier |
|---|---|---|---|
| 1 | Bromomethane | 163%/154%/OK | None - Sample ND |
| | Carbon Disulfide | 152%/142%/OK | |
| | 1,1-Dichloroethane | OK/140%/31.1% | |
| | trans-1,2-Dichloroethylene | 140%/132%/OK | J |
| | Methyl Acetate | 136%/OK/OK | None - Sample ND |
| | Vinyl Chloride | 240%/238%/OK | |
| | Methyl Tert-Butyl Ether | OK/148%/OK | J |
| | Freon 113 | OK/131%/OK | None - Sample ND |

## Laboratory Control Samples

- The following table presents LCS percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

| LCS ID | Compound | %R | Qualifier | Affected Samples |
|---|---|---|---|---|
| B32228S-BS1 | Bromomethane | 174% | None | All Associated ND |
| | Carbon Disulfide | 139% | | |
| | trans-1,2-Dichloroethylene | 138% | | |

| LCS ID | Compound | %R | Qualifier | Affected Samples |
|---|---|---|---|---|
| B32228S-BS1 | Methyl Acetate | 189% | None | All Associated ND |
| | Freon 113 | 133% | | |
| | Vinyl Chloride | 232% | | |

## Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

## Target Compound Identification

- All mass spectra and quantitation criteria were met.

## Compound Quantitation

- All criteria were met.

## Tentatively Identified Compounds (TICs)

- TICs were not reported.

## Field Duplicate Sample Precision

- Field duplicate samples are summarized below. The precision is acceptable.

| VOCs | | | | |
|---|---|---|---|---|
| Compound | MBDW-MW-2I ug/L | DUP-01 ug/L | RPD | Qualifier |
| trans-1,2-Dichloroethylene | 0.30 | 1.0U | NC | None |
| Methyl tert-Butyl Ether | 1.1 | 0.76 | 37% | |

## Perfluorinated Alkyl Substances (PFAS)

### Holding Times

- All holding time criteria were met.

### LC/MS Tuning

- All criteria were met.

### Initial Calibration

- All relative standard deviation (%RSD) and/or correlation coefficients and mean RRF criteria were met.

### Continuing Calibration

- The following table presents compounds that exceeded percent difference (%D) and/or RRF values <0.05 in the continuing calibration (CCAL). A low RRF indicates poor instrument sensitivity for these compounds. Positive results for these compounds in the affected samples are considered estimated and qualified (J). Non-detect results for these compounds in the affected samples are rejected (R) and are unusable for project objectives. A high %D may indicate a potential high or low bias. All results for these compounds in affected samples are considered estimated and qualified (J/UJ).

| CCAL Date | Compound | %D/RRF | Qualifier | Affected Samples |
|---|---|---|---|---|
| 12/09/22 (1657) | MeFOSA | 33.1% | UJ | 1 |
| 01/05/23 (0130) | PFPeS | 31.9% | J/UJ | 2-8 |
| | PFHxS | 33.7% | | |
| | 6:2 FTS | 57.0% | | |

### Method Blank

- The method blanks were free of contamination.

### Field Blank

- The field blanks are summarized below.

| Sample ID | Compound | Conc. ug/L | Qualifier | Affected Samples |
|---|---|---|---|---|
| EB-01 | None - ND | - | - | - |

## Surrogate Spike Recoveries

- The following table presents surrogate percent recoveries (%R) outside the QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J).

| Sample ID | Surrogate | %R | Qualifier |
|---|---|---|---|
| 3 | 13C2-4:2 FTS | 169% | None - Sample ND |

## Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The following table presents MS/MSD samples that exhibited percent recoveries (%R) outside the QC limits and/or relative percent differences (RPD) above QC limits. A low %R may indicate a potential low bias while a high %R may indicate a potential high bias. For a low %R, positive results are considered estimated and qualified (J) while non-detects are estimated and qualified (UJ). For a high %R, positive results are considered estimated and qualified (J). Results are valid and usable, however possibly biased.

| Sample ID | Compound | MS %R/MSD %R/RPD | Qualifier |
|---|---|---|---|
| 1 | PFPeA | 256%/-33%/OK | None for 4X Rule |
| | PFHxA | 162%/-15%/OK | |
| | PFHpA | OK/22%/OK | J |
| | PFOA | 119%/-14%/OK | None for 4X Rule |

## Laboratory Control Samples

- The LCS exhibited acceptable percent recoveries (%R).

## Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

## Target Compound Identification

- All mass spectra and quantitation criteria were met.

## Compound Quantitation

- All criteria were met.

## Field Duplicate Sample Precision

- Field duplicate samples are summarized below. The precision was unacceptable for PFBA and PFOA. These results were qualified as estimated (J).

| PFAS | | | | |
|---|---|---|---|---|
| Compound | MBDW-MW-2I ng/L | DUP-01 ng/L | RPD | Qualifier |
| PFBS | 7.5 | 8.9 | 17% | None |
| PFPeS | 0.89 | 0.89U | NC | |
| PFHxS | 4.0 | 4.3 | 7% | |
| PFOS | 25 | 25 | 0% | |
| PFBA | 42 | 62 | 38% | J |
| PFPeA | 200 | 260 | 26% | None |
| PFHxA | 120 | 140 | 15% | |
| PFHpA | 69 | 93 | 30% | |
| PFOA | 99 | 170 | 53% | J |
| PFNA | 8.4 | 14 | 50% | None - <5X RL |
| PFDA | 9.4 | 15 | 46% | |
| PFUnDA | 1.5 | 2.7 | 57% | |
| PFDOA | 0.76 | 1.8 | 81% | |
| PFTrDA | 0.46U | 0.90 | NC | None |

Please contact the undersigned at (561) 475-2000 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 4/6/23

Nancy Weaver
Senior Chemist

| Data Qualifier | Definition |
|---|---|
| U | The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. |
| J | The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. |
| J+ | The result is an estimated quantity, but the result may be biased high. |
| J- | The result is an estimated quantity, but the result may be biased low. |
| NJ | The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples. |
| UJ | The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise. |
| R | The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples. |

# 1 - FORM I
# ANALYSIS DATA SHEET

## MBDW-MW-2I

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-01 | File ID: | E22V31142.D |
| Sampled: | 11/01/22 11:40 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 01:25 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | | 2.0 | 50 | |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | ~~V-05~~ |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | ~~R-06~~ |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | 0.30 | 0.17 | 1.0 | J |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

NW 4/5/23

# 1 - FORM I
# ANALYSIS DATA SHEET

## MBDW-MW-2I

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-01 | File ID: | E22V31142.D |
| Sampled: | 11/01/22 11:40 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 01:25 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | 1.1 | 0.17 | 1.0 | J |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

MW415123

# 1 - FORM I
# ANALYSIS DATA SHEET

2

## MBDW-MW-2S

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-02 | File ID: | E22V31143.D |
| Sampled: | 11/01/22 12:45 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 01:52 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | | 2.0 | 50 | |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | ~~V-05~~ |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

MW 4/5/23

# 1 - FORM I
# ANALYSIS DATA SHEET

2

## MBDW-MW-2S

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-02 | File ID: | E22V31143.D |
| Sampled: | 11/01/22 12:45 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 01:52 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | | 0.17 | 1.0 | |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

# 1 - FORM I
# ANALYSIS DATA SHEET

3

## MBDW-MW-3I

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-03 | File ID: | E22V31144.D |
| Sampled: | 11/01/22 14:10 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 02:19 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | | 2.0 | 50 | |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | V-05 |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

# 1 - FORM I
# ANALYSIS DATA SHEET

3

## MBDW-MW-3I

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-03 | File ID: | E22V31144.D |
| Sampled: | 11/01/22 14:10 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 02:19 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | 0.44 | 0.17 | 1.0 | J |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

NW 4/5/23

# 1 - FORM I
# ANALYSIS DATA SHEET

4

## DUP-01

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-04 | File ID: | E22V31145.D |
| Sampled: | 11/01/22 12:00 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 02:47 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | | 2.0 | 50 | |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | ~~V-05~~ |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

MW415123

# 1 - FORM I
# ANALYSIS DATA SHEET

4

## DUP-01

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-04 | File ID: | E22V31145.D |
| Sampled: | 11/01/22 12:00 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 02:47 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| | | | | Instrument: | GCMSVOA5 |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | 0.76 | 0.17 | 1.0 | J |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

AW 4/5/23

# 1 - FORM I
# ANALYSIS DATA SHEET

5

## MBDW-MW-6S

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-05 | File ID: | E22V31146.D |
| Sampled: | 11/02/22 10:30 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 03:15 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | | 2.0 | 50 | |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | ~~V-05~~ |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

NW 415123

# 1 - FORM I
# ANALYSIS DATA SHEET

5

## MBDW-MW-6S

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-05 | File ID: | E22V31146.D |
| Sampled: | 11/02/22 10:30 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 03:15 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | | 0.17 | 1.0 | |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | 1.0 | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

MW 415123

# 1 - FORM I
# ANALYSIS DATA SHEET

## MBDW-MW-6I

b

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-06 | File ID: | E22V31147.D |
| Sampled: | 11/02/22 11:45 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 03:42 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | | 2.0 | 50 | |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | ~~V-05~~ |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

NW 415123

# 1 - FORM I
# ANALYSIS DATA SHEET

6

## MBDW-MW-6I

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-06 | File ID: | E22V31147.D |
| Sampled: | 11/02/22 11:45 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 03:42 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | | 0.17 | 1.0 | |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

NW 4/5/23

# 1 - FORM I
# ANALYSIS DATA SHEET

7

## MBDW-MW-2D

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-07 | File ID: | E22V31148.D |
| Sampled: | 11/03/22 14:05 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 04:09 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| | | | | Instrument: | GCMSVOA5 |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | 3.8 | 2.0 | 50 | U 6 |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | ~~V-05~~ |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

NW 41513

# 1 - FORM I
# ANALYSIS DATA SHEET

## MBDW-MW-2D

7

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-07 | File ID: | E22V31148.D |
| Sampled: | 11/03/22 14:05 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 04:09 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | | 0.17 | 1.0 | |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

MW 415123

# 1 - FORM I
# ANALYSIS DATA SHEET

## EB-01

8

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-08 | File ID: | E22V31140.D |
| Sampled: | 11/03/22 12:00 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 00:30 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | 4.0 | 2.0 | 50 | J |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | 2.1 | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | ~~V-05~~ |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

MW 4/5/23

# 1 - FORM I
# ANALYSIS DATA SHEET

8

## EB-01

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-08 | File ID: | E22V31140.D |
| Sampled: | 11/03/22 12:00 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 00:30 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | | 0.17 | 1.0 | |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | 0.27 | 0.22 | 1.0 | J |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

NW 415123

# 1 - FORM I
# ANALYSIS DATA SHEET

10

## TB-01

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-10 | File ID: | E22V31141.D |
| Sampled: | 11/02/22 00:00 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 00:58 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| Instrument: | GCMSVOA5 | | | | |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 67-64-1 | Acetone | | 2.0 | 50 | |
| 71-43-2 | Benzene | | 0.20 | 1.0 | |
| 74-97-5 | Bromochloromethane | | 0.31 | 1.0 | |
| 75-27-4 | Bromodichloromethane | | 0.18 | 0.50 | |
| 75-25-2 | Bromoform | | 0.38 | 2.0 | |
| 74-83-9 | Bromomethane | | 1.5 | 2.0 | UJ |
| 78-93-3 | 2-Butanone (MEK) | | 1.6 | 20 | |
| 75-15-0 | Carbon Disulfide | | 1.4 | 5.0 | UJ |
| 56-23-5 | Carbon Tetrachloride | | 0.16 | 5.0 | |
| 108-90-7 | Chlorobenzene | | 0.11 | 1.0 | |
| 124-48-1 | Chlorodibromomethane | | 0.22 | 0.50 | |
| 75-00-3 | Chloroethane | | 0.32 | 2.0 | |
| 67-66-3 | Chloroform | | 0.17 | 2.0 | |
| 74-87-3 | Chloromethane | | 0.52 | 2.0 | |
| 110-82-7 | Cyclohexane | | 1.8 | 5.0 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | | 0.80 | 5.0 | V-05 |
| 106-93-4 | 1,2-Dibromoethane (EDB) | | 0.17 | 0.50 | |
| 95-50-1 | 1,2-Dichlorobenzene | | 0.12 | 1.0 | |
| 541-73-1 | 1,3-Dichlorobenzene | | 0.12 | 1.0 | |
| 106-46-7 | 1,4-Dichlorobenzene | | 0.13 | 1.0 | |
| 75-71-8 | Dichlorodifluoromethane (Freon 12) | | 0.19 | 2.0 | |
| 75-34-3 | 1,1-Dichloroethane | | 0.14 | 1.0 | |
| 107-06-2 | 1,2-Dichloroethane | | 0.31 | 1.0 | |
| 75-35-4 | 1,1-Dichloroethylene | | 0.14 | 1.0 | |
| 156-59-2 | cis-1,2-Dichloroethylene | | 0.15 | 1.0 | |
| 156-60-5 | trans-1,2-Dichloroethylene | | 0.17 | 1.0 | |
| 78-87-5 | 1,2-Dichloropropane | | 0.18 | 1.0 | |
| 10061-01-5 | cis-1,3-Dichloropropene | | 0.16 | 0.50 | |
| 10061-02-6 | trans-1,3-Dichloropropene | | 0.17 | 0.50 | |
| 123-91-1 | 1,4-Dioxane | | 21 | 50 | |

MW 41523

# 1 - FORM I
# ANALYSIS DATA SHEET

10

## TB-01

| | | | | | |
|---|---|---|---|---|---|
| Laboratory: | Pace New England | | | Work Order: | 22K0850 |
| Client: | NYDEC_TRC Environmental Corpo | | | Project: | Mahopac Business District Wells - CO 145617 |
| Matrix: | Ground Water | Laboratory ID: | 22K0850-10 | File ID: | E22V31141.D |
| Sampled: | 11/02/22 00:00 | Prepared: | 11/07/22 07:45 | Analyzed: | 11/08/22 00:58 |
| Solids: | | Preparation: | SW-846 5030B | Dilution: | 1 |
| Initial/Final: | 5 mL / 5 mL | | | | |
| Batch: | B322285 | Sequence: | S079009 | Calibration: | 2200387 |
| | | | | Instrument: | GCMSVOA5 |

| CAS NO. | COMPOUND | CONC. (µg/L) | MDL | RL | Q |
|---|---|---|---|---|---|
| 100-41-4 | Ethylbenzene | | 0.21 | 1.0 | |
| 591-78-6 | 2-Hexanone (MBK) | | 1.1 | 10 | |
| 98-82-8 | Isopropylbenzene (Cumene) | | 0.11 | 1.0 | |
| 79-20-9 | Methyl Acetate | | 0.45 | 1.0 | UJ |
| 1634-04-4 | Methyl tert-Butyl Ether (MTBE) | | 0.17 | 1.0 | |
| 108-87-2 | Methyl Cyclohexane | | 0.24 | 1.0 | |
| 75-09-2 | Methylene Chloride | | 0.23 | 5.0 | |
| 108-10-1 | 4-Methyl-2-pentanone (MIBK) | | 1.3 | 10 | |
| 100-42-5 | Styrene | | 0.11 | 1.0 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | | 0.13 | 0.50 | |
| 127-18-4 | Tetrachloroethylene | | 0.19 | 1.0 | |
| 108-88-3 | Toluene | | 0.22 | 1.0 | |
| 87-61-6 | 1,2,3-Trichlorobenzene | | 0.30 | 5.0 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | 0.25 | 1.0 | |
| 71-55-6 | 1,1,1-Trichloroethane | | 0.17 | 1.0 | |
| 79-00-5 | 1,1,2-Trichloroethane | | 0.18 | 1.0 | |
| 79-01-6 | Trichloroethylene | | 0.19 | 1.0 | |
| 75-69-4 | Trichlorofluoromethane (Freon 11) | | 0.18 | 2.0 | |
| 76-13-1 | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | | 0.23 | 2.0 | UJ |
| 75-01-4 | Vinyl Chloride | | 0.21 | 2.0 | UJ |
| 1330-20-7 | Xylenes (total) | | 1.0 | 1.0 | |

Rev 4/5/23

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 11:40 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-01 | **Units:** | ng/L |
| **Lab Code:** | K2213469-001 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | 7.5 | 4.5 | 0.41 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | 0.89 J | 4.5 | 0.89 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | 4.0 J | 4.5 | 0.82 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | 25 | 4.5 | 0.83 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | 42 J | 4.5 | 0.86 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | 200 | 4.5 | 0.64 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | 120 | 4.5 | 0.63 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | 69 J | 4.5 | 0.71 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | 99 J | 4.5 | 0.87 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | 8.4 | 4.5 | 0.75 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | 9.4 | 4.5 | 0.60 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | 1.5 J | 4.5 | 0.82 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | 0.76 J | 4.5 | 0.61 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U UJ | 4.5 | 1.2 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 12/09/22 15:51 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 12/09/22 15:51 | 11/22/22 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 11:40 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-01 | **Units:** | ng/L |
| **Lab Code:** | K2213469-001 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U | 4.5 | 1.3 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 12/09/22 15:51 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 12/09/22 15:51 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 12/09/22 15:51 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 12/09/22 15:51 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-02 | **Units:** | ng/L |
| **Lab Code:** | K2213469-002 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **8.8** | 4.5 | 0.41 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND UJ | 4.5 | 0.89 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | **2.3** J | 4.5 | 0.82 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **33** | 4.5 | 0.83 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **11** | 4.5 | 0.86 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **6.2** | 4.5 | 0.64 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **5.6** | 4.5 | 0.63 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **3.8 J** | 4.5 | 0.71 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **22** | 4.5 | 0.87 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **7.7** | 4.5 | 0.75 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **2.6 J** | 4.5 | 0.60 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **0.87 J** | 4.5 | 0.61 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 22:01 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 22:01 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-02 | **Units:** | ng/L |
| **Lab Code:** | K2213469-002 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND UJ | 4.5 | 1.3 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 22:01 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:01 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 22:01 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 22:01 | 11/22/22 | |

**ALS Group USA, Corp.**
**dba ALS Environmental**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 14:10 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-03 | **Units:** | ng/L |
| **Lab Code:** | K2213469-003 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **3.5 J** | 4.5 | 0.41 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND | 4.5 | 0.89 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | **0.91** | 4.5 | 0.82 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **5.5** | 4.5 | 0.83 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **4.5** | 4.5 | 0.86 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **4.0 J** | 4.5 | 0.64 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **4.2 J** | 4.5 | 0.63 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **7.6** | 4.5 | 0.71 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **37** | 4.5 | 0.87 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **10** | 4.5 | 0.75 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **22** | 4.5 | 0.60 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | **3.0 J** | 4.5 | 0.82 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **1.3 J** | 4.5 | 0.61 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | **0.65 J** | 4.5 | 0.46 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 22:24 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 22:24 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 14:10 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-03 | **Units:** | ng/L |
| **Lab Code:** | K2213469-003 | **Basis:** | NA |

3

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U J | 4.5 | 1.3 | 1 | 01/04/23 22:24 | 11/22/22 | ✓ |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 22:24 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:24 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 22:24 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 22:24 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-04 | **Units:** | ng/L |
| **Lab Code:** | K2213469-004 | **Basis:** | NA |

4

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **8.9** | 4.5 | 0.41 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U ug | 4.5 | 0.89 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | **4.3** J | 4.5 | 0.82 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **25** | 4.5 | 0.83 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **62** J | 4.5 | 0.86 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **260** | 4.5 | 0.64 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **140** | 4.5 | 0.63 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **93** | 4.5 | 0.71 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **170** J | 4.5 | 0.87 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **14** | 4.5 | 0.75 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **15** | 4.5 | 0.60 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | **2.7 J** | 4.5 | 0.82 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **1.8 J** | 4.5 | 0.61 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | **0.90 J** | 4.5 | 0.46 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 22:47 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 22:47 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/01/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-04 | **Units:** | ng/L |
| **Lab Code:** | K2213469-004 | **Basis:** | NA |

4

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U UJ | 4.5 | 1.3 | 1 | 01/04/23 22:47 | 11/22/22 | ✓ |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 22:47 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 22:47 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 22:47 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 22:47 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 10:30 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-05 | **Units:** | ng/L |
| **Lab Code:** | K2213469-005 | **Basis:** | NA |

5

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **9.8** | 4.5 | 0.41 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U J | 4.5 | 0.89 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | **2.6** J | 4.5 | 0.82 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **52** | 4.5 | 0.83 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **7.9** | 4.5 | 0.86 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **7.7** | 4.5 | 0.64 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **7.1** | 4.5 | 0.63 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **5.1** | 4.5 | 0.71 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **19** | 4.5 | 0.87 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **2.4 J** | 4.5 | 0.75 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **1.8 J** | 4.5 | 0.60 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | ND U | 4.5 | 0.61 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 23:11 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 23:11 | 11/22/22 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 10:30 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-05 | **Units:** | ng/L |
| **Lab Code:** | K2213469-005 | **Basis:** | NA |

5

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U J | 4.5 | 1.3 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 23:11 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:11 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 23:11 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 23:11 | 11/22/22 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 11:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-06 | **Units:** | ng/L |
| **Lab Code:** | K2213469-006 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **8.4** | 4.5 | 0.41 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND UJ | 4.5 | 0.89 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | **3.9** J | 4.5 | 0.82 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **35** | 4.5 | 0.83 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **18** | 4.5 | 0.86 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **51** | 4.5 | 0.64 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **45** | 4.5 | 0.63 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **16** | 4.5 | 0.71 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **41** | 4.5 | 0.87 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **3.9 J** | 4.5 | 0.75 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **1.1 J** | 4.5 | 0.60 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **0.97 J** | 4.5 | 0.61 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.5 | 0.46 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.5 | 1.3 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 23:34 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 23:34 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/02/22 11:45 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-06 | **Units:** | ng/L |
| **Lab Code:** | K2213469-006 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND U J | 4.5 | 1.3 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 23:34 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:34 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 23:34 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 23:34 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 14:05 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-07 | **Units:** | ng/L |
| **Lab Code:** | K2213469-007 | **Basis:** | NA |

7

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

| | |
|---|---|
| **Analysis Method:** | Draft EPA Method 1633 |
| **Prep Method:** | Method |

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | **5.3** | 4.5 | 0.41 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U UJ | 4.5 | 0.89 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | **2.0** J J | 4.5 | 0.82 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.5 | 0.69 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | **18** | 4.5 | 0.83 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.5 | 0.33 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.5 | 0.67 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.5 | 0.56 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | **30** | 4.5 | 0.86 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | **41** | 4.5 | 0.64 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | **49** | 4.5 | 0.63 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | **49** | 4.5 | 0.71 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | **42** | 4.5 | 0.87 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | **17** | 4.5 | 0.75 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | **13** | 4.5 | 0.60 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | **14** | 4.5 | 0.82 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | **12** | 4.5 | 0.61 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | **6.2** | 4.5 | 0.46 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | **2.7 J** | 4.5 | 1.3 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.5 | 0.72 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.5 | 1.2 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.5 | 0.85 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.5 | 0.82 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.5 | 0.92 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.5 | 0.91 | 1 | 01/04/23 23:57 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.5 | 0.95 | 1 | 01/04/23 23:57 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 14:05 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-07 | **Units:** | ng/L |
| **Lab Code:** | K2213469-007 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.5 | 0.42 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | 1.7 J | 4.5 | 1.3 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.5 | 0.86 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.5 | 0.43 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.5 | 0.45 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.5 | 0.39 | 1 | 01/04/23 23:57 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.5 | 0.54 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.5 | 0.41 | 1 | 01/04/23 23:57 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.5 | 0.58 | 1 | 01/04/23 23:57 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.5 | 0.36 | 1 | 01/04/23 23:57 | 11/22/22 | |

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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-08 | **Units:** | ng/L |
| **Lab Code:** | K2213469-008 | **Basis:** | NA |

**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Perfluoroalkyl Sulfonic Acids (PFSAs)** | | | | | | | |
| Perfluorobutane sulfonic acid (PFBS) | ND U | 4.6 | 0.41 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoropentane sulfonic acid (PFPeS) | ND U UJ | 4.6 | 0.89 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorohexane sulfonic acid (PFHxS) | ND U UJ | 4.6 | 0.82 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoroheptane sulfonic acid (PFHpS) | ND U | 4.6 | 0.69 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorooctane sulfonic acid (PFOS) | ND U | 4.6 | 0.83 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorononane sulfonic acid (PFNS) | ND U | 4.6 | 0.33 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorodecane sulfonic acid (PFDS) | ND U | 4.6 | 0.67 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorododecane sulfonic acid (PFDoS) | ND U | 4.6 | 0.56 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Carboxylic Acids (PFCAs)** | | | | | | | |
| Perfluorobutanoic acid (PFBA) | ND U | 4.6 | 0.86 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoropentanoic acid (PFPeA) | ND U | 4.6 | 0.64 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorohexanoic acid (PFHxA) | ND U | 4.6 | 0.63 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoroheptanoic acid (PFHpA) | ND U | 4.6 | 0.71 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorooctanoic acid (PFOA) | ND U | 4.6 | 0.87 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorononanoic acid (PFNA) | ND U | 4.6 | 0.75 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorodecanoic acid (PFDA) | ND U | 4.6 | 0.60 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoroundecanoic acid (PFUnDA) | ND U | 4.6 | 0.82 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorododecanoic acid (PFDOA) | ND U | 4.6 | 0.61 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorotridecanoic acid (PFTrDA) | ND U | 4.6 | 0.46 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluorotetradecanoic acid (PFTDA) | ND U | 4.6 | 1.3 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Sulfonamido Substances** | | | | | | | |
| Perfluorooctane sulfonamide (PFOSAm) | ND U | 4.6 | 0.72 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamide (MeFOSA) | ND U | 4.6 | 1.2 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamide (EtFOSAm) | ND U | 4.6 | 0.85 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido ethanol (MeFOSE) | ND U | 4.6 | 0.82 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido ethanol (EtFOSE) | ND U | 4.6 | 0.92 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Methylperfluorooctane sulfonamido acetic acid (NMeFOSAA) | ND U | 4.6 | 0.91 | 1 | 01/05/23 00:20 | 11/22/22 | |
| N-Ethylperfluorooctane sulfonamido acetic acid (NEtFOSAA) | ND U | 4.6 | 0.95 | 1 | 01/05/23 00:20 | 11/22/22 | |

**ALS Group USA, Corp.**
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Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pace Analytical Services | **Service Request:** | K2213469 |
| **Project:** | 22K0850 | **Date Collected:** | 11/03/22 12:00 |
| **Sample Matrix:** | Water | **Date Received:** | 11/09/22 10:20 |
| **Sample Name:** | 22K0850-08 | **Units:** | ng/L |
| **Lab Code:** | K2213469-008 | **Basis:** | NA |

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**Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS Compliant with Table B-24 of DOD QSM 5.4**

**Analysis Method:** Draft EPA Method 1633
**Prep Method:** Method

| Analyte Name | Result | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|---|---|---|---|---|---|---|---|
| **Fluorotelomer Sulfonic Acids (FTSAs)** | | | | | | | |
| 1H, 1H, 2H, 2H-Perfluorohexanesulfonic acid (4:2 FTS) | ND U | 4.6 | 0.42 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorooctanesulfonic acid (6:2 FTS) | ND B UJ | 4.6 | 1.3 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 1H, 1H, 2H, 2H-Perfluorodecanesulfonic acid (8:2 FTS) | ND U | 4.6 | 0.86 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Fluorotelomer Carboxylic Acids (FTCAs)** | | | | | | | |
| 4,4,5,5,6,6,6-Heptafluorohexanoic acid (3:3 FTCA) | ND U | 180 | 6.8 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA) | ND U | 180 | 4.2 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 2H,2H,3H,3H-Perfluorodecanoic acid (7:3 FTCA) | ND U | 180 | 6.0 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Ether Sulfonic Acids (PFESAs)** | | | | | | | |
| Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA) | ND U | 4.6 | 0.43 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS) | ND U | 4.6 | 0.45 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS) | ND U | 4.6 | 0.39 | 1 | 01/05/23 00:20 | 11/22/22 | |
| **Perfluoroalkyl Ether Carboxylic Acids (PFECAs)** | | | | | | | |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | ND U | 4.6 | 0.41 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | ND U | 4.6 | 0.54 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Hexafluoropropyleneoxide dimer acid (HFPO-DA) (GenX) | ND U | 4.6 | 0.41 | 1 | 01/05/23 00:20 | 11/22/22 | |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | ND U | 4.6 | 0.58 | 1 | 01/05/23 00:20 | 11/22/22 | |
| 4,8-Dioxa-3H-perfluorononanoic acid (DONA) | ND U | 4.6 | 0.36 | 1 | 01/05/23 00:20 | 11/22/22 | |